

SAN DIEGO
CITY
COLLEGE

2011-2012 CATALOG

Fall 2011, Spring 2012, Summer 2012

1313 Park Blvd., San Diego, CA 92101

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www.sdcity.edu

Terrence J. Burgess, Ph.D.

President

San Diego City College is accredited by the Accrediting Commission for Community and Junior Colleges of the Western Association of Schools and Colleges, 10 Commercial Blvd., Ste. 204, Novato, CA 94949, 415-506-0234, an institutional accrediting body recognized by the Council for Higher Education Accreditation and the U.S. Department of Education.



President's Message

Welcome to San Diego City College – A Smoke Free Campus!

At our 97th Commencement this spring, San Diego City College awarded more than 1300 degrees and certificates, the largest graduating class in our history. Nearly a third of our students graduated with academic honors.

This year we were also honored to receive the six-year reaffirmation of the College's accreditation from the Accrediting Commission for Community and Junior Colleges, Western Association of Schools.

As I shared with the college community, this is the most positive action that the Commission may take and is a strong reflection of the high educational quality and outstanding student support that are hallmarks of San Diego City College. First accredited in 1952, San Diego City College has seen an increase of more than 7,000 students in the last ten years, and we expect to reach a student population of 25,000 within this decade.

As we begin thinking about the plans for our 100th Anniversary in 2014, the college campus is undergoing a massive transformation as part of the San Diego Community College District \$1.555 billion Propositions S and N construction bond program. In 2009, we opened the one-stop Academic Success Center for students; in fall 2010, the five-story Career

Technology Center; in winter 2011, we broke ground on our new 128,000 SF Arts and Humanities and 62,000 SF Business Technology buildings; and in spring 2011, we celebrated the launch of our five-story 85,000 SF Mathematics, Social and Behavioral Sciences.

As we meet the needs of our growing student population, we also reach outward to the community through thousands of service learning hours. City College is honored to be a member of the President's Higher Education Community Service Honor Roll, the highest federal recognition a college or university can receive for its commitment to volunteering, service-learning and civic engagement.

With increasing economic challenges impinging on education, City College is working hard to accommodate your busy work and family schedules. We offer more than 100 majors, 100 certificate programs and 1,500 classes each semester, many online. With the Western Association of Schools and Colleges accreditation, your degree or certificate from City College certifies to transfer universities and employers that you have met the highest national standards.

Our number one priority is to help our students achieve their academic and career goals. Our Student Ambassador Program offers new student orientations and our Transfer/Career Center offers guidance in transferring to a four-year university or into a career. Our Financial Aid Office is ready to answer your questions regarding available monies for college expenses.

We are pleased you have chosen to join our college community to pursue your academic and career dreams. Good luck to you, and I look forward to meeting you on campus.

Terrence J. Burgess, Ph.D.

President

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(from left, back row) Peter Zschiesche, Rich Grosch, and Mary Graham,
(front row) Maria Nieto Senour, Chancellor Constance M. Carroll, and Bill Schwandt.

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 Vice President, Administrative
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 Dean of Student Development/
 MatriculationTBA
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 Financial Aid ManagerGregory Sanchez
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 Tutorial Services Coordinator.....Lance Soukhaseum
 Work Experience Supervisor Lynne Ornelas
 Counseling/Assessment Supervisor Megan Soto
 Student Health Service
 Director..... Dotti Cordell, RN, MFH
 Mental Health SpecialistLeslie Easton, LCSW
 First Year Services (Title V)..... Bonnie Peters

Accreditation

San Diego City College is accredited by the Accrediting Commission for Community and Junior Colleges of the Western Association of Schools and Colleges, an institutional accrediting body recognized by the Council on Postsecondary Accreditation and the U.S. Department of Education. The college is accredited by the Office of Private Postsecondary Education for the training of veterans as well as by the U.S. Department of State and the U.S. Immigration Service for international student education. Courses paralleling university level work are accepted by the University of California, California State University, and by other universities and colleges.

Persons interested in the institution's accreditation and program approvals may review documents describing these activities in the President's Office. These documents will be available for such review at a mutually convenient time during regular business hours, and an appropriate interpretation of their contents will be provided if requested.

Disclaimer

The San Diego Community College District is governed by its Board of Trustees. No oral or written representation by any employee of the college is binding on the San Diego Community College District without the express approval of the Board of Trustees.

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Academic Calendar 2011-2012

Fall Semester 2011

16-WEEK SEMESTER: Fall Classes August 22, 2011–December 17, 2011

SPECIAL DATES

June 23, 2011	Final day to file an application for admission for the Fall semester and receive an appointment to register online. Applications filed after this date will be assigned a registration appointment at the time of application.
August 1, 2011	Deadline to file an application for admission and receive a registration appointment for Fall.
August 21, 2011	RESIDENCE DETERMINATION DATE (APPLIES TO ALL SESSIONS)
September 16, 2011	Constitution Day (Classes are in session)
October 31, 2011	Last day to file a petition for graduation for an Associate Degree or Certificate of Achievement for Spring or Summer 2012 completion in order to receive an evaluation prior to the beginning of the Spring semester.
November 11, 2011	Holiday—Veterans Day**
November 15, 2011	Last day to file a petition for graduation for an Associate Degree or Certificate of Achievement for Fall 2011 completion.
November 21-23, 2011	Classes not in session--campus closed.
November 24 & 25, 2011	Holiday—Thanksgiving**
December 19, 2011–January 21, 2012.....	Winter Recess

Spring Semester 2012

16-WEEK SEMESTER: Spring Classes January 23, 2012–May 19, 2012

SPECIAL DATES

TBD	Final day to file an application for admission for Spring semester and receive an appointment to register online. Applications filed after this date will be assigned a registration appointment at the time of application.
TBD	Deadline to file an application for admission and receive a registration appointment for Spring.
January 22, 2012.....	RESIDENCE DETERMINATION DATE (APPLIES TO ALL SESSIONS)
February 17, 2012.....	Holiday—Lincoln's Day**
February 20, 2012.....	Holiday—Washington's Day**
March 31, 2012.....	Last day to file a petition for graduation for an Associate Degree or Certificate of Achievement for Spring 2012 completion.
April 2-5, 2012.....	Spring Recess--campus closed.
April 6, 2012.....	Holiday—Cesar Chavez Day**
May 28, 2012	Holiday—Memorial Day**

** No Saturday or Sunday classes after a Friday holiday. No Sunday classes before a Monday holiday.

Note: Holidays apply to all sessions.

Summer Session 2012

Summer Classes: May 29, 2012–August 11, 2012

SPECIAL DATES

May 28, 2012 RESIDENCE DETERMINATION DATE (APPLIES TO ALL SESSIONS)
July 4, 2012 Holiday—Independence Day**
July 31, 2012..... Last day to file a petition for graduation for an Associate Degree or
Certificate of Achievement for Summer 2012 completion.

** No Saturday or Sunday classes after a Friday holiday. No Sunday classes before a Monday holiday.



General Information

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History

San Diego City College is a public, two-year community college administered by the San Diego Community College District. Serving as the educational cornerstone of downtown San Diego, the college offers more than 100 majors, 100 certificate programs and 1,500 classes each semester to more than 18,000 students. City College will celebrate its 100th Anniversary in 2014.

Chronology

1914

City College established as the first community college in San Diego (San Diego Junior College) with 35 students and 4 instructors. City College was the third community college established in California.

1921

City College moved from the high school to share facilities with the State Normal School, the four-year teachers' college which became San Diego State University.

1939

San Diego Evening Junior College was created by splitting the institution into two entities, day and evening. With the industrial growth in San Diego, the Evening College was needed to meet the demand for college courses for daytime working people.

1946

City College moved back to San Diego High School and reorganized into three branches: San Diego Vocational High School, San Diego College Arts and Sciences, and San Diego Evening Junior College.

1953-54

The first parcel of land, a single city block between Russ Boulevard and A Street, from 14th to 15th Streets, was purchased for the permanent home of what is now San Diego City College. The first buildings constructed were the A and T buildings.

1970s

Increasing enrollment resulted in a major expansion project bounded by Russ Boulevard, 17th, 12th and C Streets. The L, C, S, M, E, D and F buildings were constructed.

1972

San Diego Voters authorized a separate Community College District.

1988

A facilities Master Plan was developed to recommend modifications to the existing facility, to meet current and future needs.

1989

City College celebrated its 75th Anniversary.

1992

The new 3,000 SF Fitness Center opens with full fitness and exercise facilities.

1998

City College leased to San Diego Unified School District, property on which Garfield High School and a 420-space parking structure is built. City students have shared use of the parking and the College can offer classes in the facility.

2000

Construction completed on the 8,000 SF Educational Technology Center. The ETC is fully equipped with state-of-the-art media and teleconferencing equipment.

2002

The 67,000 SF Learning Resource Center (LRC) replaced the 30-year-old library. Complete with the most advanced research and learning tools available with 300-internet connected computers, multiple electronic databases, plasma displays offering continuous broadcast news, a collection of more than 67,000 books and over 200 periodicals. The three-level LRC also houses the Multimedia Center, the Independent Learning Center, and CitySITE - a center for faculty and staff development.

2005

A new Facilities Master Plan was approved by the Board of Trustees and projects a 20-year build-out to accommodate 25,000 students.

2005

The 2,000-seat, 55,000 SF Harry West Gymnasium opened. Dedicated to beloved Coach West, students enjoy three regulation basketball courts, six badminton courts, three volleyball courts, intercollegiate team rooms, workout facilities and new classrooms.

2007

Eight high-tech classrooms added to the LRC lower level, with additional offices and meeting space.

2009

The 27,800 SF Academic Success Center opened to provide a one-stop service area for students, including: Tutorial Center, Math and English Centers, EOPS, MESA (Math, Engineering, & Science Achievement), New Horizons, Puente, Umoja, and the CalWORKs Programs.

2010

The new 88,000 SF CTC – Career Technology Center - opens. This five-level building at 16th & C Streets houses Cosmetology, Nursing, Photography and Digital Arts, a Student Gallery, the College Police and an 11-story 700-car parking structure.

2011

Groundbreakings were held for the new 128,000 SF Arts and Humanities and 62,000 SF Business Technology buildings in February, and the five-story 85,000 SF Mathematics, Social and Behavioral Sciences in May. These buildings will provide new classrooms, computer labs, lecture halls, and parking for more than 400 cars.

Statement of General Education Philosophy

The general education program at the colleges in the San Diego Community College District is designed to broaden students' knowledge and their understanding of methods of gaining knowledge in a variety of disciplines and to develop students' abilities in critical thinking, in oral and written communication, and in mathematics.

The awarding of an Associate Degree symbolizes an attempt on the part of the college to lead students through patterns of learning experiences designed to develop an awareness of other cultures and times; to achieve insights gained through experience in thinking about ethical problems; and to develop the capacity for self-understanding. In addition to these accomplishments, students should possess sufficient depth in some field of knowledge to contribute to lifetime interest.

Institutional Learning Outcomes

- Communication/Interpersonal Skills
- Critical Thinking
- Analyses/Computation
- Cultural Sensitivity/Global Awareness
- Information Management/ Information Literacy
- Personal Responsibility
- Civic and Environmental Responsibility

Mission

The mission of City College has as its highest priority student learning and achievement.

San Diego City College is a multicultural institution committed to providing open access to all who can benefit from instruction and to meeting the diverse and ever changing educational, cultural, and economic needs of the urban core and surrounding communities of San Diego. As City College prepares world citizens in the twenty-first century, we recognize that the aim of education is the development of the whole person, who is prepared to be an active citizen and to participate in a global community. We are committed to the tradition of academic freedom and responsibility and to maintaining a climate that promotes learning, understanding and respect for students, faculty, staff, community, and the environment.

San Diego City College provides:

- Lower division and general education courses that lead to Certificates, Associate Degrees, or transfer to a four-year college or university;
- Career technical education programs that meet specific industry needs, upgrade the employment skills of students and fulfill licensing requirements of the state of California as well as contribute to the economic development of our region;
- Basic skills instruction to assist all students in meeting their educational goals; and
- Essential student support services for all students.

Additionally, San Diego City College is committed to:

- The development of informed, active citizens who will be engaged in the global community, lifelong learners, and literate in information technology;
- Institutional community involvement, community development and community service;
- Equity, inclusiveness and diversity in all of its manifestations;
- High quality instructional programs and essential student support services, including co-curricular and cultural activities;

- Incorporating environmental sustainability into student learning outcomes, as well as implementing a campus culture of conservation; and
- A continuous campus-wide cycle of program review and assessment with integrated planning and resource allocation.

Disclaimer

While every reasonable effort has been made to ensure that statements in this catalog are accurate, it must be understood that the information contained herein is subject to change or elimination without notice by the administration of the San Diego Community College District. Students should consult the appropriate campus or department for current information, as well as for any special rules or requirements imposed.

Admissions and Registration

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The College Matriculation Program

Steps to Student Success

The college matriculation program is designed to help students succeed in their academic program. To “matriculate” means to enroll and to commit oneself to an educational goal. The matriculation process requires a commitment on the part of the college as well as the student.

The steps in the matriculation process are:

Step 1 - Admission

Step 2 - Assessment

Step 3 - Orientation

Step 4 - Educational planning with a counselor

Step 5 - Follow-up of student progress

The matriculation program has been designed especially for students who intend to earn a certificate or degree at the college or to transfer to a four-year college or university. However, the services are available to all students admitted to the college. All students are encouraged to participate in the various components of the matriculation program.

1. Admission

Admission is open to anyone who meets one of the following criteria:

- Persons who possess a high school diploma or California high school proficiency exam certification or GED with an average score of 45 or higher.
- Persons 18 years of age or older or emancipated minors who do not possess a high school diploma or equivalent may be admitted by the college under provisional admission status.
- High school students requesting concurrent enrollment may be admitted as “special part-time” students subject to the following criteria:
 - a. Students must have completed the 10th grade.
 - b. Enrollment may be limited due to budget reductions and extraordinary demand.

- c. High school students must satisfy course prerequisites and eligibility requirements.
- d. Enrollment in Physical Education classes will not be permitted.
- e. The course is advanced scholastic or technical (college degree applicable).
- f. The course is not available at the school of attendance.
- g. Students will be given college credit for all courses. Grades will be part of the student’s permanent college record.
- h. Students must maintain a 2.0 grade point average each semester in all college work.
- i. If the number of units of W, I and NP exceed 40%, in any semester or session, the student will be academically disqualified. Students whose grade point average falls below a 2.0, or who do not complete 60% of all units attempted, will not be permitted to re-enroll without approval from a college counselor.

- Persons who are under 18 years of age who do not have a high school diploma and are not enrolled in a high school may be admitted as a special full-time student pursuant to Education Code §48800.5 subject to approval of the high school governing board and the college President where the student is planning to attend. Special full-time students will be admitted under provisional admission status.
- Persons who do not meet one of the admission criteria stated above will not be admitted under any circumstances.

All new students must file an application for admission. Students who have previously attended, but have not been in continuous attendance for one year must file a new application for admission.

Apply Online

Applications for admission to San Diego City, Mesa and Miramar Colleges are available online. Students access the online application at: <http://studentweb.sdccd.edu>.

Important Reminder

Every male citizen of the U. S. and male immigrant residing in the U. S., ages 18 through 25, must register with the Selective Service.

2. Assessment

Assessment is a tool used to assist students in selecting courses best suited to their abilities and educational goals. Specifically, assessments help students identify their skill levels in English and mathematics, and ESOL.

Assessment is a process that includes tests and other measures and is intended to assist students in meeting course prerequisites. Students may also meet course prerequisites based on other factors such as past educational achievements in mathematics or English or course completion, and other standardized tests.

In order to ensure proper course selection, all new students should go through assessment and orientation unless they already possess an associate degree or higher.

Assessment-Placement Alternative Measures

The San Diego Community College district accepts select standardized test as an alternative measure for assessment skill levels. Students should bring or send official copies of their SAT, ACT, EAP, EPT and/or ELM report directly to District Student Services to determine readiness for English 101 or 105 and for courses with a Math 096 prerequisite. **All tests must have been completed within the past 2 years.**

Test	Minimum Score Required
SAT - ENGL	500
SAT - MATH	560
ACT - ENGL	22
ACT - MATH	23
EPT -	151
ELM -	50

EAP - *Ready for CSU College-Level English/Math Course*

Testing accommodations are available to students with disabilities. For assistance contact the Disability Support Programs and Services (DSPS) office on campus.

3. Orientation

The orientation provides important information to students about the programs and services available at the college as well as strategies for student success. Orientation includes assessment and program planning. Matriculating students who have

been admitted to the college are expected to attend an assessment/orientation session before registering for classes.

For additional information call or stop by the Testing Office on campus.

4. Educational Planning with a Counselor

The Student Education Plan (SEP) is an important tool to assist students in successfully attaining their goals without wasted time and effort. Counseling and career planning services are available to help students make informed choices concerning the programs and courses available.

The Education Plan is an agreement which contains the official requirements for graduation and/or transfer. **All transcripts of prior college work must be on file and evaluated before an official education plan can be prepared.** See the Graduation section on page 84 for graduation filing requirements.

A SEP typically lays out a program of study for a four or six semester period. These plans allow students to determine how long it will take to complete a program of study and to be sure that all program requirements can be met within a particular period of time. Education plans may be changed. The student should review plans periodically with a counselor. They are revised as a student's goals or objectives change.

Assessment of interests and aptitudes is also available to those students who want more information or assistance in order to choose the "right" programs or courses.

5. Follow-up on Student Progress

Follow-up services are available to all students as part of the college's commitment to student success. These services include a periodic review of student progress and education plans to assist students in reaching their educational goal. Students who need additional support services will be referred to those services.

Exemptions

Students who meet the following criteria are exempt from components of the matriculation process:

1. Admission

- No exemptions

2. Assessment

- Students with the following educational goals:
 - preparation for a new career, advancement in their current job/career, maintenance of a certificate or license, educational development, or completion of credits for high school diploma
- Students enrolled in an apprenticeship Program
- Students who have an associate degree or higher
- Students concurrently enrolled at a four-year college
- Students who have taken the placement tests within the last three years

3. Orientation

- Students with the following educational goals:
 - preparation for a new career, advancement in their current job/career, maintenance of a certificate or license, educational development, or completion of credits for high school diploma
- Students enrolled in an apprenticeship Program
- Students who have an associate degree or higher
- Students concurrently enrolled at a four-year college or university

4. Educational Planning With a Counselor

- Students with the following educational goals:
 - preparation for a new career, advancement in their current job/career, maintenance of a certificate or license, educational development, or completion of credits for high school diploma
- Students enrolled in an apprenticeship Program

- Students who have an associate degree or higher
- Students concurrently enrolled at a four-year college
- Students who have taken the placement tests in the last three years

5. Follow-up on Student Progress

- No exemptions

Registration

With the exception of Special-Admit High School students, all students receive an appointment to register online using Reg-e. Special-Admit High School students must enroll in person at the time of their registration appointment.

By using the combined schedule of classes and Reg-e, a student can enroll in any available course offered at ECC, City, Mesa, or Miramar Colleges. The class schedule is also available on the web at: <http://schedule.sdccd.edu/index.cfm>

Reg-e is easy to use. Instructions for using Reg-e are on the registration site.

The following information and services are available through Reg-e:

- registration
- a record of the student's class schedule, fees, and payment deadlines
- cancellation of registration
- adding and dropping classes
- academic deadlines and calendar
- grade information
- academic history
- purchase of parking permits
- purchase of an Associated Students college membership

Online Registration (Reg-e)

Students can register for classes using Reg-e, the San Diego Community College District's online registration system. Students can visit the Student Web Services at: <http://studentweb.sdccd.edu> and click on the Reg-e icon. Full instructions will lead students through the process.

Responsibility for Maintaining Accurate Registration

It is the **student's** obligation to add, drop, or withdraw from classes before the deadlines stated in the schedule of classes schedule. This applies even if the student has never attended class. Any student who anticipates difficulty in paying fees should check with the Financial Aid Office about eligibility and sources of assistance. Registration will be canceled for nonpayment of fees.

Time/Schedule Conflicts

- Students may not register for classes with times that overlap (includes 10 minute passing period).
- Students may not enroll in two classes of the same subject and course number if the start and/or end date of one class overlaps with the other class.

Class Schedules on Internet

Up-to-date class schedule information and course descriptions for each campus is available online at www.sdccd.edu/schedule. This web site displays new classes, cancellations, and changes after the printed schedule has been distributed. A search engine allows students to search for classes by academic subject, by time and day, or by key words.

Wait List

Students who attempt to register in a class that is closed may select the option to have his/her name placed on a Wait List.

IMPORTANT NOTE: Wait Listing is not a guaranteed priority for enrollment.

Criteria:

- Students may place their name on only one Wait List for a specific subject and course number.
- Students must meet course prerequisites to be placed on the Wait List.
- Students who are on a Wait List and later enroll in another section of the same subject and course number will be automatically removed from the Wait List.
- Students will be told their priority number on the Wait List.

- Students can check their priority number on Reg-e.
- Students have the option to remove themselves from the Wait List at any time.
- There is a limit to the number of students allowed on each Wait List.
- Wait listed students will be given first priority to add their wait listed class if a space becomes available before the semester begins.
- The college will attempt to notify students that a space is available via e-mail and telephone according to their priority number; however, it is the students' responsibility to check the status of their wait listed classes on Reg-e daily.
- Upon notification, students will be given five (5) business days, including the day of notification, to add the waitlisted class. (An add code is not required.)
- If students do not add their wait listed class within the 5-day period, they will be removed from the Wait List and lose their priority.
- It is the Student's responsibility to check his/her e-mail and/or Reg-e, weekly for the status of their wait listed class(es).
- Students remaining on the Wait List after classes begin, **MUST** attend the first class meeting (and be on time) to have their Wait List priority considered.

Note: Students who are waitlisted in a lecture & lab concurrently (Ex: CHEM 152 & 152L) will not be allowed to enroll in the lab class until they are enrolled in the lecture (Ex: CHEM 152), even if a space becomes available in the lab before the lecture. Additionally, if the wait list availability expires for the lab before the lecture is open, the student's name will be removed from the wait list for the lab class.

Students enrolled in SDCCD Online courses must contact the instructor on the first day of class via e-mail if they wish to have their Wait List priority considered.

Adding Classes

Students may add classes online until the deadline date published in the schedule of classes. Students will not be allowed to add classes beyond the published deadline.

To add a class once the semester has begun, students must obtain an add code from the instructor, then must process and pay for the added class through Reg-e. A student may also pay at the Accounting Office, Room A-114.

Students are not officially enrolled until the add code is processed through Reg-e and fees are paid in full. Add codes for Special-Admit part-time high school and Joint Diploma students must be processed **in person** in the college Admissions Office prior to the add deadline.

If an instructor finds that a student has given his or her add code to another student, the instructor should administratively drop the student who was not issued the add code.

Drop/Withdrawal from Classes

Students may drop or withdraw from classes online until the published deadline dates. Deadline dates are available in the Admissions Office or in the online schedule of classes at: <http://schedule.sdccd.edu> and by clicking on the “details” box next to the class they are interested in viewing.

- It is the student’s responsibility to drop all classes in which he/she is no longer participating.
- Students, who remain enrolled in a class beyond the published withdrawal deadline, as stated in the online class schedule, will receive an evaluative letter grade.
- Final grades may be affected by attendance as described in the class syllabus.

DROP—ending enrollment in a class prior to about 20% point of class meetings. A drop is not recorded on the student’s academic record.

WITHDRAWAL—ending enrollment in a class between about the 20% point and up to about 60% point of class meetings. A withdrawal is a permanent symbol on the student’s academic record and is included in progress probation and disqualification determination.

Registration will be blocked in any course where three withdrawals have been earned. Counselor approval will be required for additional enrollment.

Administrative Drop

Registration may be administratively cancelled for the following reasons:

1. failure to pay all mandatory fees in accordance with the fee payment schedule;
2. using an add code issued to another student;
3. failure to meet the terms and conditions of a fee deferment;
4. failure to meet academic or progress standards;
5. denial of a “Petition to Challenge a Prerequisite.”

Study Load Limit

Important: The study load limit is currently under revision by the district due to limited availability of classes and the state budget situation. Consult your semester/session schedule of classes for specific semester/session limitations.

The maximum study load for a semester is 20 academic units exclusive of physical education activity units and/or 25 units including physical education.

Students are reminded that each unit of credit is calculated to involve a total of at least three hours of classroom and outside time per week. Thus, a 20-unit study load represents a 60-hour work load each week. Students working full-time are advised NOT to attempt a full-time college program.

Twelve units of credit is considered a minimum full-time program during a semester; nine units is three-quarters time and six units, half-time.

The maximum study load for summer session is 12 academic units excluding physical education and/or 15 units including physical education.

Six units of credit is considered a minimum full-time during the summer session; four units is three-quarters time, and 3 units, half time.

Note: Study load requirements may vary at each college for financial aid purposes. Inquire at your college Financial Aid Office for detailed information.

Basic Skills Unit Limit

Title 5, 55035 states: “...no student shall receive more than 30 semester units of credit for basic skills coursework.” Registration will be blocked prior to students reaching this limit so that students can meet with a counselor to ensure that they are successful when this unit limit is met. Students with a verified learning disability are exempt from this limitation (contact the DSPS office for more information).

Priority Enrollment System

Consistent with state law and the goal of providing a fair and equitable registration system for all students, the San Diego Community College District has established the following priority system for assigning registration appointments.

Priority Group

1. EOPS and DSPS students
2. Active Duty Military and Veteran students who meet the eligibility criteria*
3. Continuing students
4. New matriculating students
5. New and returning students
6. Students possessing a baccalaureate or higher degree who are not matriculating.

Within each priority group above, students are prioritized according to cumulative units, including transfer units and work in progress. Students who have completed an education plan will receive priority within each range. New students are assigned an appointment on a first-come, first-served basis.

Range

- 50.0–72.0 units
- 30.0–49.9 units
- 15.0–29.9 units
- 00.0–14.9 units
- 72.1–89.9 units
- 90+ units

* Students who are Active Duty Military, or Veterans discharged within the past two years, may be eligible for priority registration. Students should contact the Residency/Admissions Office for additional information. A military ID card of DD214 will be required for verification.

Enrollment priorities are currently under review and subject to change.

Change of Name, Mailing or E-mail Address

All students must report immediately any change of address to the college Admissions Office or online at <http://studentweb.sdccd.edu>. Failure to provide

this information will result in delays in registration, and other important information sent by the college. Name changes must be supported with legal documentation and a picture ID and reported in person at the Admissions Office.

Prerequisites, Corequisites, Limitations on Registration and Advisories

PLAN AHEAD! All prerequisites, corequisites, and limitations on enrollment stated in the course descriptions listed in this catalog will be strictly enforced at the time of registration. Students who do not meet the prerequisite requirements according to college records will not be permitted to register for the course. Students who believe they have met the prerequisite at another institution are strongly advised to have all transcripts of prior college work evaluated and on file well in advance of registration to minimize registration delays.

Note: Unofficial transcripts are accepted for prerequisite clearance.

Students should plan their schedules early and see a counselor for assistance.

PREREQUISITES are courses that must be completed with a "C" or better prior to registration in a specific course.

COREQUISITES are courses that are required to be taken the same semester as another course.

LIMITATIONS ON ENROLLMENT are other restrictions that are stated in the course description such as "not open to students with credit in..."

ADVISORIES are departmental recommendations to be completed prior to enrolling in the course. Advisories do not prevent a student from enrolling, but are strongly encouraged by the department for a student's academic success.

Challenge Procedures

Students who believe they have sufficient grounds may challenge a prerequisite, corequisite, or

limitation on enrollment in a specific course (the student does not get units for a challenged class). A student may obtain a Petition to Challenge in the Admissions Office and a copy of Procedures 5500.2. The completed petition must be filed in the Admissions Office no later than ten working days prior to the published add deadline for the course being challenged. Students who challenge a prerequisite or corequisite after the start of the semester must obtain an add code issued by the instructor prior to completing the petition. Contact the Admissions Office for additional information. For credit by examination, please refer to page 63.

Residency

Residency is determined when a student applies for admission to the College. The following paragraphs summarize the rules and regulations related to student residency for tuition purposes. Details are found in the CA Education Code, section 68000 and Title 5, sections 54000-54072.

Residency Status

Every person who is married or is age 18 or older and under no legal restriction may establish residence. Certain minors may also establish residence.

A California "resident" is a person who has resided in the state for more than one year prior to the residence determination date and shows "intent" to make the State of California their permanent residence.

An undocumented student is precluded from establishing residency. Restrictions also apply to some visas, please see the Residency Office.

The residence determination date is the day immediately preceding the first day of classes for each semester.

Factors Considered to Determine Residency

No one factor determines residency. The following factors are called "indices of intent." They, along with a person's presence in California, are among the factors considered in determining California residency:

- Filing California state and federal tax returns with W-2 form (required)

- Possessing a California driver's license and a vehicle registered in California
- Voting in California
- Owning residential property in California for personal use
- Being licensed to practice a profession in California
- Having an active checking and/or savings account in a California bank
- Showing California on military records (Leave and Earnings Statement)
- Possessing a marriage license or a divorce decree issued in California
- Having paid nonresident tuition in another state

Exceptions to Residency Requirements

Several exceptions to the residency rules apply. They include, but are not limited, to the following:

- Active duty military personnel stationed in California
- Active military and dependents previously stationed in California, who are currently enrolled, and subsequently receive orders to change their duty station to-out-of-state
- Dependents of active duty military personnel stationed in California
- Certain minors who remained in California when their parents moved
- Self-supporting minors
- Full-time employees of the college or a state agency, or a child or spouse of the full-time employee

Nonresident Students

A student's residency status is determined at the time of application. Nonresident students must pay nonresident tuition in addition to the enrollment fee and other fees for credit classes. Tuition must be paid in full at the time of registration.

Assembly Bill (AB) 540

Assembly Bill 540 exempts nonresident students, U.S. citizens, and permanent residents who meet the following criteria, from paying nonresident tuition:

- have attended high school in California for three or more years;
- have received a high school diploma or equivalent, including certification of graduation from a California high school;
- have registered as an entering student at, or concurrent enrollment at an accredited institution of higher education in California;
- must file an affidavit with the college stating that he or she has filed an application to legalize his or her immigration status.

This provision applies to students attending community college after January 1, 2002. For additional information contact the college Residency Office.

Incorrect Classification

A student incorrectly classified as a California resident is subject to reclassification as a nonresident and payment of all nonresident tuition. If incorrect classification results from false or misleading facts, a student may be excluded from classes or the college upon notification.

Reclassification

Reclassification to resident status must be requested by the student. Financial independence during the current year and preceding two years will be considered at the time the student requests reclassification. Information regarding requirements for reclassification is available in the Residency or Admissions Office.

Tuition will not be refunded to a student classified as a nonresident due to lack of documentation if, at a later date, documentation is presented for a previous semester.

Appeals

To appeal a residency determination decision, a student may file a Residency Determination Appeal form with the college Admissions and Records Supervisor.

Limitation of Residency Rules

Students are cautioned that this summary of rules regarding residency determination is by no means a complete explanation of their meaning or content.

For further information, contact the residency clerk in the Admissions Office. Changes may have been made in the statutes and in the regulations since this catalog was published.

False Information

Providing false information necessary for establishing residency will result in disciplinary action up to and including dismissal from the college.

Contact the Admissions Office for more details.

International Students

(F-1 Visa Students)

San Diego City College welcomes application from nonimmigrant F-1 visa students. Acceptance into a program at the college is necessary before U.S. Citizenship and Immigration Services Form I-20 (certificate of eligibility) is issued by the college Admissions Office. The decision to grant an acceptance will be based on all evidence received prior to the deadlines. The application forms are available at www.sdcity.edu/international.

General Information

1. An international student must register for and maintain a minimum of 12 units each semester while at City College. Part-time F-1 status will not be approved. The registration status and academic performance of all international students will be monitored by the college.
2. A recent photograph must be submitted with an application (passport size is acceptable).
3. Prospective international students are advised that they must comply with all requirements of the U.S. Citizenship and Immigration Services and of San Diego City College to be admitted as international students.
4. Restriction on Aviation Program. The Federal government prohibits all F-visa (F-1, F-2 and

F-3) students from enrolling in any Aviation Maintenance Technology (AVIM) and/or Aviation Operations (AVIA) classes and programs. No exceptions will be made. Student enrollment is monitored and students will be administratively dropped.

5. A transfer student from another accredited United States college or university must:
 - a. follow set transfer procedures of the U.S. Citizenship and Immigration Services; and
 - b. have pursued a full-time course of study with a minimum GPA of 2.0 (C) at the college the student was last authorized to attend. (An official transcript must be filed.)

Admission Requirements

Application Fee: All international students are required to pay a \$100.00 non-refundable application fee. Upon admission to the college, the fee will be applied toward the first semester nonresident tuition. The fee is valid for up to one year from the date processed.

Admission for Fall Semester: Students must complete all admissions requirements no later than June 1 to be admitted for the fall semester. Since the processing of an application normally requires a minimum of three to five months, students are strongly encouraged to file an application by May 1 of the current year. Students who meet the June 1 deadline will be notified as soon as possible of their admission status.

Admission for Spring Semester: Students must complete all admissions requirements no later than November 1 to be admitted for the Spring semester. Students who meet the November 1 deadline will be notified as soon as possible of their admission status.

Academic Achievement

1. An international student must have graduated from high school (or its equivalent) with a GPA of 2.0 ("C") or better, or have obtained a GED certificate (General Education Development).
2. Official transcripts of all previous secondary and college/university education must be submitted, including an English translation of the transcript, before an application will be considered.

English Proficiency Requirements

To be considered for admission, an international student whose native language is not English must take an International Test of English as a Foreign Language (TOEFL) and score a minimum of 500 on the paper-based test, 173 on the computerized version, or 61 on the internet-based test. For questions regarding the TOEFL test, please visit the Educational Testing Service website at www.ets.org/toefl/. Institutional reports or photocopies will not be accepted. Students may petition to waive the TOEFL requirement under one of the following conditions:

1. completion of a transfer level college English composition course at an accredited United States institution with a grade of "C" or higher;
2. completion of ESL assessment and placement at a level of English 40 (formerly English 62) or higher; in addition, the student must take the prescribed course work at the level of assessment; or
3. a minimum ACT English score of 19 or SAT verbal score of 450.

Advanced Degrees: An international student in possession of an associate degree or its equivalent (completion of about 60 semester units) may be determined to be beyond the course offerings of City college and is encouraged to apply to a four-year college or university.

Financial Resources

1. Each international student must submit verification of sufficient financial resources. The verification must indicate the ability of the student to finance each year's education and living expenses to the satisfaction of the International Student Advisor (normally \$17,500 a school year for two semesters).
2. An international student attending the college must pay all mandatory fees, including nonresident tuition, enrollment fees, and health services fees.
3. Financial aid is not available to F-1 visa international students.
4. An international student may not accept off-campus employment while attending college unless approval is granted by the U.S. Citizenship and Immigration Services.

Health Clearance

1. Students must be in good health and free of communicable diseases. The "Report of Health Examination" form or a medical examination report by a physician must be submitted prior to admission. The medical examination must certify immunization against polio, diphtheria, measles, rubella, and tetanus, and must provide tuberculosis clearance.
2. Each student must present and maintain satisfactory evidence of an active medical insurance policy while in attendance.

Housing

The college is located near public transportation and housing. The college does not provide or assist with housing. Housing is the responsibility of the student.

Visa Students (other than F-1)

All other visa categories or immigrant classifications, other than F-1, must see the Residency Office.

Students who are residing in the United States on other than F-1 student visas must comply with all restrictions on total units enrolled as specified by the U.S. Citizenship and Immigration Services. Students who have additional questions may contact the International Student Admissions Office at the following address:

International Student Admissions Office A-112
 619-388-3476 - Office
 619-388-3652
 San Diego City College
 1313 Park Blvd.
 San Diego, CA 92101

Fees

Community College Enrollment Fee

The **enrollment fee** is assessed of all students, including nonresidents. The fee is currently \$36.00 per unit. Enrollment fees subject to change.

- Waiver of the enrollment fee is available to students who petition and qualify as recipients of benefits under the Temporary Assistance to Needy Families (TANF) program,

the Supplemental Security Income/State Supplementary (SSI) program, or the General Assistance program.

- Indentured apprentices are exempt from enrollment fees for Apprenticeship Program classes only.
- Financial Aid may be available to students who qualify for assistance.

Health Services Fee

All students are assessed a mandatory fee for health services and accident insurance, whether or not they choose to use the health services available to them. The health services fee is currently \$17.00 per semester for Fall and Spring semesters, and \$14.00 for the Summer session. The following students are exempt from the health fee:

- Students who meet the income standards for the Board of Governor's Waiver (**BOGW-A Only**). Contact the Financial Aid Office for eligibility determination.
- Students attending under an approved apprenticeship program.
- Students who depend on prayer for healing, in accordance with the teachings of a bona fide religious sect, denomination, or organization, may petition to have the fees waived.

To apply for an exemption contact the Admissions Office.

For more information, contact the Admissions Office.

Nonresident Tuition

In addition to the enrollment fee and health fee, tuition is charged to students who are not legal residents of California for tuition purposes. The 2011-2012 non-resident tuition fee is \$183.00 per unit.

Liability Insurance

Students enrolled in occupational courses that require direct clinical practice must pay a fee for liability insurance. Liability insurance fee is automatically assessed at the time of registration. The current fee is \$7.00 per semester.

Library

Overdue fines and fees apply to late and lost library materials.

Additional Fees

Parking fees are currently under review and subject to change.

Automobile permits per semester (hanger included)	\$35.00
Carpool permits per semester(Mesa only)	\$30.00
Motorcycle permits per semester	\$17.50
Transcript of Record	\$5.00
(after two have been issued free of charge)	

Loss or damage of equipment and books.....	cost
A.S. College Membership (per academic year)...	\$8.00
Credit by Examination	\$36.00/unit
Student Representation Fee	\$1.00

Note: Students receiving public assistance, or who are determined eligible for financial aid, may purchase a single car permit for \$20.

All fees are subject to change.

Students are expected to buy all books and supplies needed for their courses. Certain occupational programs may require additional expenditures for tools, uniforms and/or liability insurance.

Student Representation Fee: All students attending college classes are required to pay a \$1.00 student representation fee. This fee is expended by the college solely for the purpose of student advocacy efforts to Federal, State and local governments. Students have the right to refuse to pay the fee for religious, moral, political or financial reasons.

Note: A \$25.00 fee will be assessed for any returned checks.

Refunds

1. Fees will be refunded to students who reduce their program in accordance with the following schedule:
 - Classes 1 week or shorter in duration, see Admissions for refund deadline dates
 - Short-Term Sessions (less than 16 weeks)—Beginning Monday of second week
 - Primary Session (16 weeks or more)—Beginning Monday of third week

2. Students who are administratively dropped when a Petition to Challenge is denied will receive a full refund of the class(es) petitioned.
3. Students who are academically disqualified and administratively dropped will receive a full refund.

No refund is given for classes dropped after the deadline.

Students with a valid address on file and who do not have an outstanding financial obligation to the district will receive a refund in the mail or credit to their credit card. Refunds will be sent to students after the add/drop deadline. For payments by check or e-check, there is a five week waiting period for checks to clear the bank before refunds will be processed. For more information contact the Accounting Office on campus.

NOTE: Students who drop all classes and wish to receive a refund must also submit their parking permit before the refund will be granted. If the permit is not returned within the two-week refund period, the student will not receive a refund for the permit.

Student Services

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Counseling Services

Counseling Department

Room A-110

(619) 388-3540

Counselors offer a variety of counseling services, both online and in-person, to students in order to assist and facilitate both personal, career, and academic student growth. The following services are provided to new, continuing, transfer, and returning students.

Academic Counseling—Students are encouraged to speak with counselors regarding any academic planning issues which may arise during their time at San Diego City College. Counselors will assist with identifying academic goals and developing computer generated student education plans through a scheduled appointment.

Career Counseling—Counselors offer guidance to those students who are uncertain of their career path. Students are encouraged to explore career possibilities through the guidance of career counselors, use of research materials and career assessment inventories.

Personal Counseling—Students can also receive personal counseling from the Counseling Office. Counselors will provide support to those students with issues arising from managing the stress of school life and personal life. Personal counseling sessions will be kept confidential.

Walk-in Counseling—A 5–15 minute walk-in session is available through the academic year to students with short questions. Students may walk into the Counseling Office and speak with a walk-in counselor on a first come, first-serve basis.

Counseling Appointments—One hour counseling appointments are available to help students with career, educational, transfer planning, and to discuss personal issues related to academic goals.

Transfer Counseling—Through scheduled appointments students will learn how to successfully transfer to a four-year university. They will receive assistance in researching and choosing the right university based on their individual needs.

Math/English Skills Assessment—Students can sign up for the academic skills assessment which includes the Math and English Placement Tests. Students who have taken Math and English courses

or placement tests from another college or university may not need to take a placement test at San Diego City College.

College Success/Career Planning—Courses are offered in Personal Growth listed in the schedule of classes.

Note: If the student's educational objective is to receive an Associate Degree, a Certificate of Achievement, or to satisfy transfer requirements to a four-year college or university, the student must send all their official transcripts to the District.

Student Transition Services

A-111

(619) 388-3722

The Student Transition Services department provides programs, services, and information resources that enable students to prepare for their future after City College. The department includes the Transfer/Career Center and the Cooperative Work Experience Program.

University Transfer/Career Services

The Transfer/Career Center is a resource center that assists students in planning their transition to a new career, new job, or transfer to a four-year university. The Center also administers guaranteed transfer admission programs to selected universities. The Transfer/Career Center offers assistance in the following areas:

Transfer Resources

- Learn about transfer
- Choose a major
- Choose a transfer university
- Transfer guarantee programs
- Transfer dates & deadlines
- Contact a transfer university
- Transfer coursework requirements
- Apply for admission
- Apply for financial aid
- Apply for scholarships

Career/Employment Prep Resources

- Career assessment/exploration
- Research occupations
- Learn about training programs
- Research potential employers
- Find an internship
- Search for jobs
- Create a resume
- Create a cover letter
- Prepare to interview

Visit the Transfer/Career Center website:
www.sdcc.edu/transfer.

Cooperative Work Experience Program

The Cooperative Work Experience Program awards college credit for learning experiences that take place on a job or internship. The goals and assignments for completion of work experience courses are formulated with the student's workplace supervisor under the direction of the course instructor. More information on Work Experience courses is available in the Programs of Instruction section of the catalog under courses numbered 270 or 272. Course enrollment is limited and may not be available to all students.

To learn more about Cooperative Work Experience or to apply for enrollment in a Work Experience course, visit the Transfer/Career Center in room A-111, 619-388-3722.

English for Speakers of Other Languages (ESOL)

The English as a Second Language Program is designed to prepare students to read, write, speak and listen at a level that enables them to succeed in college courses. The program consists of four levels and the student is assigned a level based on the result of his/her placement test. Students interested in enrolling in ESOL courses should schedule an assessment test for placement into the appropriate skill level.

For more information on the English as a Second Language Program, students should contact the college Counseling Office.

Puente Project

L-114 (619) 388-3668

The Puente Project, co-sponsored by the University of California and the Community Colleges, is an academic preparation, retention and transfer program. Puente is a year-long program in which students participate in three components:

- Writing - students enroll in English 49 for the Fall and English 101 for the Spring semester. Course materials focus on Latino/Chicano literature & experience to enhance writing skills.
- Counseling - academic, personal, transfer and career counseling is offered. Students enroll in PERG 140 for the fall semester.
- Mentoring - students are exposed to various career options through their close involvement with mentors.

Materials utilized in the Puente Project come from the Latino/Chicano perspective. Classes are open to all students. If interested in participating, please stop by the Academic Success Center and speak to the Puente Counselor or visit our website: www.sdcc.edu/puente.

Umoja

L-114 (619) 388-3796

The Umoja Community is a learning community that seeks to engage, connect, educate, support, and encourage students through a program of math, English, and personal growth courses to prepare students for transfer to 4-year colleges and universities. Course materials, discussions, and activities focus on African-American culture, literature, and experiences.

- Program Components:
- Assessment for math and English
- Orientation
- Counseling
- Academic/Cultural Enrichment Activities

- Mentoring
- Supplemental Instruction/Tutoring
- Umoja Village

If you are interested in joining the Umoja Community, please visit Erin Charlens in the new Academic Success Center.

First-Year Experience (FYE) Program

L-206

(619) 388-3998

The First Year Experience (FYE) program is a success program for students transitioning from high school or for any student just starting college. The 'experience' is designed as a learning community to provide academic, personal, and career support to each student. The FYE program at San Diego City College ensures that first-year students have the tools and support necessary to succeed the first year and beyond. With the support of Counselors, faculty, and student peers, FYE students will find their first year to be welcoming and successful. To apply or for more information, please stop by the Transfer-Career Center or visit our website: www.sdcity.edu/fye.

MESA Program

L-115

(619) 388-3156

The Mathematics, Engineering, and Science Achievement (MESA) program enables educationally disadvantaged students to prepare for and graduate from a four-year college or university with a math-based degree in areas such as engineering, the sciences, computer science, and mathematics. Through MESA, students develop academic and leadership skills, increase educational performance, and gain confidence in their ability to compete professionally.

MESA has particular interest in and focus on students from those groups who historically have had the lowest levels of attainment to four-year and graduate level programs. By closing this achievement gap, MESA students and graduates will be better able to make significant contributions to the socioeconomic well-being of their families and their communities.

In MESA you will find:

- A place to study with other students in your major
- Walk-in tutoring in math and science
- Easy access to computers and printing
- MESA advantage program to develop your skills and your resume
- Laptop computers, scientific calculators, and textbooks available for short-or long-term loan
- Current scholarship, internship, and other opportunities posted directly to your inbox
- Activities and competitions sponsored by the San Diego MESA Alliance.

If you are interested in joining the MESA program, please visit the new Academic Success Center.

Disability Support Programs and Services (DSPS)

A-115

(619) 388-3513
tty (619) 388-3313

City College provides programs and services for students with disabilities in compliance with State and Federal legislation including Section 504 and 508 of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) and Americans with Disabilities Amendments Act (ADAA). Student participation in the program is voluntary.

Eligible students who have a verifiable disability qualify for support services through the Disability Support Programs and Services (DSPS) Department. The programs and services are designed to support students in the achievement of their academic and vocational goals. Specialized classes for students with disabilities are available to support the college academic and vocational programs through DSPS, Computer Business Technology and Education, Personal Growth, and Health and Exercise Science Departments. Services provided include priority enrollment, readers, interpreters for deaf students, note takers and/or note taking materials, use of special equipment and adaptive devices, and specialized counseling and referral. Liaison

with community agencies is also an important component of the program.

Academic accommodations such as the use of tape recorders in the classroom and the modification of test-taking procedures may be arranged. The campus is physically accessible.

Anyone interested in applying for services or obtaining further information may contact the Disability Support Programs and Services Department or visit our website: www.sdccity.edu/studentresources/dsps/.

Animals on Campus

Animals are not permitted on campus with the exception of authorized service animals for persons with disabilities. Refer to Administrative Procedure (AP 3105.1) *Service Animals*.

Service Animals

The San Diego Community College District will permit qualified students with disabilities to use service animals in district facilities and on district campuses (Policy 3105.2) in compliance with state and federal law. Please contact the DSPS Office at the enrolled college for review and approval for the issuance of SDCCD identification.

Extended Opportunity Programs and Services (EOPS)

L-117

(619) 388-3209

What is EOPS?

EOPS is a state-funded student support services program. Its purpose is to provide special recruitment, retention, and transition services to eligible students. The services offered are “above and beyond” those offered by the college’s Student Services division. The primary services include assistance in the following areas: priority enrollment, counseling/advisement, preparation for transition to four-year colleges and universities. For detailed information on all services offered and application procedures, please contact the EOPS Office in

the Academic Success Center or visit our website: www.sdccity.edu/studentresources/EOPS.

You may be eligible if you are enrolled full-time (at least 12 units). At least 9 of these units must be taken at City College. In addition you must meet all of the following criteria:

1. You are a resident of the state of California, as determined by the Admissions Office.
2. You are (or plan to be) a full-time student.
3. You qualify to receive a Board of Governors Waiver A or B.
4. You have not completed 70 (or more) units of degree-applicable college course work. This includes courses taken at other colleges.
5. You are determined to be educationally disadvantaged by meeting any one of the following criteria:
 - a. You do not qualify to enroll for the minimum level English or mathematics courses required for your degree objective.
 - b. You have not fulfilled the requirements for a high school diploma or General Educational Development (GED).
 - c. Upon graduation from high school your high school grade point average (GPA) was 2.5 or less on a 4.0 scale.
 - d. You have been enrolled in a Math or English course, or program that is considered to be developmental or remedial.
 - e. You have been enrolled in an English as a Second Language (ESL) class or program.
 - f. In the judgment of the EOPS director, using state guidelines, you are determined to be educationally challenged.

Cooperative Agencies Resources for Education (CARE)

EOPS students who are single parents, have a child less than 14 years of age, and receive CalWORKs Cash Aid are encouraged to apply for the program’s Cooperative Agencies Resources for Education (CARE) component. CARE provides additional support services, to address those needs that are unique to single parents.

How to Apply

Students interested in applying for the EOPS program must complete an EOPS application and the Free Application for Federal Student Aid (FAFSA). These applications are available in the EOPS Office and the FAFSA is available online at www.fafsa.ed.gov. Students should apply early to ensure that they receive consideration for all services. It is recommended that students complete the FAFSA by the priority filing date published by the Financial Aid Office.

Summer Readiness Program (SRP)

SRP is a summer orientation for first-time college students. Participating students attend classes four days each week for eight weeks. The course work includes material designed to develop and enhance college survival skills. In addition to the course work, a full compliment of EOPS services is provided.

Applications are usually available in early January and accepted until the end of the first week of May. Interested applicants should contact the EOPS Office for details.

CalWORKs/TANF Believe Program Training, Education and Service

L-206

619 388-3797

The CalWORKs Program offers support services to students who receive TANF/CalWORKs funding. Specialized services have been designed to support students in their education, career and personal goals while meeting their welfare to work requirements. Services include academic/vocational counseling, job placement, workshops, work study placement and verification of welfare to work hours. For more information, contact the CalWORKs office in the Academic Success Center or visit our website: www.sdcc.edu/studentresources/CalWORKs.

Financial Aid

A-113

619-388-3501

The Financial Aid Office is committed to assisting students who might otherwise be unable to continue their education because of financial disadvantage.

Financial Aid funds are administered in accordance with a nationally established policy of financial assistance for education. The basis of this policy is the belief that students and their parents have the primary responsibility for meeting educational costs. The amount of the contribution expected from students and their family is determined by careful analysis of family financial strength taking into consideration net income, number of dependents, allowable expenses, indebtedness, and assets. The U.S. Department of Education, in cooperation with congress and educational agencies, has established procedures which are used in making an evaluation of the amount families can be expected to contribute.

Application

Application materials are available on January 1st for the following academic year. The priority filing date for aid is April 15. Students filing their application by this date will be considered first in the award process. The Cal Grant deadline is March 2. However, applications for financial aid are accepted throughout the school year until June 30, 2012.

Prospective students do not have to be accepted for admission to City College to apply for financial aid. In fact, students should apply for aid as soon as the applications are available whether or not they have been admitted to the college, since the application process for federal aid can take up to 12 weeks. However, students must be enrolled in order to be offered any financial aid funds.

All financial aid applicants must complete the Free Application for Federal Student Aid (FAFSA). The completed application (FAFSA) should be mailed directly to the processor according to the instructions. The FAFSA is now available online at www.fafsa.ed.gov.

Academic transcripts from prior colleges attended must be submitted before the processing of a financial aid application can be completed. Academic transcripts must be submitted directly to the District Records Office.

Eligibility

In order to be eligible to apply for financial aid, a student must be a citizen or permanent resident of the United States or be in the country for other than a temporary purpose with the intention of becoming a permanent resident.

Eligible non-citizens must provide proof of permanent residency for Federal Aid (Alien Registration Cards, I-94, I-155, I-688, or U.S. Immigration and Naturalization letter granting asylum, etc.). F-1 Visa students are not eligible for financial aid at City College. For further information regarding other eligible immigration status, contact the Financial Aid Office.

Students who do not have a high school diploma or equivalent are required to demonstrate "Ability to Benefit" from instruction. Information is available in the Financial Aid Office.

Awards

Awards take the form of a "package" of financial aid, usually consisting of grant money and work-study, depending on the financial need of the applicant and availability of funds. Awards may be adjusted at any time upon notice of receipt of resources not previously reported or a change in enrollment status. Revisions to awards may be possible because personal financial circumstances are so unpredictable. **If funding is available, aid for valid educational expenses not already covered in the student cost budget may be increased.**

Financial aid checks are usually ready for disbursement approximately four or five weeks after the start of classes. Pell Grant disbursements are based on enrollment levels at the time of payment and will not be adjusted. However, SEOG, Cal Grant and loan payments will be adjusted according to enrollment status. If you withdraw from classes after aid has been disbursed to you, you may be required to repay all or part of this aid. (see "Return of Title IV Funds" below)

An automated system is available in the college bookstores to allow California resident students, who are enrolled in at least six units, to use a portion of their estimated Pell Grant to purchase books and supplies one week prior, and two weeks after, the start of the semester. Funds will be set aside from each eligible student's Pell Grant and placed in a special account in the bookstore. This account may be used for the purchase of books and supplies until

the funds are exhausted. The account is valid at the City, Mesa, and Miramar College and ECC bookstores, regardless of where students are taking classes.

Student will be responsible for paying back the Bookstore Pell grant if student does not attend classes.

Students who elect not to purchase books from the college bookstore, or have any funds remaining on account, will receive the funds in the mail or by direct deposit with the remainder of their Pell Grant award according to the Pell Grant payment schedule for the semester.

Students must be making satisfactory academic progress as determined by the Standards of Satisfactory Academic Progress for Financial Aid Recipients. Copies are available in the Financial Aid Office.

Return of Title IV Funds

Federal law requires that if a student receives a Federal grant and then drops/withdraws from all his/her classes, he/she may owe money back to the Federal Government.

Note that the earlier a student drops/withdraws, the more money he/she may have to pay back.

- If a student receives LOAN money and withdraws, he/she may pay back the money according to the normal rules of the loan program.
- If a student receives WORKSTUDY money and withdraws, he/she does not owe anything back and may keep the salary earned, but must stop working immediately.

For more detailed information, contact the Financial Aid Office.

Financial Aid Programs Available

Following is a basic description of the programs available. Contact the Financial Aid Office for detailed descriptions and eligibility requirements, or visit our website.

Enrollment Fee Assistance: Board of Governors Waiver (BOGW)

State law requires that students attending the college pay an enrollment fee. Students enrolled in credit classes are currently required to pay \$36 per unit.

The college offers the Board of Governors Waiver (BOGW), a state-funded program which will waive the enrollment fee for all eligible applicants.

Effective Fall 2006, students who are eligible for a Board of Governors Waiver will be required to pay the health fee. The health fee will no longer be waived for students who are eligible for a BOGW other than students who are eligible for a BOGWA (TANF/CalWorks, SSI/SSP, or General Assistance).

If you are a California resident, you will qualify for a BOGW if any **one** of the following statements applies to your current status:

- You have already qualified for financial aid, such as a Federal Pell Grant or a Cal Grant.
- You have need as determined by Federal Methodology.
- You or your family are receiving TANF (Temporary Assistance to Needy Families), SSI (Supplemental Security Income), or General Assistance/General Relief.
- You have a letter from the Department of Veterans Affairs certifying that you meet the eligibility requirements of "certain disabled veterans, dependents of certain deceased or disabled veterans."
- You are a dependent of a deceased or disabled veteran of the California National Guard. You must submit a letter of certification from the California National Guard Adjutant General's Office.
- You meet the following income standards:

Number In Household (including yourself)	Total Family Income for 2010 (adjusted gross income and/or untaxed income)
1	\$16,245 or less
2	\$21,855 or less
3	\$27,465 or less
4	\$33,075 or less
5	\$38,685 or less
6	\$44,295 or less
7	\$49,905 or less
8	\$55,515 or less

Add \$5,610 for each additional family member.

To determine your eligibility for the Board of Governor's Waiver based on the above income standards, you will be considered independent if:

- You do not live with your parents or your parent's registered domestic partner
- You were not claimed as an exemption on any federal income tax filed by your parents or your parent's registered domestic partner in 2010

Federal Pell Grant

The Federal Pell Grant is the largest federal grant program and is the foundation of a student's total "aid package." Eligibility is determined by the federal government using a standard formula for all applicants.

Enrollment status will be frozen after the add/drop period and will be the basis for Pell disbursement. Once the Pell Grant award has been processed it will not be adjusted for additional units added during the semester.

Federal Supplemental Educational Opportunity Grant (FSEOG)

FSEOG is a federal grant program designed to assist students who have the greatest demonstrated financial need. Awarding of FSEOG funds is determined by the Financial Aid Office based on available resources.

Cal Grants

The Cal Grant program is administered by the California Student Aid Commission to help low-income students attend college. Students at the college may receive Cal Grant B or C.

- To be eligible for Cal Grant B a student must be a California resident and pursuing an undergraduate academic program of not less than one academic year.
- Cal Grant C is designed for students enrolled in a vocational program who are California residents from a low or middle-income family.
- See the Financial Aid Bulletin for important dates and deadlines.

Chafee Grant Program

The Chafee Grant is a federal program that is administered by the California Student Aid

Commission to provide financial assistance to prior Foster Youth. The applicant must be certified by the State Department of Social Services of their Foster Youth status prior to reaching age 16. The grant has no citizenship requirement; however, non-citizens without a valid Social Security Number must call the CSAC for additional steps and information. The program awards a maximum of \$5,000 per academic year. Renewal applicants must maintain satisfactory academic progress as defined by the school.

Federal Work Study

Federal Work Study (FWS) allows students the opportunity to earn part of their financial aid by working in assigned jobs, both on and off campus. The salary received is at least equal to the current minimum wage, but many Federal Work Study jobs pay more than minimum wage. Federal Work Study differs from the other financial aid programs in that a student is allocated a certain amount of money to earn. As work on the job is completed, a time card is submitted for the hours worked just as at a regular job. Once a month the student receives a paycheck for the hours worked. Once the amount allocated in the financial aid package is earned, the job ends.

Scholarships

Students are encouraged to apply for scholarships, which are available for students who meet the qualifications. These awards are donated by individual contributors, clubs and organizations both on campus and in the community. Amounts are determined by the donors and vary. Qualifying criteria may include that the student meet financial need, a designated grade point average or other requirements to be eligible for consideration. Scholarship applications may be obtained from the City College Office of Student Affairs, Room D-106 or at the website: www.sdccity.edu/scholarships.

Student Loans

Applicants for student loans will be subject to college policy requirements regarding enrollment status, length of attendance, number of units completed, and total amount of previous loans.

Contact the Financial Aid Office for other requirements.

William D. Ford Federal Direct Loan Program

The Federal Direct Loan is a federal loan program where you borrow directly from the Federal Government. The interest rate for new loans is a fixed rate which is currently 3.4% for loans disbursed from July 1, 2011 to June 30, 2012. New Federal regulations require schools to disburse loans only after the signed Promissory Note has been accepted. You are required to pay the Department of Education loan processing fees that are currently 1%. The fees are deducted from the proceeds of your loan.

To qualify, a student must be enrolled in at least six units, demonstrate Satisfactory Academic Progress for aid recipients and must demonstrate financial need through the federal methodology using the FAFSA Application. To apply for a Federal Direct Loan, students must complete a mandatory loan entrance counseling session. The counseling session is required even if a student has attended a Stafford loan workshop in the past. If a student has attended a Direct Loan workshop at San Diego City, or Miramar Colleges in the past, it will not be necessary to conduct another entrance counseling session. Students must contact the Financial Aid Office or visit the College website for application procedures. You may complete the entrance counseling session online at: www.studentloans.gov.

The Financial Aid Office will be notified when the session has successfully been completed. In addition, you must fill out a Loan Request Form form your Financial Aid Office. You must complete an online multi-year Master Promissory Note at: www.studentloans.gov.

You may also be required to submit an Educational Plan and be enrolled at the campus of your declared major. Please ask your Financial Aid Office for more information. The actual loan amount for which you are eligible will be determined by the Financial Aid Office. Checks will be disbursed twice per loan period. If you are a first-time student or borrower, your check will not be disbursed until at least 30 days after the start of the semester. If you have "Late Start" classes, of loan funds to be disbursed, you must be actively attending classes in at least six units.

For additional information, contact the Financial Aid Office.

Federal Direct Plus Loan

Parents of dependent undergraduate students may borrow from the PLUS loan program. The amount borrowed may be up to the cost of attendance minus any financial aid. Checks will be payable to the parent. Parents must begin repayment within 60 days of receiving full dispensation of the loan. The interest rate is a fixed rate. Borrower must meet all other financial aid eligibility requirements, including completing the FAFSA.

National Student Clearinghouse

All current SDCCD student's enrollment levels are automatically sent to the National Student Clearinghouse. Submission and disclosure of enrollment levels is a federal requirement for students with current and past student loans according to regulations. Enrollment information for students with no prior or current student loan history is protected from disclosure by the contractual agreement between the National Student Clearinghouse and the San Diego Community College District. For more information, please contact your campus Financial Aid Office.

New Horizons Program

Room L-206

619-388-3424

The New Horizons Program assists students in completing their educational goals by providing support services such as textbook loans, public transportation assistance, student academic planner, study skills booklet, nontraditional career information, life skills and job search information and referrals to campus and community programs/services.

To qualify for the New Horizons Program, students must be enrolled in a career/technical major or certificate program and eligible for the Board of Governors Waiver (BOGW), and be one or more of the following: single parent, single pregnant woman, displaced homemaker, disabled student, student enrolled in a nontraditional program, or student with limited English proficiency.

Anyone interested in program services may call or stop by the office located in the Academic Success Center.

Veterans and Service Members

A-109

619-388-3504

Veterans Center Military Service Connected Benefit Programs

The San Diego Community Colleges have been approved to offer military service connected benefit programs leading to a certificate, an Associate Degree or transfer to a four-year institution. The Veterans Affairs Office staff provides guidance to veterans and assists them in the selection of educational programs which qualify for veterans benefits. The final responsibility for monitoring the process of qualification for educational benefits resides with the individual. Each veteran must read, understand, and comply with the many rules, regulations, and procedures that influence the benefit process.

Students on active duty and veterans who have been discharged within the past 2 years may be eligible to receive priority registration. Check with the college Admissions/ Residency Office for eligibility. An Active Duty Military ID card or DD214 are required for verification.

Students must be enrolled in at least one half of their total approved units at City College to be certified by the college.

Failure to take the proper classes can result in an overpayment and the reduction or termination of benefits.

Disabled Veterans

Veterans who qualify for educational benefits as disabled veterans may be entitled to special educational benefits. Veterans should visit the Veterans Administration Regional Office, 8810 Rio San Diego Drive, San Diego, CA, 92108, to determine their eligibility for disabled status (Telephone: 1-800-827-1000).

Veterans with disabilities are encouraged to pursue services offered through Disability Support Programs and Services, A-115.

Veteran Dependent Exemption

Children and spouses of U.S. Veterans with service connected disabilities may be eligible for waiver of college fees and/or for a small monthly payment. For more information see the Veterans Affairs Office.

Liability

The veteran assumes full liability for any overpayment of veterans benefits.

All persons receiving educational benefits must report to the Veterans Affairs Office after enrollment every **semester** to continue their benefits. In addition, a Student Education Plan (SEP) must be on file by the end of the first semester; otherwise, certification of VA benefits will be delayed for the second semester. This plan must be developed and reviewed by a counselor.

Number of Units Required

For students enrolled in a degree program under CH: 30, 31, 34, 35, 1606/1607, the following number of units are required each semester to qualify for educational and training allowance:

12 units or more	full allowance
9–11.5 units	three-fourths allowance
6–8.5 units	one-half allowance
2–5.5 units	one-quarter allowance*

* Chapters 32 and 1606 only.

Short-term and summer session courses are computed proportionately for payment purposes.

Withdrawal/Change of Classes

Veterans are required to notify the campus Veterans Affairs Office when they stop attending class, withdraw from the college, or add or drop a class. Such changes should be reported immediately after completing the add/drop procedure through Reg-e. Failure to comply with this regulation will be grounds for decertification of VA benefits.

Veterans Academic Progress

A veteran student on Academic or Lack of Progress probation status will be disqualified when his/her grade point average (GPA) falls below 2.0 the subsequent semesters. The College Veterans Affairs Office is required to notify the Department of Veterans Affairs (DVA) of this status. The DVA will terminate benefits unless it can be shown that the

student is pursuing an appropriate objective and has a reasonable chance for success in the chosen program. Please contact the Veterans Affairs Office for more information.

Readmission After Termination Status

Students who wish to be considered for readmissions after the VA termination will be required to meet with a Counselor and develop a Student Success Plan prior to being readmitted.

Repeated Classes

Veterans may not receive benefits for a repeat of a course in which a grade of "A," "B," "C," "D," or "P" has already been earned. Although District policy allows a student to repeat a course in which a "D" grade has been received, the course may be certified for benefits only if this catalog states that a grade of "C" or better in that course is required to earn a degree or meet a prerequisite.

Work Experience

Veterans may be approved for Work Experience classes only if it is required for their major or electives are available according to their education plan.

Transcripts

All official transcripts of prior college work and military schools, including copies of form DD214 or DD295 covering all periods of military service, **must be on file in the Records Office by the end of the first semester of attendance at this college.** Certification for benefits for the second semester will be withheld if transcripts are not received.

Learning Resource Center (LRC)

Offering far more than the best views on campus, the San Diego City College's Learning Resource Center (LRC) continues to evolve and mature as the college's information hub. Located in the R building on the southeast corner of campus at Park Boulevard and B Street, the LRC is comprised of the Library on the second (main) and third floors, and the Independent Learning Center, the Multimedia Center, a

videoconference room, and CitySITE (faculty/staff development) on the first floor. Televisions on each floor are set to broadcast cable news and campus information. San Diego City College students will find that the LRC provides a multitude of services and scholarly research resources specifically selected to support their academic success. Below is a brief overview of our resources and services. Please see our web site <http://www.sdcity.edu/lrc/> for more details and updated information.

LRC / Library

619-388-3421

The Library offers an extensive collection of scholarly books, e-books, periodicals, and a robust selection of reference and periodical databases available onsite, via wireless and remotely to currently enrolled students. San Diego City College students find help with their research and information needs at the Library's Information Center (reference desk), by phone, email, or 24/7 online chat. Students may enroll in a transferable one-unit course, Information Literacy and Research Skills (LIBS 101). Scheduled tours, instructor requested research sessions, access to reserves, circulation services, group study rooms and inter-library loan services between district colleges are also offered.

LRC / Independent Learning Center

619-388-3265

The Independent Learning Center (ILC) creates a welcoming environment for students pursuing independent learning experiences to augment their in-class activities and improve their academic skills. Beyond maintaining a media collection and the supporting equipment, the ILC provides access to the Internet, a wide array of specialized software required for a variety of classes, adaptive software, and Microsoft Office Suite.

LRC / Multimedia Center

619-388-3418

The Multimedia Center (MMC) offers the campus the educational technology required for a college in the 21st Century by providing maintenance and support for smart classrooms and all campus-wide audiovisual equipment. Students have access to current technologies and the hands-on training needed to create successful classroom presentations. Through the Student Affairs Office, the MMC fills the

requests for technical assistance for campus-wide student events. Through the MMC's digital signage service, campus information is distributed via campus television.

Tutorial/Learning Center

The Tutorial/Learning Center is located in the Academic Success Center (L-205). The Center is dedicated to providing high quality academic support to students in art, science, vocational, and technological courses. The goal is for each student to become an independent learner, who will succeed in the collegiate setting.

Peer tutors are carefully selected and professionally trained for most college subjects. Many are bilingual to help with language barriers. They provide FREE individual and small group tutoring in most subject areas. All City and ECC college students may sign up for appointments and walk-in. Study group sessions facilitated by a tutor are available for high demand courses. Online tutoring is also available on limited subjects.

The Tutorial/Learning Center offers FREE one-hour academic skill workshops such as note-taking, test-taking, memory enhancement and time management to strengthen student learning skills.

The current hours of operation are Monday through Thursday 9:00 am–6:00 pm, Friday 9:00 am–1:00 pm

Center for Reading, Writing, English as a Second Language (ESOL), and Critical Thinking

The Center for Reading, Writing, ESOL, and Critical Thinking is located in the Academic Success Center (L-209). The Center offers peer tutoring in reading, writing, and critical thinking assignments in classes across the curriculum. Tutors can provide assistance on a wide variety of assignments at any stage of the writing process. No appointments are taken; tutors see students on a walk-in basis. The Center is a free service to City College students. Hours, which may vary from semester to semester, are posted outside the Center.

Mathematics Center

The Mathematics Center provides two services to students: walk-in tutoring and self-paced math courses. The Center, located in the Academic Success Center (L-Building), is open both day and

evening hours. Tutoring is available to all City College students. The tutors include trained student tutors and Math Department faculty.

Tutoring is on a first-come, first-served basis.

The self-paced mathematics courses provide students with a flexible alternative to the traditional lecture courses for Math 038, 046, and 096. The courses are open-entry/open-exit and self-paced. A variety of learning resources are available including video lectures and computer tutorials keyed to the student's textbook, live and videotape workshops, on-line testing for immediate feedback, tutors and an on-site counselor.

For additional information, come to the Academic Success Center (L-208), or call 619-388-3583.

Computer Services

The use of District computer equipment is limited to District staff and students.

Student Health Services

Medical and Nursing Services

A-116 619-388-3450

Mental Health Counseling Center

A-221 619-388-3539

The City College Student Health Services program consists of medical, nursing and mental health care. Mental health care and support is provided by the **Mental Health Counseling Center**. The medical/nursing program provides preventive and primary health care with referrals to community resources as needed. Students are welcome to walk-in to see a nurse or to call the office to schedule an appointment with the Student Health Services physician or nurse practitioners. Our services for students are confidential and free/low cost.

Ambulatory medical care is provided by the physician or nurse practitioners. This includes history and physical assessment of skin, muscle, joint, respiratory, gastrointestinal, endocrine and/or other system problems. Medical referrals are made to the community as indicated. Laboratory tests and prescription medications are provided at low cost, as ordered by the physician or nurse practitioner. First aid is provided for minor problems. For severe or

life-threatening issues, emergency care is accessed through the Emergency Medical Transport System of San Diego. All students are strongly encouraged to obtain immunizations against communicable diseases as recommended by public health authorities.

Student Accident Insurance/Claims

The Student Health Fee provides coverage for on-campus accidents or college-related injuries. All student campus injuries are processed through Student Health Services in A-116 as soon as possible after the accident/injury has occurred.

For additional information on Mental Health Counseling, please refer to Mental Health Counseling Center.

Mental Health Counseling Center

A-221

619-388-3539

The Mental Health Counseling Center supports student success through focus on personal, social, and emotional well-being. Our services for students are confidential and free. Mental health counseling is designed to support mental health in a proactive, relaxed and caring atmosphere.

Mental health and personal counseling services are provided by a licensed Clinical Social Worker, Masters level staff and graduate interns/trainees and include:

- Individual short and long term strengths-based therapy
- Couples and family therapy
- Crisis intervention and referral
- Group therapy services
- Workshops and Psycho-educational seminars
- Cognitive behavioral based therapy and relaxation training targeted at addressing specific school related problems such as test taking anxiety, math anxiety, panic disorder, etc.
- Faculty/Staff consultations
- Disciplinary evaluations/behavioral contract compliance

- Working closely with Student Health Services for wrap around care

Students can walk in or call the office to schedule a confidential appointment. For additional information, please see Student Health Services.

Child Development Center

The Child Development Center offers an educational program for children six weeks to five years old. Enrollment is limited to children of parents attending day classes at City College. Parents must participate at the center three hours per week each semester their child is enrolled and must take Child Development 160 and 161 the first year they enroll a child in the program. Applications for enrollment are accepted for the first two weeks in July for fall enrollment, the first two weeks in December for spring enrollment, and the first two weeks in May for summer enrollment. The Center is located at 16th and B streets. For additional information, call 619-388-3205 or drop by (License Numbers 370805154 and 370806172).

Evening child development services are available for families that meet Head Start criteria.

Student Affairs/ Campus Life

D-106

619-388-3498

The Office of Student Affairs provides a variety of services designed to provide students with a well-balanced academic and extra-curricular college experience.

Student leadership, clubs and organizations, cultural events, graduation and other support services are offered through the Office of Student Affairs.

For scholarship information, emergency book loans, fee deferments and information about other support services, contact the Office of Student Affairs.

Associated Students (AS) Student Government

The Associated Students is the governing body that finances, organizes, and directs many student-

sponsored programs and activities at City College. Elections are held annually for Associated Student President and other officers. Any student with a current City College ID card may vote in the elections.

Current district policy allows the elected Associated Student President to share the responsibility of the Student Trustee. The Student Trustee is a non-voting member of the Board of Trustees of the San Diego Community College District and represents the student voice on the Board.

Any student who participates in student government may not have any Policy 3100 violations of suspension or greater, as stated on their official student record.

Associated Students Membership

Support your student body by purchasing an AS membership. The membership entitles you to special benefits and privileges. The revenues go back to support various campus events and activities. See the Associated Students office, D-105A for a list of current benefits.

Student Organizations

There are over 20 active student organizations on campus reflecting the diversity of interest of the student body. Students wishing to charter or register new organizations should contact the Student Affairs Office in D-106.

Athletics

P3-200

619-388-3486

San Diego City College is a member of the Pacific Coast Athletic Conference for the following sports: men's and women's soccer, men's and women's cross country, men's and women's basketball, softball, men's and women's tennis, baseball, men's and women's volleyball, and women's badminton.

The Pacific Coast Athletic Conference includes the following colleges: Cuyamaca, Grossmont, Imperial Valley, MiraCosta, Palomar, San Diego Miramar, San Diego Mesa, and Southwestern.

Students must meet academic requirements established by the California Community College Athletic Association and pass a physical examination before they are determined to be eligible to

participate in Intercollegiate Athletics. Academic eligibility includes enrollment as a full-time student during the season of the sport and a minimum 2.0 grade point average by their sophomore season of play. For more information, contact the Athletic Office.

Physical Education Classes/ Intercollegiate Sports Disclaimer

Participation in all sports and physical education activities involves certain inherent risks.

Risks may include, but are not limited to, neck and spinal injuries that may result in paralysis or brain injury, injury to bones, joints, ligaments, muscles, tendons and other aspects of the muscular skeleton system; and serious injury, or impairment, to other aspects of the body and general health, including death. The San Diego Community College District, its officers, agents and employees are not responsible for the inherent risks associated with participation in physical education classes/intercollegiate sports.

Students are strongly advised to consult a physician prior to participating in any physical education activity.

Performing Arts

The City College Department of Visual and Performing Arts offers students the opportunity to present plays several times a year and sponsors student performances in music and dance which are open to the public as well as the college community.

Journalism

College Newspaper

The college newspaper, City Times, provides students the opportunity for class workshops and actual experience in writing, editing, and producing a newspaper.

CityWorks

CityWorks is San Diego City College's creative arts annual anthology which features artwork, poetry and prose from students and the community. Each October, the staff seek artists, writers,

poets, journalists, editors, graphic designers, photographers, and other creative people to seek submissions for the issue, which is published each spring. For more information, call 619-388-3522.

Support Services

Campus Bookstore

A-12

619-388-3548

San Diego City College Bookstore stocks textbooks and supplies required for classes. Rental books are also available. The Bookstore provides study aids, snacks, school supplies, clothing, backpacks, gift items, greeting cards, emblematic items and general books. The bookstore also buys back textbooks for cash.

Extended hours are offered at the beginning of each semester. Textbooks can also be purchased online at www.bookstore.sdccd.edu/city. For additional information or special Bookstore hours, please contact the bookstore or visit our website listed above.

Cafeteria

The cafeteria is located in D-123 and serves both day and evening students.

College Police Department

The College Police Department is responsible for providing public safety, law enforcement and crime prevention services. Its mission is to maintain peace and order and a safe learning environment throughout our District. It is also responsible for administering the campus parking program, lost and found and the building security program.

The police business office is located in V-118. For information and general assistance, call 619-388-3461. For police assistance, call 619-388-6405. Emergency services are provided 24 hours a day 7 days a week. Learn more about College Police at <http://police.sdccd.edu>.

Police Escort and Related Services

The college police are available to provide escort, vehicle battery jumps, and vehicle lockout services during regular hours of operation. Students who wish to use these services should call College

Police Dispatch at 619-388-6405 or go any of the College Police Offices at the following locations for assistance:

City College (V-118).....	619-388-6411
Mesa College (Q-100).....	619-388-2749
Miramar College (B-102).....	619-388-7353 or 858-536-7353
College Police Dispatch.....	619-388-6405

Emergency Calls

The college will not interrupt classroom instruction to deliver messages, except in extreme emergencies. All calls/inquiries should be referred to the College Police Dispatch at 619-388-6405.

Parking

Student parking permits are available for purchase during registration through “Reg-e” or at the campus accounting office. Permits paid for before classes begin are mailed and those purchased after classes begin must be picked up. You do not need a permit in student lots for the first two-weeks of each sixteen-week semester. Check in College Police for parking permits not received before the grace period ends. Parking permits are not required on Saturdays, Sundays or college holidays including winter break and spring break. Students may not utilize staff/ faculty parking areas unless they are the owner of a valid state issued disabled placard. Owners of valid disabled placards may also park at meters without paying and are not required to buy a parking permit.

There are visitor parking meters and/or time limited visitor parking at each campus. Students may not utilize visitor parking. All meters require deposit of coins. Permits are not valid at meters. All campuses have pay and display machines for visitor and student use. Pay and display permits are only valid in student parking lots.

Parking permits are required Monday through Friday, 7:00 am to 10:00 pm. Parking between the hours of 11:00 pm and 6:00 am requires an overnight permit issued through College Police.

Bicycles must be parked only in designated bicycle racks. Students are not allowed to ride bicycles or motorized bikes on campus. Violators are subject to disciplinary action.

For additional information on parking visit your campus police office or call parking services at 619-388-6415.

Transportation for Disabled Students

Paratransit (curb-to-curb) service is available for a fee to persons with disabilities who cannot use public transportation. ADA certification is required. Please contact DSPS for additional information or forms for certification. Students may also contact MTS (Metropolitan Transit System) at 888-517-9627.

Vehicle Immobilization/Booting/Towing/Hold

Vehicles that accumulate five (5) or more unpaid parking citations are subject to immobilization (booting) of their vehicle and/or impound (towing) at owners expense. In addition a hold may be placed on the vehicle registration. If a vehicle accumulates \$100 or more in outstanding fines a hold may be placed on student records/grades.

Emergency Cell Phone Numbers

The College encourages students to provide cell phone numbers to communicate with them in the event of a college or district-wide emergency. Students can log-on to Reg-e at: <http://studentweb.sdccd.edu> to provide this important information.

Academic Information and Regulations

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Academic Information

SDCCD Online Learning Pathways

San Diego City, Mesa, and Miramar Colleges

QUALITY ONLINE LEARNING

Learn anytime, anywhere with our convenient, flexible online courses that fit your busy schedule. Enjoy interactive communication with your classmates and instructor as you complete your coursework in an engaging, supportive learning environment. Our quality online courses are developed and taught by experienced instructors from our three colleges—City College, Mesa College, and Miramar College.

Want to get started? Find out if online learning is for you at www.sdccdonline.net/newstudents.htm

Get ready for online learning success! Visit www.sdccdonline.net/students/training/

Online students receive 24/7 Technical Support at <https://www.sdccdonline.net/help> or by calling toll free 866-271-8794. For login instructions visit www.sdccdonline.net/login.

Honors

The Honors Program is open to any student who meets appropriate general and departmental criteria. Honors classes are designed to provide strongly motivated students with a more in-depth or cross-disciplinary curriculum and a highly interactive classroom experience.

The Honors core curriculum, “A World of Ideas,” is intended for prospective transfer students who are interested in a multicultural, multinational perspective in their courses. The goal of the program is to facilitate and increase transfer to the University of California, California State University, and distinguished private universities, as well as to enhance employability for vocational students.

Special transfer agreements also exist for City College Honors students at the following four-year colleges and universities: UCLA, UC Santa Cruz, UC Irvine, UC Riverside, USC, Pomona College, Occidental College, SDSU, Pepperdine University, Chapman University, Whitman College and Pitzer

College. For information on eligibility requirements and course offerings, see the schedule of classes or call 619-388-3512.

The Honors Program is open to all students (part-time or full-time, day or evening) and can be found in all disciplines (vocational, liberal arts, fine arts, sciences, business, etc.). For specific criteria and other information, please consult the schedule of classes or contact the campus Honors Coordinator.

Students enrolled in an Honors section (including an honors contract), may not transfer to a regular section after the deadline to make a schedule adjustment for the class. Petition for Honors Credit after the course has been completed will not be permitted.

Off-Campus Programs

City College offers credit courses at various locations throughout San Diego such as the Educational Cultural Complex (ECC), military bases, and other educational and social service agency sites. These classes are open to all City College students and are designed to provide an opportunity for students to attend classes in the community that are short term, easily accessible, and have convenient parking. Off-Campus courses are listed in the class schedule each semester under the subject in which they are offered. Classes held at the ECC location are also listed in the ECC section of the class schedule. If you have questions about enrolling in off-campus classes, call the Off-Campus Programs office at 619-388-3924 or 619-388-4883.

Study Abroad Programs

San Diego City College offers students the opportunity to study in different countries around the world in order to develop global competencies and to increase cultural awareness while making progress towards completion of academic goals.

Classes are held at educational institutions in the host country. Field trips, excursions, and visits to sites of cultural and historical interest are components of the program. Housing arrangements include family homestays, student apartments, and/or residence halls. Costs vary from \$5,900 to \$6,900 for semester programs and are less for summer programs. Financial aid is available for students who qualify and sometimes scholarships are offered.

Semester Abroad Programs: These enhanced learning opportunities have been offered every semester in countries such as the United Kingdom,

Costa Rica, Argentina, Australia, France, Spain, and Italy. Courses are taught by faculty from California community colleges. Classes offered abroad meet general education requirements, are mostly CSU and UC transferable, and are selected to take advantage of the host country's history, environment, and culture.

Summer Abroad Programs: Programs from 10 days to 4 weeks in length are often available during the summer for college credit. Spanish immersion in Mexico has been offered; as well as, photography in Italy and the United Kingdom, and graphic design and dance in Mexico.

Contact Information: Additional information is available from the International Education Coordinator at 619-388-3652.

Dean's List

A Dean's Honor List is compiled at the close of each academic year (Fall and Spring). To be eligible for the Dean's Honor List, a student must complete 12 units or more during the academic year and have earned a grade point average of 3.5 or better.

Cooperative Work Experience

Under certain circumstances, students can receive academic credit for their current employment or volunteer service. For registration information, call 619-388-3475 or contact the Work Experience Office in A-111 at the beginning of each semester.

Distance Education

For those students who need (because of child care, health, or scheduling problems) an alternative way to attend college, City College offers a broad range of courses on-line. The majority of instructional time will be spent viewing the programs and completing assigned readings in the text and/or workbook, however, these courses also meet on campus several times during the semester.

Check the current schedule of classes for a listing of Distance Education courses. For more information, please contact the Distance Education Office at 619-388-3534.

Class Attendance

Students are responsible for dropping or withdrawing from classes they are no longer attending.

Students who remain enrolled in a class beyond the published withdrawal deadline will receive an evaluative letter grade. See the details for each class in the online schedule for these important dates.

Grading System

Unit of Credit: A unit of credit represents one hour of lecture or recitation and two hours of preparation per week, or three hours of laboratory per week for one semester.

Academic Grades

Grade	Standing	Grade Points per Unit
A	Excellent	4
B	Good	3
C	Satisfactory	2
D	Passing—less than satisfactory	1
F	Fail	0
P	Pass	Units earned not counted in GPA
NP	No Pass	Units not counted in GPA

The grade point average (GPA) is determined by dividing the total grade points earned by the total grade point units completed as listed in the chart above.

Administrative symbols: P/NP—Pass/No Pass; I—Incomplete; W—Withdrawal; IP—In Progress; RD—Report Delayed. Administrative symbols are not used in the computation of GPA. See below for further explanation.

Pass/No Pass (P/NP) is a nonpunitive grading system where such units earned will be counted in satisfaction of curricular requirements but will be disregarded in determining a student's grade point average. For more specific information, refer to the discussion of the "Pass/No Pass Grading Policy" on page 46.

Incomplete: A symbol of "I," Incomplete, may be assigned by an instructor when a student has been unable to complete academic work for unforeseeable emergency and/or justifiable reason at the end of term. A copy of the "Assignment of Incomplete" form will be mailed to the student and the original retained in the Office of the Vice President, Student Services. A final grade will be assigned when the work stipulated has been completed and evaluated by the instructor or

when the time limit for completion of the work has passed. An "I" must be made up no later than one year following the end of the term in which it was assigned. In the event of unusual, verifiable circumstances beyond the student's control, a petition may be filed in the Office of the Vice President, Student Services for extension of the one-year time limit. Course repetition is not permitted to remove an Incomplete.

Withdrawal: An official withdrawal from classes may be requested by the student or initiated on his/her behalf by the instructor or Vice President, Student Services.

The following conditions apply to official withdrawal:

1. No record of the class will be entered on the student's permanent record if the official withdrawal is made by the deadline to drop without a "W" being recorded as published in the schedule of classes.
2. If the withdrawal is made after the deadline for withdrawing without a "W" and prior to the deadline for withdrawal published in the class schedule for that session, a "W" will be recorded on the student's permanent record. No exceptions to this policy will be made. Petitions will not be accepted for exception to policy.
3. A student attending a session after the deadline for withdrawal will not be eligible to receive a "W" and must be assigned an academic grade or other administrative symbol by the instructor. Exceptions to this policy will be made only upon verification of extreme circumstances beyond the control of the student. Petitions requesting exception must be filed in the Admissions Office.
4. Withdrawal (W) symbols will be used in the calculation of lack of progress probation and disqualification status.
5. Students on active duty or reserve duty may petition for a "military" withdrawal. This withdrawal is not calculated in the determination of academic progress and is noted on the student's academic record.
6. Students will be allowed a maximum of four withdrawals in any course.

In Progress: A symbol of "IP," In Progress, will be assigned when a class extends beyond the normal end of a semester or summer session, that is, when the class "carries over" from one term to the next. The appropriate grade, however, shall be assigned

and appear on a student's record for the term during which the course is completed. The "IP" will remain on the academic record. The "IP" shall not be used in the calculation of a student's grade point average.

Grade Challenge

Final grades will be issued at the end of each semester. In the absence of mistake, fraud, incompetence, or bad faith, the determination of the student's grade by the instructor shall be final once it has been recorded by the Registrar's Office.

A student may challenge a grade or request a change to his/her academic record within two years from the date of issuance. Requests beyond two years will not be accepted. Students wishing to challenge a grade should first attempt to resolve the challenge informally with the instructor. Grade challenges must be processed under District Procedure 3001.2, Grade Challenge Procedure. Copies of Procedure 3001.2 are available in the Office of the Vice President, Instruction.

Pass/No Pass Grading Policy

Consistent with District policy, a student in good standing may elect to be graded on a Pass/No Pass basis in a course. A grade of "Pass" (P) shall be awarded only for work which otherwise would have received a grade of "C" or better. Work that would have received a "D" or "F" will be graded "No Pass" (NP). The units earned will be counted in satisfaction of program requirements, but will be disregarded in determining a student's grade point average.

IMPORTANT: Students who plan to transfer to a four-year institution should review the Pass/No Pass acceptance policy of the transfer institution prior to petitioning for this grading option. Restrictions in the San Diego Community College District also apply.

Limitations:

1. No course required in the student's major may be taken for Pass/No Pass. Some departments may limit this option further.
2. No more than 12 units of a student's coursework completed in the San Diego Community College District may be graded on a Pass/No Pass basis. Courses offered only on a Pass/No Pass basis are excluded from this limit.

Conditions:

1. Students who wish to be graded on a Pass/No Pass basis must submit a petition to the

Admissions Office by the deadline date listed in the schedule of classes. No exceptions to the deadline will be made.

2. An evaluation on a Pass/No Pass basis may not later be changed to a letter grade nor may the reverse occur. No exceptions to this condition will be made. Petitions will not be accepted for exception to policy.

There are courses in which Pass/No Pass grades are used exclusively; these are designated in the catalog course description by the statement "Pass/No Pass Only." In addition, there are courses which cannot be taken on a Pass/No Pass basis; these are designated in the course description by the statement "Letter Grade Only."

Effective Fall 2009, the Credit/No Credit (CR/NC) grading option changed to Pass/No Pass (P/NP).

Standards of Academic Progress

Students are in good academic standing when they have a 2.0 grade point average or higher and have completed at least 60% of units they have attempted. There are two kinds of probation and disqualification, one based upon GPA (Academic Performance) and the other based upon the number of units completed (Progress Performance).

Certain programs may have more stringent standards for academic progress. Consult the program director for more information.

Students enrolled in the core curriculum of medically-related programs will be governed by the probation and disqualification policies as outlined in the program policy manuals that reflect the tenets of safe medical practice and respond to program accreditation guidelines.

Academic Probation*

A student whose grade point average falls below a 2.0. A student on academic probation will return to good standing when his/her cumulative grade point average reaches or exceeds 2.0.

Academic Disqualification

A student on academic probation status will be disqualified when his/her non-cumulative GPA falls below 2.0 in a subsequent semester. An enrollment

hold will be placed on the student's record. Students who are disqualified after registering for the subsequent semester will be administratively dropped from all classes.

Lack of Progress Probation*

A student shall be placed on lack of progress probation when the percentage of all (cumulative) units for which entries of "W," "I," and "NP" are recorded reaches or exceeds 40%.

Lack of Progress Disqualification

A student who has been placed on lack of progress probation shall be disqualified and an enrollment hold placed on the student's record when the percentage of units for which entries of "W," "I," and "NP" are recorded in a subsequent semester (not-cumulative), reaches or exceeds 40%. Students who are disqualified after registering for the subsequent semester will be administratively dropped from all classes.

* EXCEPTIONS:

Provisional, Joint Diploma and Special Admit High School students who do not maintain good academic standing will be automatically disqualified. **Probationary Status will not apply!**

If Disqualified:

- Special Admit High School students will not be permitted to re-enroll without approval from a high school counselor.
- Joint Diploma students must see a JD counselor for readmission.

Readmission After Disqualification

Note: *Disqualification status is determined based upon Progress Performance, Academic Performance, or a combination of both.*

First Disqualification

- Students who wish to be considered for readmission after the first disqualification will be required to meet with a counselor and develop a Student Success Plan prior to being readmitted. Students who are disqualified after registering for the next semester will be administratively dropped from all classes.

Second Disqualification

- Students who are disqualified a second time will be required to sit out for one semester. Students

who are disqualified after registering for the next semester will be administratively dropped from all classes.

Third Disqualification

- Students who are disqualified a third time (and each disqualification thereafter) will be required to sit out for one year. Students who are disqualified after registering for the next semester will be administratively dropped from all classes.

Academic Regulations

Honest Academic Conduct

Honesty and integrity are integral components of the academic process. Students are expected to be honest and ethical at all times in their pursuit of academic goals in accordance with Policy 3100, Student Rights, Responsibilities and Administrative Due Process. Procedure 3100.3 describes the Academic and Administrative Sanctions for Students who are found to be cheating. A copy of Procedure 3100.3 can be obtained in the Office of the Vice President of Student Services.

Course Repetition Policy

- No course in which a "C" or better grade has been earned may be repeated.
- Students will not be allowed more than four enrollments in any activity course, regardless of grade or symbol earned.
- Each course in which an unsatisfactory grade ("D," "F," or "NP") has been earned may be repeated once without a petition. The course being repeated must be the same as the original course, not its equivalent. Only the newly-earned units and grades will be used in computing the grade point average.

Academic Renewal Without Course Repetition

A student with a semester of substandard academic performance (GPA below 2.00) that is not reflective of present demonstrated ability may petition to have the substandard semester disregarded in computation of grade point average.

The following conditions apply:

1. To be eligible for academic renewal without course repetition a student must:
 - a. have transcripts from all institutions attended officially on file;
 - b. successfully complete, in an accredited college or university, 15 units with a grade point average of at least 2.0 subsequent to the work to be disregarded. All courses taken during the semester/session in which the student reaches or exceeds the 15 unit minimum will be used in computing the 2.0 grade point average;
 - c. have one year elapsed since the semester/session to be disregarded was completed.
2. Students with degrees or certificates: Semester/session(s) prior to earning a degree or certificate are not eligible for academic renewal.
3. A maximum of 24 units or two semesters or summer sessions, may be disregarded, whichever is greater. For purposes of academic renewal for summer session work, a summer session will be defined as all courses which commence after the termination of the spring semester and end prior to the commencement of the fall semester. Intersession work will be included in the spring semester. Short-term or carry-over classes will be considered to be part of the semester or session in which credit is awarded or a grade is posted to the student's permanent academic record.
4. For any semester/session in which course work is to be disregarded, all courses in that semester/session will be disregarded including satisfactory grades.
5. If grade alleviation has already been applied two times for a course included in the semester to be disregarded, the course will not be eligible for academic renewal without repetition and will remain on the academic record.
6. If previous action for academic renewal has been applied to coursework included in the semester to be disregarded, the course will not be eligible for academic renewal without repetition and will remain on the academic record.
7. Academic renewal without course repetition may be applied to substandard semester(s) from another accredited institution.

8. Similar actions by other accredited institutions will be honored and also be counted as part of 24 units or two semesters/sessions limit to be disregarded.
9. The permanent academic record will be annotated in such a manner that the record of all work remains legible, ensuring a true and complete academic record.
10. Recalculation of the grade point average will be used toward qualification for graduation with honors.
11. Academic standing for the semester/session(s) will not be adjusted.
12. Once the petition is approved, the action is not reversible.

Course Repetition—Lapse of Time

Academic departments may require that courses for the major be completed within a specified number of years prior to the granting of the Associate Degree, Certificate of Achievement, or Certificate of Performance. Students may be required to repeat a course in which a satisfactory grade (A,B,C, or P) has already been earned. Students with questions about the applicability of previous coursework are advised to consult the department as early as possible.

Disability Support Programs and Services (DSPS) Repeat

Additional repetitions of a course to accommodate a student's disability-related needs may be permitted. For students with disabilities, course repetition is determined on an individual student basis. Contact DSPS Office on campus for more information.

Mandated Training

Students who are required to meet a legally mandated training requirement as a condition of continued paid or volunteer employment may repeat a credit course any number of times. Students should complete the Mandated Training Course Repetition form.

For more information on course repetition, consult the Counseling Office at your college.

Transcripts of Record

A student may order an official transcript of record online, in person, by mail or via fax. To order an official transcript online, visit: <https://studentweb.sdccd.edu/transcript/>.

Transcripts ordered online will be mailed within 1-2 business days.

To order a transcript in person, a student may complete a request at the Accounting Office at the college, or in person at the Office of the Registrar, San Diego Community College District, Administrative Office, 3375 Camino del Rio South, San Diego, CA 92108.

Payment of fees must be made prior to processing a request for transcripts.

The following policy has been adopted by the San Diego Community College District Board of Trustees regarding the issuance of transcripts of record:

1. The first two transcripts will be issued without charge.
2. There will be a charge of \$5.00 for each additional transcript.
3. All transcript requests are processed within 10 working days except "RUSH" orders.
4. **A \$10.00 special handling fee will be charged for all "RUSH" order transcript requests, including hand carried transcript requests ordered at the District Office. Rushed transcripts are processed within 24-48 hours of receipt. The special handling fee will be charged per request.**

Requests will not be processed if students have outstanding holds preventing the release of the official transcript.

All official copies of the student's permanent record are in the Office of the Registrar. The Office of the Registrar will certify only to the accuracy of the records prepared by and issued directly from that office to another institution.

More information on ordering transcripts is available at: <http://studentweb.sdccd.edu/docs/transcript.pdf>

Transcripts of Prior Academic Credit

Students with credit from other colleges and universities must have official transcripts on file with the college.

- Official transcripts are those sent directly from one institution to another.
- Transcripts will only be accepted for one year after issuance.

- Transcripts brought in by students may be accepted for unofficial purposes such as prerequisite clearance.
- Transcripts are required even if prior credits do not appear relevant or if units were taken years ago.
- Students receiving veterans benefits must have transcripts on file within one semester.
- Certain programs require transcripts before admission to the program.
- Official transcripts from other institutions become the property of the college and will not be duplicated or returned.
- Official transcripts should be sent to the following address:

San Diego Community College District
3375 Camino del Rio South, Rm. 100
San Diego, CA 92108-3883

Please note: Foreign transcripts are not evaluated by the college. This service is available through outside companies for a fee. Contact the college Evaluations Office for additional information.

Transferability of Credits

Credits from other regionally accredited institutions may be accepted for transfer credit after evaluation by District evaluators. San Diego City College **will not** accept the transfer credits from another institution if the evaluation by the District and college evaluators determines that the credits received from another accredited institution do not meet the equivalent standards for a similar course taken at San Diego City College.

Academic Credit for Nontraditional Education

Academic credit may also be available to currently enrolled SDCCD students for skills or knowledge not obtained by formal scholastic experience or for prior course work with content determined equivalent to district courses.

Credit is available through the following:

- College-Level Examination Program (CLEP)
- Defense Activity for Non-Traditional Education Support (DANTES)
- Advanced Placement Examinations (AP)
- International Baccalaureate (IB)

To obtain credit, students must request the evaluation of tests and meet the following criteria:

- All official transcripts must be on file.
- Official copies of test scores must be submitted.
- Students must be currently enrolled.

Limitations on credit by standardized examination:

- Tests cannot be used to meet the American Institutions nor laboratory requirements. The English composition requirement can be met by the AP exam.
- Credit will not be granted for equivalent courses completed.
- Grades are not assigned, nor is the credit used in calculating grade point average.
- Departmental approval is required to satisfy requirements in the student's major.
- Credit granted by SDCCD does not necessarily transfer to other institutions. Transferability of credit is determined by the receiving college or university.
- A maximum of 30 cumulative units may be granted for acceptable scores on any combination of AP, CLEP, DANTES, or IB.

The tables below indicate the score necessary, the credit allowed, and the area(s) satisfied for each of the examinations accepted for credit.

Advanced Placement Test (AP)

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
Art History 3, 4, or 5	ARTF 110 or 111 Area C 6 semester units (3 units GE credit)	Area C1 or C2 3 semester units	6 semester units	Area 3A or 3B 3 semester units	8 quarter/5.3 semester units
Biology 3, 4, or 5	Area B 6 semester units (4 units GE credit)	Area B2 & B3 4 semester units	6 semester units	Area 5B (with lab) 4 semester units	8 quarter/5.3 semester units
Calculus AB or BC/AB subscore¹ 3, 4, or 5	Area A2 & Mathematics Competency 3 semester units (3 units GE credit)	Area B4 3 semester units	3 semester units	Area 2A 3 semester units	4 quarter/2.6 semester units
Calculus BC¹ 3, 4, or 5	Area A2 & Mathematics Competency 6 semester units (3 units GE credit)	Area B4 3 semester units	6 semester units	Area 2A 3 semester units	8 quarter/5.3 semester units
Chemistry 3 <i>Exam taken prior to Fall 2009</i>	CHEM 200 Area B 6 semester units (6 units GE credit)	Area B1 & B3 6 semester units	6 semester units	Area 5A (with lab) 4 semester units	8 quarter/5.3 semester units
Chemistry 4 or 5 <i>Exam taken prior to Fall 2009</i>	CHEM 200 & 201 Area B 6 semester units (6 units GE credit)	Area B1 & B3 6 semester units	6 semester units	Area 5A (with lab) 4 semester units	8 quarter/5.3 semester units
Chemistry 3 <i>Exam taken Fall 2009 or later</i>	CHEM 200 Area B 6 semester units (4 units GE credit)	Area B1 & B3 4 semester units	6 semester units	Area 5A (with lab) 4 semester units	8 quarter/5.3 semester units
Chemistry 4 or 5 <i>Exam taken Fall 2009 or later</i>	CHEM 200 & 201 Area B 6 semester units (4 units GE credit)	Area B1 & B3 4 semester units	6 semester units	Area 5A (with lab) 4 semester units	8 quarter/5.3 semester units
Chinese Language & Culture 3, 4, or 5	Area C 6 semester units (3 units GE credit)	Area C2 3 semester units	6 semester units	Area 3B & 6A 3 semester units	8 quarter/5.3 semester units
Comparative Government & Politics 3, 4, or 5	POLI 103 Area D 3 semester units (3 units GE credit)	Area D8 3 semester units	3 semester units	Area 4H 3 semester units	4 quarter/2.6 semester units
Computer Science A¹ 3, 4, or 5	3 semester units	N/A	3 semester units	N/A	2 quarter/1.3 semester units

Advanced Placement Test (AP)

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
Computer Science AB¹ 3, 4, or 5	6 semester units	N/A	6 semester units	N/A	4 quarter/2.6 semester units
English Language 3, 4, or 5	ENGL 101 Area A1 6 semester units (3 units GE credit)	Area A2 3 semester units	6 semester units	Area 1A 3 semester units	8 quarter/5.3 semester units ²
English Literature 3, 4, or 5	ENGL 101 Area A1 & C 6 semester units (6 units GE credit)	Area A2 & C2 6 semester units	6 semester units	Area 1A or 3B 3 semester units	8 quarter/5.3 semester units ²
Environmental Science 3 <i>Exam taken prior to Fall 2009</i>	Area B 4 semester units (4 units GE credit)	Area B1 & B3 or Area B2 & B3 4 semester units	4 semester units	Area 5A (with lab) 3 semester units	4 quarter/2.6 semester units
Environmental Science 4 or 5 <i>Exam taken prior to Fall 2009</i>	BIOL 120 Area B 4 semester units (4 units GE credit)	Area B1 & B3 or Area B2 & B3 4 semester units	4 semester units	Area 5A (with lab) 3 semester units	4 quarter/2.6 semester units
Environmental Science 3 <i>Exam taken Fall 2009 or later</i>	Area B 4 semester units (4 units GE credit)	Area B1 & B3 4 semester units	4 semester units	Area 5A (with lab) 3 semester units	4 quarter/2.6 semester units
Environmental Science 4 or 5 <i>Exam taken Fall 2009 or later</i>	BIOL 120 Area B 4 semester units (4 units GE credit)	Area B1 & B3 4 semester units	4 semester units	Area 5A (with lab) 3 semester units	4 quarter/2.6 semester units
European History 3, 4, or 5	Area C or D 6 semester units (3 units GE credit)	Area C2 or D6 3 semester units	6 semester units	Area 3B or 4F 3 semester units	8 quarter/5.3 semester units
French Language 3, 4, or 5 <i>Exam taken prior to Fall 2009</i>	Area C 6 semester units (6 units GE credit)	Area C2 6 semester units	6 semester units	Area 3B & 6A 3 semester units	8 quarter/5.3 semester units
French Language 3, 4, or 5 <i>Exam taken Fall 2009 or later</i>	Area C 6 semester units (3 units GE credit)	Area C2 3 semester units	6 semester units	Area 3B & 6A 3 semester units	8 quarter/5.3 semester units
French Literature 3, 4, or 5 <i>Exam taken prior to Fall 2009</i>	Area C 6 semester units (3 units GE credit)	Area C2 3 semester units	6 semester units	Area 3B & 6A 3 semester units	8 quarter/5.3 semester units

Advanced Placement Test (AP)

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
German Language 3, 4, or 5 <i>Exam taken prior to Fall 2009</i>	Area C 6 semester units (6 units GE credit)	Area C2 6 semester units	6 semester units	Area 3B & 6A 3 semester units	8 quarter/5.3 semester units
German Language 3, 4, or 5 <i>Exam taken Fall 2009 or later</i>	Area C 6 semester units (3 units GE credit)	Area C2 3 semester units	6 semester units	Area 3B & 6A 3 semester units	8 quarter/5.3 semester units
Human Geography 3, 4, or 5	GEOG 102 Area D 3 semester units (3 units GE credit)	Area D5 3 semester units	3 semester units	Area 4E 3 semester units	4 quarter/2.6 semester units
Italian Language and Culture 3 <i>Exam taken prior to Fall 2010</i>	ITAL 101 Area C 6 semester units (3 units GE credit)	Area C2 3 semester units	6 semester units	Area 3B & 6A 3 semester units	8 quarter/5.3 semester units
Italian Language and Culture 4 or 5 <i>Exam taken prior to Fall 2010</i>	ITAL 102 Area C 6 semester units (3 units GE credit)	Area C2 3 semester units	6 semester units	Area 3B & 6A 3 semester units	8 quarter/5.3 semester units
Japanese Language and Culture 3, 4, or 5	Area C 6 semester units (3 units GE credit)	Area C2 3 semester units	6 semester units	Area 3B & 6A 3 semester units	8 quarter/5.3 semester units
Latin Literature 3, 4, or 5 <i>Exam taken prior to Fall 2009</i>	Area C 6 semester units (3 units GE credit)	Area C2 3 semester units	6 semester units	Area 3B & 6A 3 semester units	4 quarter/2.6 semester units
Latin: Vergil 3, 4, or 5	Area C 3 semester units (3 units GE credit)	Area C2 3 semester units	3 semester units	Area 3B & 6A 3 semester units	4 quarter/2.6 semester units
Macroeconomics 3, 4, or 5	ECON 120 Area D 3 semester units (3 units GE credit)	Area D2 3 semester units	3 semester units	Area 4B 3 semester units	4 quarter/2.6 semester units
Microeconomics 3, 4, or 5	ECON 121 Area D 3 semester units (3 units GE credit)	Area D2 3 semester units	3 semester units	Area 4B 3 semester units	4 quarter/2.6 semester units
Music Theory 3, 4, or 5 <i>Exam taken prior to Fall 2009</i>	Area C 6 semester units (3 units GE credit)	Area C1 3 semester units	6 semester units	N/A	8 quarter/5.3 semester units

Advanced Placement Test (AP)

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
Physics B 3, 4, or 5 <i>Exam taken prior to Fall 2009</i>	Area B³ 6 semester units (6 units GE credit)	Area B1 & B3³ 6 semester units	6 semester units ³	Area 5A (with lab)⁴ 4 semester units	8 quarter/5.3 semester units ⁵
Physics B 3, 4, or 5 <i>Exam taken Fall 2009 or later</i>	Area B³ 6 semester units (4 units GE credit)	Area B1 & B3³ 4 semester units	6 semester units ³	Area 5A (with lab)⁴ 4 semester units	8 quarter/5.3 semester units ⁵
Physics C (electricity / magnetism) 3, 4, or 5	Area B³ 4 semester units (4 units GE credit)	Area B1 & B3³ 4 semester units	4 semester units ³	Area 5A (with lab)⁴ 3 semester units	4 quarter/2.6 semester units ⁵
Physics C (mechanics) 3, 4, or 5	Area B³ 4 semester units (4 units GE credit)	Area B1 & B3³ 4 semester units	4 semester units ³	Area 5A (with lab)⁴ 3 semester units	4 quarter/2.6 semester units ⁵
Psychology 3, 4, or 5	PSYC 101 Area D 3 semester units (3 units GE credit)	Area D9 3 semester units	3 semester units	Area 4I 3 semester units	4 quarter/2.6 semester units
Spanish Language 3, 4, or 5 <i>Exam taken prior to Fall 2009</i>	Area C 6 semester units (6 units GE credit)	Area C2 6 semester units	6 semester units	Area 3B & 6A 3 semester units	8 quarter/5.3 semester units
Spanish Language 3, 4, or 5 <i>Exam taken Fall 2009 or later</i>	Area C 6 semester units (3 units GE credit)	Area C2 3 semester units	6 semester units	Area 3B & 6A 3 semester units	8 quarter/5.3 semester units
Spanish Literature 3, 4, or 5 <i>Exam taken prior to Fall 2009</i>	Area C 6 semester units (6 units GE credit)	Area C2 6 semester units	6 semester units	Area 3B & 6A 3 semester units	8 quarter/5.3 semester units
Spanish Literature 3, 4, or 5 <i>Exam taken Fall 2009 or later</i>	Area C 6 semester units (3 units GE credit)	Area C2 3 semester units	6 semester units	Area 3B & 6A 3 semester units	8 quarter/5.3 semester units
Statistics 3, 4, or 5	MATH 119 Area A2 & Mathematics Competency 3 semester units (3 units GE credit)	Area B4 3 semester units	3 semester units	Area 2A 3 semester units	4 quarter/2.6 semester units
Studio Art: Drawing 3, 4, or 5	ARTF 150A & 155A 3 semester units	N/A	3 semester units	N/A	8 quarter/5.3 semester units ⁶

Advanced Placement Test (AP)

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
Studio Art: 2-D Design 3, 4, or 5	3 semester units	N/A	3 semester units	N/A	8 quarter/5.3 semester units ⁶
Studio Art: 3-D Design 3, 4, or 5	3 semester units	N/A	3 semester units	N/A	8 quarter/5.3 semester units ⁶
U.S. Government & Politics 3, 4, or 5	POLI 101 Area D & US-2 3 semester units (3 units GE credit)	Area D8 & US-2 3 semester units	3 semester units	Area 4H & US-2 3 semester units	4 quarter/2.6 semester units
U.S. History 3, 4, or 5	HIST 109 Area C or D & US-1 6 semester units (3 units GE credit)	Area C2 & US-1 or Area D6 & US-1 3 semester units	6 semester units	Area 3B & US-1 or Area 4F & US-1 3 semester units	8 quarter/5.3 semester units
World History 3, 4, or 5	HIST 101 Area C or D 6 semester units (3 units GE credit)	Area C2 or D6 3 semester units	6 semester units	Area 3B or 4F 3 semester units	8 quarter/5.3 semester units

* Credit may not be awarded for exams which duplicate credit for the same content earned through other means.

1. If a student passes more than one exam in calculus or computer science, only one exam may be applied to UC / CSU baccalaureate or SDCCD associate degree / certificate requirements.
2. Students passing both English AP exams will receive a maximum of 8 quarter units / 5.3 semester units toward UC baccalaureate degree requirements.
3. Students passing more than one AP exam in physics will receive a maximum of 6 units of credit toward CSU baccalaureate or SDCCD associate degree / certificate requirements and a maximum of 4 units of credit toward CSU GE certification or SDCCD associate degree GE requirements.
4. Students passing either of the Physics C exams will be required to complete at least 4 additional semester units in IGETC Area 5 coursework to meet the IGETC Area 5 unit requirement.
5. Students passing more than one physics AP exam will receive a maximum of 8 quarter units / 5.3 semester units toward UC baccalaureate degree requirements.
6. Students passing more than one AP exam in studio art will receive a maximum of 8 quarter units / 5.3 semester units of credit toward UC baccalaureate degree requirements.

To request an official transcript, write to: PSAT/NMSQT Office, P.O. Box 6720, Princeton, NJ, 08541-6720

International Baccalaureate (IB) Credit

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
Biology 5-7 Higher Level	Area B 6 semester units (3 units GE credit)	Area B2 3 semester units	6 semester units	Area 5B (without lab) 3 semester units	8 quarter/5.3 semester units
Chemistry 5-7 Higher Level	Area B 6 semester units (3 units GE credit)	Area B1 3 semester units	6 semester units	Area 5A (without lab) 3 semester units	8 quarter/5.3 semester units

International Baccalaureate (IB) Credit

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
Economics 5-7 Higher Level	ECON 120 & 121 Area D 6 semester units (3 units GE credit)	Area D2 3 semester units	6 semester units	Area 4B 3 semester units	8 quarter/5.3 semester units
Geography 5-7 Higher Level	Area D 6 semester units (3 units GE credit)	Area D5 3 semester units	6 semester units	Area 4E 3 semester units	8 quarter/5.3 semester units
History (any region) 5-7 Higher Level	Area C or D 6 semester units (3 units GE credit)	Area C2 or D6 3 semester units	6 semester units	Area 3B or 4F 3 semester units	8 quarter/5.3 semester units
Language A1 (any language) 4 Higher Level	Area C 6 semester units (3 units GE credit)	Area C2 3 semester units	6 semester units	N/A	N/A
Language A1 (any language) 5-7 Higher Level	Area C 6 semester units (3 units GE credit)	Area C2 3 semester units	6 semester units	Area 3B¹ 3 semester units	8 quarter/5.3 semester units
Language A2 (any language) 4 Higher Level	Area C 6 semester units (3 units GE credit)	Area C2 3 semester units	6 semester units	N/A	N/A
Language A2 (any language) 5-7 Higher Level	Area C 6 semester units (3 units GE credit)	Area C2 3 semester units	6 semester units	Area 3B¹ 3 semester units	8 quarter/5.3 semester units
Language B (any language)² 4 Higher Level	6 semester units	N/A	6 semester units	N/A	N/A
Language B (any language)² 5-7 Higher Level	6 semester units	N/A	6 semester units	Area 6A	8 quarter/5.3 semester units
Mathematics 4 Higher Level	Area A2 and Mathematics Competency 6 semester units (3 units GE credit)	Area B4 3 semester units	6 semester units	N/A	N/A
Mathematics 5-7 Higher Level	Area A2 and Mathematics Competency 6 semester units (3 units GE credit)	Area B4 3 semester units	6 semester units	Area 2A 3 semester units	8 quarter/5.3 semester units
Physics 5-7 Higher Level	Area B 6 semester units (3 units GE credit)	Area B1 3 semester units	6 semester units	Area 5A (without lab) 3 semester units	8 quarter/5.3 semester units
Psychology 5-7 Higher Level	Area D 3 semester units (3 units GE credit)	Area D9 3 semester units	3 semester units	Area 4I 3 semester units	8 quarter/5.3 semester units
Theatre 4 Higher Level	Area C 6 semester units (3 units GE credit)	Area C1 3 semester units	6 semester units	N/A	N/A

International Baccalaureate (IB) Credit

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
Theatre 5-7 Higher Level	Area C 6 semester units (3 units GE credit)	Area C1 3 semester units	6 semester units	Area 3A 3 semester units	8 quarter/5.3 semester units
* Credit may not be awarded for exams which duplicate credit for the same content earned through other means.					
1. Students who pass the Language A1 or A2 Higher Level exam in a language other than English with a score of 5 or higher will also receive credit for IGETC area 6A.					
2. If a student passes more than one test in the same language other than English (e.g., two exams in French) then only one examination may be applied.					
Credit is not awarded for the following exams: Art.					
IB transcripts may be requested from your high school..					

College Level Examination Program (CLEP)

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
American Government 50 or higher	Area D 3 semester units (3 units GE credit)	Area D8 3 semester units	3 semester units	N/A	N/A
American Literature 50 or higher	Area C 3 semester units (3 units GE credit)	Area C2 3 semester units	3 semester units	N/A	N/A
Analyzing and Interpreting Literature 50 or higher	Area C 3 semester units (3 units GE credit)	Area C2 3 semester units	3 semester units	N/A	N/A
Biology 50 or higher	Area B 3 semester units (3 units GE credit)	Area B2 3 semester units	3 semester units	N/A	N/A
Calculus 50	Area A2 and Mathematics Competency 3 semester units (3 units GE credit)	Area B4 3 semester units	3 semester units	N/A	N/A
Chemistry 50 or higher	Area B 3 semester units (3 units GE credit)	Area B1 3 semester units	3 semester units	N/A	N/A
College Algebra 50 or higher	Area A2 and Mathematics Competency 3 semester units (3 units GE credit)	Area B4 3 semester units	3 semester units	N/A	N/A

College Level Examination Program (CLEP)

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
College Algebra - Trigonometry 50 or higher	Area A2 and Mathematics Competency 3 semester units (3 units GE credit)	Area B4 3 semester units	3 semester units	N/A	N/A
English Literature 50 or higher	Area C 3 semester units (3 units GE credit)	Area C2 3 semester units	3 semester units	N/A	N/A
Financial Accounting 50 or higher	3 semester units	N/A	3 semester units	N/A	N/A
French – Level I 50 or higher	6 semester units ¹	N/A	6 semester units ¹	N/A	N/A
French – Level II 59 or higher	Area C 12 semester units ¹ (3 units GE credit)	Area C2 3 semester units	12 semester units ¹	N/A	N/A
German – Level I 50 or higher	6 semester units ¹	N/A	6 semester units ¹	N/A	N/A
German – Level II 60 or higher	Area C 12 semester units ¹ (3 units GE credit)	Area C2 3 semester units	12 semester units ¹	N/A	N/A
History of the United States I 50 or higher	Area D & US-1 3 semester units (3 units GE credit)	Area D6 & US-1 3 semester units	3 semester units	N/A	N/A
History of the United States II 50 or higher	Area D & US-1 3 semester units (3 units GE credit)	Area D6 & US-1 3 semester units	3 semester units	N/A	N/A
Human Growth and Development 50 or higher	3 semester units	Area E 3 semester units	3 semester units	N/A	N/A
Humanities 50 or higher	Area C 3 semester units (3 units GE credit)	Area C2 3 semester units	3 semester units	N/A	N/A
Information Systems and Computer Applications 50 or higher	3 semester units	N/A	3 semester units	N/A	N/A
Introduction to Educational Psychology 50 or higher	3 semester units	N/A	3 semester units	N/A	N/A
Introductory Business Law 50 or higher	3 semester units	N/A	3 semester units	N/A	N/A

College Level Examination Program (CLEP)

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
Introductory Psychology 50 or higher	Area D 3 semester units (3 units GE credit)	Area D9 3 semester units	3 semester units	N/A	N/A
Introductory Sociology 50 or higher	Area D 3 semester units (3 units GE credit)	Area D0 3 semester units	3 semester units	N/A	N/A
Natural Sciences 50 or higher	Area B 3 semester units (3 units GE credit)	Area B1 or B2 3 semester units	3 semester units	N/A	N/A
Pre-Calculus 50 or higher	Area A2 and Mathematics Competency 3 semester units (3 units GE credit)	Area B4 3 semester units	3 semester units	N/A	N/A
Principles of Accounting 50 or higher	3 semester units	N/A	3 semester units	N/A	N/A
Principles of Macroeconomics 50 or higher	Area D 3 semester units (3 units GE credit)	Area D2 3 semester units	3 semester units	N/A	N/A
Principles of Management 50 or higher	3 semester units	N/A	3 semester units	N/A	N/A
Principles of Marketing 50 or higher	3 semester units	N/A	3 semester units	N/A	N/A
Principles of Microeconomics 50 or higher	Area D 3 semester units (3 units GE credit)	Area D2 3 semester units	3 semester units	N/A	N/A
Spanish – Level I 50 or higher	6 semester units ¹	N/A	6 semester units ¹	N/A	N/A
Spanish – Level II 63 or higher	Area C 12 semester units ¹ (3 units GE credit)	Area C2 3 semester units	12 semester units ¹	N/A	N/A
Trigonometry 50	Area A2 and Mathematics Competency 3 semester units (3 units GE credit)	Area B4 3 semester units	3 semester units	N/A	N/A
Western Civilization I 50 or higher	Area C or D 3 semester units (3 units GE credit)	Area C2 or D6 3 semester units	3 semester units	N/A	N/A

College Level Examination Program (CLEP)

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
Western Civilization II 50 or higher	Area D 3 semester units (3 units GE credit)	Area D6 3 semester units	3 semester units	N/A	N/A
* Credit may not be awarded for exams which duplicate credit for the same content earned through other means.					
1. If a student passes more than one exam in the same language other than English (e.g. two exams in French), then only one examination may be applied toward CSU baccalaureate degree requirements.					
Credit is not awarded for the following exams: College Mathematics, English Composition (with or without Essay), Freshman College Composition and Social Sciences and History.					
To request an official CLEP transcript, write to: Educational Testing Service, P.O. Box 6600, Princeton, NJ 08541-6600					

DANTES Subject Standardized Test (DANTES/DSST)

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
Fundamental College Algebra 50 or higher <i>Exam taken prior to Spring 2008</i>	Area A2 and Mathematics Competency 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
Fundamental College Algebra 400 or higher <i>Exam taken Spring 2008 or after</i>	Area A2 and Mathematics Competency 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
Principles of Statistics 50 or higher <i>Exam taken prior to Spring 2008</i>	Area A2 and Mathematics Competency 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
Principles of Statistics 400 or higher <i>Exam taken Spring 2008 or after</i>	Area A2 and Mathematics Competency 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
Art of the Western World 50 or higher	Area C 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
Western Europe Since 1945 50 or higher	Area C 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
An Introduction to the Modern Middle East 50 or higher	Area D 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A

DANTES Subject Standardized Test (DANTES/DSST)

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
Human / Cultural Geography 50 or higher	3 semester units	N/A	N/A	N/A	N/A
A History of the Vietnam War 50 or higher	3 semester units	N/A	N/A	N/A	N/A
Foundations of Education 50 or higher	3 semester units	N/A	N/A	N/A	N/A
Lifespan Developmental Psychology 50 or higher	3 semester units	N/A	N/A	N/A	N/A
General Anthropology 50 or higher	3 semester units	N/A	N/A	N/A	N/A
Introduction to Law Enforcement 50 or higher	Area D 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
Criminal Justice 50 or higher <i>Exam taken prior to Spring 2008</i>	3 semester units	N/A	N/A	N/A	N/A
Criminal Justice 400 or higher <i>Exam taken Spring 2008 or after</i>	3 semester units	N/A	N/A	N/A	N/A
Fundamentals of Counseling 50 or higher	3 semester units	N/A	N/A	N/A	N/A
Principles of Finance 400 or higher <i>Exam taken Fall 2009 or after</i>	3 semester units	N/A	N/A	N/A	N/A
Human Resource Management 50 or higher	3 semester units	N/A	N/A	N/A	N/A
Organizational Behavior 50 or higher	3 semester units	N/A	N/A	N/A	N/A
Principles of Supervision 50 or higher <i>Exam taken prior to Fall 2009</i>	3 semester units	N/A	N/A	N/A	N/A

DANTES Subject Standardized Test (DANTES/DSST)

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
Principles of Supervision 400 or higher <i>Exam taken Fall 2009 or after</i>	3 semester units	N/A	N/A	N/A	N/A
Introduction to Computing 50 or higher <i>Exam taken prior to Spring 2008</i>	3 semester units	N/A	N/A	N/A	N/A
Introduction to Computing 400 or higher <i>Exam taken Spring 2008 or after</i>	3 semester units	N/A	N/A	N/A	N/A
Introduction to Business 50 or higher <i>Exam taken prior to Fall 2009</i>	Area D 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
Introduction to Business 400 or higher <i>Exam taken Fall 2009 or after</i>	Area D 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
Personal Finance 50 or higher <i>Exam taken prior to Spring 2008</i>	3 semester units	N/A	N/A	N/A	N/A
Personal Finance 400 or higher <i>Exam taken Spring 2008 or after</i>	3 semester units	N/A	N/A	N/A	N/A
Business Mathematics 50 or higher <i>Exam taken prior to Fall 2009</i>	Area A2 & Math Competency 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
Business Mathematics 400 or higher <i>Exam taken Fall 2009 or after</i>	3 semester units	N/A	N/A	N/A	N/A
Astronomy 50 or higher	Area B 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
Here's to Your Health 50 or higher	Health Education 3 semester units	N/A	N/A	N/A	N/A

DANTES Subject Standardized Test (DANTES/DSST)

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
Environment and Humanity: The Race to Save the Planet 50 or higher	3 semester units	N/A	N/A	N/A	N/A
Principles of Physical Science I 50 or higher	Area B 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
Physical Geology 50 or higher	Area B 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
Technical Writing 50 or higher	3 semester units	N/A	N/A	N/A	N/A
Ethics in America 50 or higher <i>Exam taken prior to Spring 2008</i>	3 semester units	N/A	N/A	N/A	N/A
Ethics in America 400 or higher <i>Exam taken Spring 2008 or after</i>	3 semester units	N/A	N/A	N/A	N/A
Introduction to World Religions 50 or higher <i>Exam taken prior to Spring 2008</i>	Area C 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
Introduction to World Religions 400 or higher <i>Exam taken Spring 2008 or after</i>	Area C 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
Principles of Public Speaking 50 or higher	Area A2 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A

* Credit may not be awarded for exams which duplicate credit for the same content earned through other means.

To request an official DANTES transcript, write to:

PROMETRIC ATTN: DSST Program, 1260 Energy Lane, St. Paul, MN 55108

Phone: 877-471-9860 (toll free) or 651-603-3011 or request transcripts at <http://getcollegecredit.com/resources>

Credit by Examination designed and approved by individual disciplines

The term "examination" means any written, oral or performance standards determined by the individual departments. Students must meet specific criteria to

be eligible for credit by examination. The approved list of courses and forms are available in the College Evaluations Office.

Credit for non-college credit vocational courses

Students who complete non-college credit articulated courses (SDUSD/SDCCD) that are

equivalent in subject matter, content, educational objectives, length of course, and performance standards and pass a college faculty approved examination for the course offered by the college may have these courses converted to college credit. Additional information is available in the Evaluations Office.

Academic Information For Veterans And Military Servicemembers

Acceptance and Application of Military Credit

San Diego City, Mesa, and Miramar Colleges apply credit for educational experience completed during military service toward the associate degree in accordance with the associate/baccalaureate credit recommendations contained in "A Guide to the Evaluation of Educational Experiences in the Armed Services" published by the American Council on Education (ACE). Students must submit documentation of educational experiences during military service. Acceptable documents include:

- AARTS or SMART Transcript
- DD-214
- DD-295
- NAV/PERS 1070/604
- DD-2586
- National Guard Bureau (NGB) Form 22E
- Coast Guard Institute
- Community College of the Air Force (CCAF)

Students who have completed at least six months of continuous active U.S. military service have fulfilled the following degree requirements:

- 4 units of credit towards the associate degree
 - The Health Education requirement
 - The Physical Education requirement (both courses)
- The California State University General Education-Breadth Pattern (CSU GE) Area E requirement.

Other educational experiences during military service may also fulfill additional major, general education, or elective degree requirements. More specific information is available in the San Diego Community College District Evaluations Office.

Service Members Opportunity Colleges System (SOC)

San Diego City, Mesa, and Miramar Colleges are members of the Service members Opportunity Colleges (SOC) Consortium. As members, the colleges provide educational assistance to active duty service members and agree to accept credit for educational experiences during military service as recommended by the American Council on Education (ACE). In addition, the colleges accept credit from other non-traditional sources such as DANTES and CLEP examinations. The San Diego Community College District is committed to military personnel who may choose to participate in the SOCNAV/SOCMAR Program network through the campuses of San Diego City and San Diego Miramar Colleges. SOCNAV/SOCMAR was established to better serve highly mobile service members and their families. For more information on these programs, contact the Military Education advisor at the following locations:

Naval Base San Diego (32nd St.)	619-233-5617
Marine Corps Recruit Depot (MCRD)	619-295-9974
Marine Corp Air Station Miramar (MCAS)	858-536-4329

U.S. Air Force and U.S. Army ROTC Programs

Under the provisions of a special agreement, students may participate in the Army or Air Force Reserve Officers Training Program (ROTC) at SDSU. San Diego City, Mesa and Miramar College students may enroll and attend ROTC classes at SDSU by contacting the SDSU Military Science Department 619-594-5545. Financial assistance may also be available. The credits earned in these classes may be transferred as electives to meet the degree requirements of City, Mesa and Miramar Colleges.

Responsibility for Meeting Requirements

Each student must assume responsibility for compliance with the regulations of the college set forth in this catalog, for satisfying prerequisites for any course, and for selecting courses which will facilitate attainment of educational objectives.

The college does not assume responsibility for misinterpretation of policies and procedures as presented in this catalog. Counselors and advisors

are available to assist in planning students' programs. Any questions or doubts concerning this catalog material should be referred to the Office of the Vice President, Student Services.

Petition for Exceptions

Petitions for exceptions to graduation requirements, substitutions, or waiver of requirements are filed with the Evaluations Office. All petitions are acted upon by the appropriate college committees/offices.

Statement of Open Courses

It is the policy of the San Diego Community College District that, unless specifically exempted by statute, every course, section, or class offered by the District and reported for state aid shall be fully open to enrollment and participation by any person who has been admitted to the college and who meets course prerequisites.

Academic Accommodation for Students with Disabilities (Board of Trustees Policy - BP 3105)

The San Diego Community College District (SDCCD) is committed to all provisions of Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990 and Section 508 of the Rehabilitation Act of 1973. The fundamental principles of nondiscrimination and accommodation in academic programs provide that:

1. No student with a qualified disability shall, on the basis of the disability, be excluded from participation in, be denied the benefit of, or otherwise be subjected to discrimination under any post-secondary education activity or program; and
2. Reasonable accommodations to academic activities or requirements shall be made as are necessary to ensure that such requirements do not discriminate or have the effect of discrimination on a student with a qualified disability; and
3. The institution shall create an educational environment where students with disabilities have equal access to instruction without compromising the essential components of the course, educational program or degree.

The intent of this policy is to insure compliance with state and federal laws. SDCCD Procedure 3105.1

is intended to provide consistent and fair review of all academic adjustments requests and dispute resolution.

Students with verified disabilities who may require academic accommodations or auxiliary aids are strongly recommended to contact the Disability Support Programs and Services (DSPS) Department, Room A-115, and complete orientation procedures well before classes begin. Students are encouraged to identify themselves to the appropriate instructors to discuss the details and time lines necessary to provide appropriate accommodations. Students enrolled in Online courses are encouraged to contact the college DSPS to request academic accommodation. Questions regarding academic accommodations may be directed to the college 504 Officer or Gerald Ramsey at (619) 388-3246.

Debt Owed to the College

California Education Code Section 72237 and Title 5 Section 54640 state that grades, transcripts, diplomas, and registration privileges, or any combination thereof, shall be withheld from any student or former student who has been provided with written notice that he or she has failed to pay a proper financial obligation. Any item(s) withheld shall be released when the student satisfactorily meets the financial obligation. A service fee may be charged for all delinquent loans; any service fee would be determined by the total cost required to collect the delinquent loans.

Audit Policy

Auditing courses is not permitted under any circumstances. Students must be officially enrolled in all classes which they attend.

Exclusion from Classes

A student may be excluded from class or the college whenever the student:

- Exhibits behavior which interferes with the educational process. An instructor may remove a student from two class sessions for disruptive behavior. (Refer to Policy 3100: Student Rights, Responsibilities and Administrative Due Process); or
- Is found to have a communicable disease which requires isolation pursuant to a directive from the County Department of Public Health.

Minor Children on Campus

Minor children who are not enrolled are not permitted in any classroom at any time.

Minor children who are not enrolled are not to be left unattended at any time while on the campus.

Student Right to Know

In compliance with the Student-Right-to-Know and Campus Security Act of 1990, it is the policy of our college district to make available its completion and transfer rates for all certificate, degree and transfer seeking first-time, full-time students who began in Fall 2007. These rates do not represent the success rates of the entire student population at the college, nor do they account for student outcomes occurring after this three-year tracking period. The completion and transfer rates are listed below:

	Completion Rates	Transfer-Out Rates
City	15.15%	15.45%
Mesa	23.39%	22.55%
Miramar	28.44%	15.43%

Nondiscrimination Policy (Board of Trustees Policy-BP 3410)

The San Diego Community College District has a policy which prohibits discrimination in accordance with state and federal laws. Students wishing to file complaints based upon discrimination should contact the campus Site Compliance Officer (SCO), Edwin Heil at (619) 388-3036. Appeals may be made to the District EEO Compliance Manager at the District Administrative Office, 3375 Camino del Rio South, San Diego, CA 92108.

Students with disabilities who want to file a grievance under Section 504 of the 1973 Federal Rehabilitation Act should contact Disability Support Programs and Services in room A-115 or call 388-3513. Students who want to file a grievance under the Americans with Disabilities Act (ADA) should contact the campus Site Compliance Officer.

Free Speech

Free speech areas have been designated on the college campuses to maximize the opportunity for free discussion and expression, while minimizing the potential for disruption of classroom and college activities.

Information concerning free speech areas is available in the office of the Vice President of Student Services, or the Dean of Student Affairs office on campus.

Gender Equity

The Gender Equity Coordinator facilitates the development or updating of the campus Gender Equity Plan in cooperation with committees that are responsible for equity concerns. The Gender Equity Coordinator can be reached at 619-388-3940 at San Diego City College, Building E, President's Office.

Title IX. Prohibiting Sex Discrimination in Education

San Diego City College is committed to support all regulations under Title IX. "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance."

For further directions or inquiries, please contact the Title IX Coordinator, Edwin Heil, eheil@sdccd.edu.

Policy Prohibiting Sexual Harassment

It is the policy of the San Diego Community College District to provide an educational environment that is free of sexual advances, requests for sexual favors, and other verbal or physical conduct or communications that constitute sexual harassment as defined and prohibited by federal and state statutes. Anyone with questions about this policy or anyone who wishes to file a complaint should contact the Dean of Student Affairs, the College Affirmative Action Officer, or the District Affirmative Action Officer. The Vice President, Student Services is also available to provide assistance in matters of alleged sexual harassment. Procedures for filing a formal complaint of sexual harassment are described in District Procedure 4105.2. Copies of this procedure may be obtained from the Office of the Vice President, Student Services.

Drug and Alcohol Use

The San Diego Community College District is committed to providing a drug free environment. Any type of drug use, including alcohol, is dangerous and potentially life threatening. Drugs and alcohol adversely affect the body, mind and behavior. The effects vary from person to person and from usage to usage. Even low doses of drugs and alcohol can

impair judgment and coordination. If you use drugs or alcohol, you risk overdose, accidents, dependence, ill health, as well as legal, financial and personal problems. The federal laws against drugs are divided into two categories: possession and distribution. The penalties are severe depending upon the type of drug, quantity of the drug, and any prior offenses. Possession will earn up to one year in prison and a \$5,000 fine. Distribution will earn up to life in prison and an \$8 million fine. State laws vary and may be more severe. BP 3100-Code of Conduct-states that use, possession, or distribution of narcotics or other controlled substances is prohibited while on the college premises or at college sponsored events. A student may be suspended or expelled for violation of this policy. A complete list of legal sanctions is available in the Vice President, Student Services Office. The colleges provide information on drug and alcohol treatment and prevention through seminars, courses, and the Student Health Services. Contact Student Health Services or the Vice President, Student Services Office for additional information.

Smoking Regulation

SAN DIEGO CITY COLLEGE IS A SMOKE FREE CAMPUS

For Smoking Cessation Program Referrals please visit City College Student Health Services: A-116.

All campuses of the San Diego Community College District operate in compliance with Government Code 7597. For complete Smoking Policy, please reference SDCCD Procedure 0505.2. Additional information is available in the College Police Office on each campus.

- Smoking is not permitted in District facilities which are open to the public and used as: Classrooms, Meetings Rooms, Theatres, Restrooms, Libraries, Cafeterias, Bookstores, Service Lines, Elevators, and Faculty Offices.
- Littering Prohibited. San Diego Municipal Code 374.4(a) and 374.7(a).
- Smoking is not permitted in vehicles used for transportation of students.
- Site presidents/provost/facility managers may designate facilities or areas in addition to those listed above as NO SMOKING facilities or areas.
- Each site determines areas for smoking and areas for nonsmoking in accordance with the SDCCD procedure and San Diego Municipal Code.

- Signs indicating SMOKING PERMITTED and NO SMOKING should be posted conspicuously in each area.
- Site presidents/provost/facility managers may designate areas within NO SMOKING areas where smoking is permitted, under the general guidance of San Diego Municipal Code.

Crime Awareness and Campus Security

The San Diego Community College District Annual Security Report, titled "Safe and Sound, A Guide to Safety and Security in the San Diego Community College District", includes statistics for the previous three years concerning reported crimes that occurred on campus; in certain off-campus buildings or property owned or controlled by the San Diego Community College District; and on public property within, or immediately adjacent to and accessible from, the campus. The report also includes institutional policies concerning campus security, such as policies on drug use, crime prevention, the reporting of crimes, sexual assault and other matters. You can obtain a copy of this report by contacting any campus admissions office, Vice President of Student Services office or college police business office. At anytime you may view a full copy by accessing the following website: <http://police.sdccd.edu/crimestats.htm>.

Pursuant to State and Federal Law information concerning registered sex offenders enrolled or employed by the college may be obtained through the College Police Office.

Elder and Dependent Adult Abuse

An elder is defined as a resident of the State of California which is 65 years of age or older; or a dependent adult, defined as a resident of the State of California between the ages of 18 and 64 years, who has a physical or mental limitation that restrict his or her ability to carry out normal activities or to protect his/her rights.

Post-secondary educational institutions serving dependent adults are designated as mandated reporters with an individual, personal responsibility to comply with the reporting requirements.

Any mandated reporter, who, in his or her professional capacity, or within the scope of his or her employment, has observed or had knowledge of an incident that reasonably appears to be physical abuse, abandonment, isolation, financial abuse, or

neglect, or is told by an elder or dependent adult that he or she has experienced behavior constituting physical abuse, abandonment, isolation, financial abuse, or neglect, or reasonably suspects abuse shall report the known or suspected instance of abuse immediately to Adult Protective Services at 1-800-510-2020.

Copyright Responsibility

Any duplication request of copyrighted materials for use in the college's instructional programs must be accompanied by written permission from the copyright owner. Any duplication of copyrighted materials by student, staff, or faculty is to be for the sole purpose of private scholarly study. Since the liability for infringement of statutory or common-law copyright occurs during misuse of duplicated materials, the duplicated copies cannot be sold or distributed. A designated portion of the duplicated copy cannot be included in another's work without the written permission of the copyright owner. All copyright responsibility is assumed by the individual requesting the duplication. San Diego City College, its agents, representatives, and employees are held harmless against all claims, suits, damage costs, and expenses of charges of statutory or common-law infringement resulting from the college's efforts to provide services, materials, and equipment to the requestor.

Student Rights, Responsibilities, and Privacy of Student Records (Board of Trustees Policy BP 3100)

This policy enumerates the rights and responsibilities of all San Diego Community College District students. All students are subject to adhering to the policies and procedures of the San Diego Community College District, as well as all federal, state, and local laws. Students are subject to charges of misconduct concerning acts committed on District-owned or controlled property or the District-sponsored activities as specified in the policy.

You may view a full copy of the policy by accessing the following website:
<http://www.sdccd.edu/public/district/policies/>

Student Grievance Procedure

The purpose of this procedure is to provide a prompt and equitable means for resolving student grievances. The procedures enumerated in Student Grievance Procedures 3100.1 shall be available to

any student who believes a district decision or action has adversely affected his/her rights as a student as specified in Student Rights and Responsibilities, BP 3100, Section *a* through *i*. Note that grades are not grievable under this policy. Refer to the Grade Challenge section, page 46, of this catalog.

Academic Freedom & Freedom of Expression

(Board of Trustees Policy--BP4030)

The San Diego Community College District is committed to an academic environment that embraces the principles of academic freedom and freedom of expression. This commitment is based upon the value that free expression is essential to excellence in teaching, learning, critical inquiry and service to the community.

1. ACADEMIC FREEDOM

- a. Academic freedom affords the faculty the right to speak freely and write, without unreasonable restrictions or prejudices.
- b. In accordance with the doctrine of academic freedom, faculty have the following fundamental rights:
 1. Collective primacy in designing and approving curriculum and instructional methods;
 2. Individual faculty determination of instructional materials, course content, and student evaluation methods, in concert with colleagues, so as to assure coherence in instruction and the maintenance of academic standards;
 3. Individual faculty freedom to discuss subject matter of the course, as appropriate to the standards of the discipline and academic community, even when that material is controversial;
 4. Individual faculty authority to evaluate enrolled students on the basis of the academic merit of the students' performance;

5. Individual faculty choice of research topics and methods of investigation—subject to professional and peer-determined standards—as well as unconditional freedom to publish results; and
6. Faculty participation in shared governance, curriculum review, and accreditation processes.

2. FREEDOM OF EXPRESSION

- a. Freedom of expression affords the faculty, staff and students the right to speak and write freely in accordance with the constitutional protections of free speech.
- b. Faculty, staff and students have the following responsibilities:
 1. The District shall protect the rights of faculty to express their views in the classroom that pertain to class content. While it is understood that controversy is often at the core of inquiry, such controversy should be addressed in a mutually respectful manner.
 2. The District shall protect the rights of faculty, staff and students to speak freely on matters of public concern.
 3. Faculty, staff and students are free to explore a wide range of views and judge on matters of public concern.
 4. As outlined in District policies and procedures, faculty, staff and students have responsibilities which are based upon principles of fairness, integrity, confidentiality, safety, professionalism, and respect for others.
 5. Members of the academic community have the right to participate in governance and to join or form organizations without fear of retaliation.

Volunteer/ Visitor Conduct Expectations

In accordance with Procedure 3100.4, all visitors and volunteers are expected to adhere to the policies and

procedures of the San Diego Community College District, as well as all federal, state and local laws. Visitors and volunteers will be subject to removal from classrooms, service areas, and activities of the campus for any of the following acts (but not limited to) while on campus. Any violation may be subject to permanent removal from campus. Violations of state, federal, or local laws or ordinances, while on district premises, will be addressed by college police in accordance with the California Penal Code.

- Act or threat of damage to or theft of property belonging to or located on District-controlled property or facilities.
- The physical or verbal intimidation or harassment of such severity or pervasiveness as to have the purpose or effect of unreasonably interfering with a student's academic performance, or a District employee's work performance, or of creating an intimidating, hostile, or offensive educational or work environment.
- Physical or verbal disruption that is incompatible with instructional or student services activities, administrative procedures, public service functions, authorized curricular or co-curricular activities or prevention of authorized guests from carrying out the purpose for which they are on campus when such a disruption occurs inside of any classroom or facility or in such proximity as to appear reasonably likely to interfere with activities inside of the classroom or facility, or the substantial and material disruption of any other regular campus activity which occurs in any other portion of District-controlled property.
- Disorderly, lewd, indecent or obscene conduct or expression or habitual profanity or vulgarity; any expression which is obscene, libelous or slanderous according to current legal standards or which so incites students as to create a clear and present danger of the commission of unlawful acts, or the substantial disruption of the orderly operation of the community college. (Ed. Code 76120)
- Assault, or battery upon a student or district personnel on district premises or at any time or place while under the authority of District personnel.
- Possession of weapons, explosives, unlicensed dangerous chemicals or objects which may be used as weapons or to threaten bodily harm, as specified in the California Penal Code or other applicable laws.

- Failure to comply with the reasonable directions of staff members of the district who are acting within the scope of their employment. Continued and willful disobedience or open and persistent defiance of the authority of district personnel, provided such authority is related to district activities or college/center attendance.

Student Records, Release, Correction and Challenge

(Administrative Procedure - AP 3001.1)

San Diego Community College District strictly adheres to the Family Education Rights and Privacy Act (FERPA). This procedure specifies limitations on federal and state law, and ensures that appropriate record maintenance and destruction systems are in place.

Pursuant to the “Family Rights and Privacy Act of 1974” (Public Law 93-380) and the California Education Code, a student may request to inspect all official school records, files, and related data that are classified as Student Records. The records will be available for review at a mutually convenient time during regular working hours. Contact the Vice President, Student Services. If information in the file is inaccurate, misleading, or inappropriate, a student may request removal of the information or include a statement disputing the material that is challenged. The law provides that no individual, agency, or organization shall have access to a student’s records without the written consent of the student.

You may view a full copy of the procedure by accessing the following website:
<http://www.sdccd.edu/public/district/policies/>

Academic Requirements

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The Associate Degree

On the recommendation of the faculty, the colleges of the San Diego Community College District award the Associate in Arts degree or the Associate in Science degree.

The Associate in Arts degree is awarded in the social sciences, humanities, the arts, and similar disciplines. The Associate in Science degree is awarded in engineering, physical and biological sciences, and occupational curricula.

All Degrees Have the Following Requirements in Common

Minimum Units in Residence

A minimum of 12 semester units must be completed in residence at the college granting the degree.

The 12-unit in residence requirement is effective for all degrees awarded regardless of catalog year.

Major/Area of Emphasis Requirements

- Eighteen semester units or more are required.
- Six semester units must be completed at City, Mesa, or Miramar College. Refer to the Degree Curricula and Certificate Programs section of this catalog for specific requirements for each major.
- Only one course in a student's major discipline may be used to meet the San Diego Community College District's general education requirements with the exception of Liberal Arts and Sciences degrees.

Recency of Coursework Limitation:

Academic departments may require that courses for the major be completed within a specified period of time prior to the granting of the Associate Degree, Certificate of Achievement, or Certificate of Performance. Students with questions about the applicability of previous coursework are advised to consult the Department as early as possible.

Associate in Arts for Transfer (AA-T) or Associate in Science for Transfer (AS-T)

The Associate in Arts for Transfer (AA-T) or the Associate in Science for Transfer (AS-T) is intended for students who plan to complete a bachelor's degree in a similar major at a CSU campus. Each AA-T or AS-T is accepted by some but not all CSU campuses. Students transferring to a CSU campus that does accept the AA-T or AS-T will be required to complete no more than 60 units after transfer to earn a bachelor's degree in that major. Please see a counselor and www.cccco.edu/1440 for more information.

NOTE: At the time of the 2011-2012 catalog printing, this degree is not accepted by San Diego State University. CSU San Marcos accepts this degree for some majors with limitations. There may be other CSU campuses which do not accept this degree.

Students intending to transfer to a CSU or other university should consult a counselor and visit www.assist.org for guidance on appropriate transfer coursework.

Degree Requirements

The following is required for all AA-T or AS-T degrees:

1. Minimum of 60 CSU-transferable semester units.
2. Minimum grade point average (GPA) of at least 2.0 in all CSU-transferable coursework. While a minimum of 2.0 is required for admission, some CSU campuses and majors may require a higher GPA. Please see a counselor for more information.
3. Completion of a minimum of 18 semester units in an "AA-T" or "AS-T" major (see list above). All courses in the major must be completed with a grade of C or better or a "P" if the course is taken on a "pass-no pass" basis.
4. Certified completion of the California State University General Education-Breadth pattern (CSU GE; see page 104 for more information); OR the Intersegmental General Education Transfer Curriculum pattern (IGETC; see page 97 for more information).

Associate in Arts and Associate in Science Degree Requirements

Minimum 60 Units Required

All degrees require a minimum of 60 semester units.

Grade Point Average (GPA) and Minimum Grade Requirements

- Effective 2009-2010 catalog year (and each year thereafter), students must earn a grade of "C" or better in courses required for the major.
- Students enrolled in occupational and health occupation programs must earn a grade of "C" or better in courses required for the major.
- A grade point average of at least 2.0 (a "C" average) is required in the curriculum upon which the degree is based.

District Competencies

District competencies in reading, written expression, and mathematics (See City College catalog

Select One of the Following Four General Education Options:

- **Option 1**—San Diego Community College District General Education AND District Requirements. (See City College Catalog page 74).
- **Option 2**—CSU General Education Breadth (CSU GE Pattern). (See City College Catalog page 104)

- **Option 3**—Intersegmental General Education Transfer Curriculum (IGETC) pattern. (See City College Catalog page 96)
- **Option 4**—San Diego Community College District General Education Requirements. (See City College Catalog page 78). Students selecting this option should meet with a counselor to determine the appropriate General Education courses for their individual transfer goals. **NOTE:** Option 4 is only available for the following City Liberal Arts and Sciences degrees designed for transfer students. Available emphases include:
 - Visual and Performing Arts
 - Language Arts and Humanities
 - Scientific Studies:
 - Biological Science Specialization
 - Mathematics and Pre-Engineering Specialization
 - Physical and Earth Sciences Specialization
 - Elementary (Multiple Subject) Teaching Preparation
 - Social and Behavioral Sciences

Students should plan programs with long range goals in mind. Students who plan to transfer to a four-year institution should review the Transfer Requirements section of this catalog.



District Requirements (Option 1)

- () Colleges in parenthesis indicate where the course is approved for District Requirements.
 C—City College
 M—Mesa College
 MMR—Miramar College
- ^ Courses with carets fulfill District multicultural studies graduation requirement.

The following information is effective for students graduating under the 2009-2010 catalog year or each term thereafter and is subject to change. Please contact the Counseling Department for updates.

1. Competence in Reading and Written Expression

Complete one course with a grade of "C" or better from General Education Requirements Area A.1 Language and Rationality, English Composition.

Note: The course selected to meet this requirement may also be used to meet the general education requirement for English Composition.

2. Competence in Mathematics

Competence is demonstrated by:

- a. Placement in Assessment Skill Level M50 or higher on SDCCD mathematics assessment

OR

- b. Completing one of the following courses with a grade of "C" or better:

- * MATH 84 Practical Geometry (M)
- * MATH 85 Practical Career Mathematics (C,M)
- MATH 96 Intermediate Algebra and Geometry (C,M,MMR)
- * MATH 98 Technical Intermediate Algebra and Geometry (C)

OR

- c. Completing, with a grade of "C" or better, any other course for which one of the above listed courses is a prerequisite or any math course with a number higher than 100.

* These courses cannot be used to meet the prerequisite for any transfer-level mathematics course.

Note: The course selected to meet these requirements may also be used to meet the general education requirement for Communications and Analytical Thinking.

3. American Institutions/California Government

Students are required to complete the United States History, Constitution and American Ideals before being awarded an associate degree. This requirement may be fulfilled by completing any combination of two classes that, when combined, fulfill areas: US-1, US-2, and US-3. A course may be used to fulfill more than one area.

A check mark [✓] indicates course has been approved to meet the requirement for the area.

Course	Area US-1: Development of American Institutions	Area US-2: US Constitution	Area US-3: California State & Local Governments
^BLAS 140A History of the United States, Black Perspectives (C, M, MMR)	✓	✓	
^BLAS 140B History of the United States, Black Perspectives (C, M, MMR)	✓		✓
^CHIC 141A U.S. History from a Chicano Perspective (C, M)	✓	✓	
^CHIC 141B U.S. History from a Chicano Perspective (C, M)	✓		✓
HIST 109 History of the United States I (C,M,MMR)	✓	✓	
HIST 110 History of the United States II (C,M,MMR)	✓		✓
^HIST 115A History of the Americas I (C,M)	✓	✓	
^HIST 115B History of the Americas II (C,M)	✓		✓

Course	Area US-1: Development of American Institutions	Area US-2: US Constitution	Area US-3: California State & Local Governments
^HIST 123 U.S. History from the Asian Pacific American Perspective (C,M)	✓		✓
HIST 141 Women in United States History I (C,M, MMR)	✓	✓	
HIST 142 Women in United States History II (C,M, MMR)	✓		✓
^HIST 150 Native Americans in U.S. History (M,MMR)	✓	✓	
^HIST 151 Native Americans in U.S. History (M,MMR)	✓		✓
HIST 175 California History (M)			✓
POLI 102 The American Political System (C,M, MMR)		✓	✓

NOTES:

- **Three units of coursework used to fulfill the American Institutions/California Government requirement may also be used to fulfill a general education requirement. However, if a six-unit sequence or combination is selected to fulfill the American Institutions requirement, only three (3) units may be used for general education credit.**
- **Courses designated with a carat (^) may also be used to fulfill the District Multicultural studies requirement.**
- **Completion of the Advanced Placement examination in U.S. History with a score of 3 or higher will satisfy the requirement for the CSU American Institutions Area US-1 only.**
- **Completion of the Advanced Placement examination in U.S. Government & Politics with a score of 3 or higher will satisfy the requirement for Area US-2.**
- **Students who have completed the American Institutions requirement except for the California government portion must complete one course approved in Area US-3**

4. Health Education

This requirement is met by completing Health Education 101: Health and Lifestyle, three units.

Note: This requirement is waived for students who earn degrees in Nursing Education and Physical Therapist Assistant. U.S. Veterans and active duty U.S. military personnel may be granted two units of college credit to fulfill the Health Education Requirement if service has been continuous for at least six months. Copies of form DD-214 or DD-295 or SMART or AART or CCAF Transcript covering all periods of military service must be on file in the Records Office.

5. Physical Education

Students must complete two activity courses. Physical Education courses numbered below 240 are acceptable, except for Physical Education 150. Dance courses are also acceptable, except for DANC 127, 181, 183 and 253. Administration of Justice 147, 148, 323, 381 and 382 are also

acceptable. Fire Protection Technology 100D and 150A are also acceptable. Students with physical conditions which prevent participation in regular physical education activity classes must file a physician's statement with the College Evaluations Office. Adapted Physical Education classes are available. A Physician's medical release form is required.

Note: U.S. Veterans and active duty U.S. military personnel may be granted two units of college credit to fulfill the Physical Education requirement if service has been continuous for at least six months. Copies of form DD-214 or DD-295 or SMART or AART or CCAF Transcript covering all periods of military service must be on file in the Records Office.

6. Multicultural Studies

Students may satisfy the District multicultural studies graduation requirement by satisfactorily completing a course related to the culture of one or more of the ethnic groups which are

represented in American society. The course shall include a focus on the role of men and women in the origin, development, and current status of these cultures.

Note: Each student seeking the Associate Degree must complete a three-unit multicultural studies course selected from the general education courses marked with a ^ indicating that it meets the Multicultural Requirement. The three units may be applied to the 18 units required in general education.

This requirement is met by completing one of the following courses (these courses are also on the District General Education list).

- ^ ADJU 106 Diversity and Community Relations (MMR)
- ^ AMSL 104 Introduction to Deaf Culture (M)
- ^ ANTH 103 Introduction to Cultural Anthropology (C,M,MMR)
- ^ ANTH 200 Introduction to North American Indians (M)
- ^ ANTH 210 Introduction to California Indians (C,M)
- ^ ARTF 113 African, Oceanic, and Native American Art (M,MMR)
- ^ ARTF 115 African Art (C,M)
- ^ ARTF 120 Native American Indian Art (M)
- ^ BLAS 104 Black Psychology (C,M)
- ^ BLAS 110 African American Art (C,M)
- ^ BLAS 115 Sociology from a Black Perspective (C)
- ^ BLAS 116 Contemporary Social Problems from a Black Perspective (C,M)
- ^ BLAS 120 Black Music (C,M)
- ^ BLAS 125 Dynamics of the Black Community (M)
- ^ BLAS 130 The Black Family (C,M)
- ^ BLAS 135 Introduction to Black Politics (C)
- ^ BLAS 140A History of the U.S., Black Perspectives (C,M,MMR)
- ^ BLAS 140B History of the U.S., Black Perspectives (C,M,MMR)
- ^ BLAS 145A Introduction to African History (C,M)
- ^ BLAS 145B Introduction to African History (C)
- ^ BLAS 150 Black Women in Literature and the Media (C,M)
- ^ BLAS 155 Afro-American Literature (C,M)
- ^ CHIC 110A Introduction to Chicano Studies (C,M)
- ^ CHIC 110B Introduction to Chicano Studies (C,M)
- ^ CHIC 135 Chicana/o Literature (C,M)
- ^ CHIC 141A United States History from a Chicano Perspective (C,M)
- ^ CHIC 141B United States History from a Chicano Perspective (C,M)
- ^ CHIC 190 Chicano Images in Film (C,M)
- ^ CHIC 210 Chicano Culture (C,M)
- ^ CHIL 141 The Child, Family and Community (C,M,MMR)
- ^ COMS 180 Intercultural Communication (C,M,MMR)
- ^ DRAM 109 Theatre and Social Issues (C)
- ^ ENGL 202 Introduction to Linguistics (C,M)
- ^ ENGL 230 Asian American Literature (M,MMR)
- ^ FILI 100 Filipino American Experience (M,MMR)
- ^ GEND 101 Introduction to Gender Studies (C)
- ^ GEOG 102 Cultural Geography (C,M,MMR)
- ^ HIST 115A History of the Americas I (C,M)
- ^ HIST 115B History of the Americas II (C,M)
- ^ HIST 120 Introduction to Asian Civilizations (C,M,MMR)
- ^ HIST 121 Asian Civilizations in Modern Times (C,M,MMR)
- ^ HIST 123 U. S. History from the Asian Pacific American Perspective (C,M)
- ^ HIST 130 The Modern Middle East (M)
- ^ HIST 150 Native Americans in United States History (M,MMR)
- ^ HIST 151 Native Americans in United States History (M,MMR)
- ^ INTE 125 History of Decorative Arts (M)
- ^ MUSI 109 World Music (C,M,MMR)
- ^ NUTR 153 Cultural Foods (M)
- ^ PHIL 125 Philosophy of Women (C,M)
- ^ POLI 103 Comparative Politics (C,M,MMR)
- ^ POLI 140 Contemporary International Politics (C,M,MMR)
- ^ SOCO 101 Principles of Sociology (C,M,MMR)
- ^ SOCO 110 Contemporary Social Problems (C,M,MMR)
- ^ SOCO 125 Sociology of the Family (C,M)
- ^ SOCO 150 Sociology of Latinos/Latinas (C)
- ^ SOCO 223 Globalization and Social Change (C,M,MMR)

General Education Outcomes Defined

General Education courses should contribute to the broad education of career technical and transfer

students in the areas of critical thinking, writing, and oral communication skills, understanding of and the ability to use quantitative analysis, and awareness of the arts and humanities; and of the physical, social and behavioral sciences as they affect one's interaction with the diverse local and global communities. General Education Requirements Title 5: Section 55806

a. Natural Sciences. Courses in the natural sciences are those that examine the physical universe, its life forms, and its natural phenomena. To satisfy the General Education Requirement in natural sciences, a course shall be designed to help the student develop an appreciation and understanding of the scientific method, and encourage an understanding of the relationships between science and other human activities. This category would include introductory or integrative courses in astronomy, biology, chemistry, general physical science, geology, meteorology, oceanography, physical geography, physical anthropology, physics and other scientific disciplines.

Students who complete natural sciences general education courses will be able to:

- demonstrate an understanding and appreciation of the scientific method
- express an understanding of the relationships between science and other human activities
- examine the natural physical world and its life forms in a variety of courses
- utilize critical thinking skills in a variety of scientific applications

b. Social and Behavioral Sciences. Courses in the social and behavioral sciences are those which focus on people as members of society. To satisfy the general education requirement in social and behavioral sciences, a course shall be designed to develop an awareness of the method of inquiry used by the social and behavioral sciences. It shall be designed to stimulate critical thinking about the ways people act and have acted in response to their societies and should promote appreciation of how societies and social subgroups operate. This category would

include introductory or integrative survey courses in cultural anthropology, cultural geography, economics, history, political science, psychology, sociology and related disciplines.

Students who complete social and behavioral sciences general education courses will be able to:

- express understanding of how people act and have acted in response to their societies and the natural environment
- articulate how societies and social subgroups operate in specific historical and contemporary contexts
- use methods of inquiry and measurement appropriate to the particular discipline being studied

c. Humanities. Courses in the humanities are those which study the cultural activities and artistic expressions of human beings. To satisfy the general education requirement in the humanities, a course shall be designed to help the student develop an awareness of the ways in which people throughout the ages and in different cultures have responded to themselves, help the student develop aesthetic understanding and an ability to make value judgments. Such courses could include introductory or integrative courses in the arts, foreign languages, literature, philosophy, and religion.

Students who complete humanities general education courses will be able to:

- express understanding and appreciation of varieties of cultural and artistic expression
- articulate an understanding of the complex relationships between the arts and their cultural, historical, and economic contexts
- evaluate the various elements of artistic works

d. Language and Rationality. Courses in language and rationality are those which develop for the student the principles and applications of language toward logical thought, clear and precise expression and

critical evaluation of communication in whatever symbol system the student uses.

1. English Composition. Courses fulfilling the written composition requirement shall be designed to include both expository and argumentative writing.
2. Communication and Analytical Thinking. Courses fulfilling the communication and analytical thinking requirement include oral communication, mathematics, logic, statistics, computer languages and programming, and related disciplines.

Students who complete language and rationality general education courses will be able to:

- demonstrate an understanding of the principles of clear and coherent communication.
- use verbal and non-verbal languages in a clear and precise manner.
- develop logical and rational thinking skills while analyzing and communicating processes.
- evaluate different quantitative and qualitative symbol expressions and systems.

Ethnic Studies will be offered in at least one of the required areas.

General Education Requirements (Option 4)

- () Colleges in parenthesis indicate where the course is approved for General Education Requirements.
 C—City College
 M—Mesa College
 MMR—Miramar College
- ^ Courses with carets fulfill District multicultural studies graduation requirement.
- * Courses with asterisks may satisfy more than one area and/or general education requirement but may not be counted more than once for this

Only one course in a student's major discipline may be used to meet the San Diego Community College District General Education Requirements.

The following information is based on 2011-2012 course offerings and is subject to change. Please contact the Counseling Department for updates.

The State of California requires the completion of a minimum of 18 units of general education with at least a 2.0 grade point average. One course must be selected from each of the following areas: English Composition; Communication/Analytical Thinking; the Sciences (Life or Physical, not both); Humanities; Social Sciences; and a sixth course chosen from any area.

A. Language and Rationality

A minimum of three semester units, or four quarter units, must be completed. Choose one course from the following:

1. English Composition

ENGL 101	Reading and Composition (C,M,MMR)
ENGL 105	Composition and Literature (C,M,MMR)
ENGL 205	Critical Thinking and Intermediate Composition (C,M,MMR)

A minimum of three semester units, or four quarter units, must be completed. Choose one course from the following:

2. Communication and Analytical Thinking

BIOL 200	Biological Statistics (C,M)
BUSE 101	Business Mathematics (C,M,MMR)
CISC 150	Introduction to Computer and Information Sciences (C,M)
CISC 181	Principles of Information Systems (C,M,MMR)
COMS 99	Voice and Diction for Non-Native Speakers of English (C,MMR)
COMS 101	Voice and Articulation (C,M,MMR)
COMS 103	Oral Communication (C,M,MMR)
COMS 135	Interpersonal Communication (C,M,MMR)
COMS 160	Argumentation (C,M,MMR)
COMS 170	Small Group Communication (C,M)
^ COMS 180	Intercultural Communication (C,M,MMR)
GISG 104	Geographic Information Science and Spatial Reasoning (C,M)
MATH 84	Practical Geometry (M)
MATH 85	Practical Career Mathematics (C,M)

MATH 96	Intermediate Algebra and Geometry (C,M,MMR)
MATH 98	Technical Intermediate Algebra and Geometry (C)
MATH 104	Trigonometry (C,M,MMR)
MATH 107	Introduction to Scientific Programming (C)
MATH 107L	Introduction to Scientific Programming Lab (C)
MATH 115	Gateway to Experimental Statistics (C)
MATH 116	College and Matrix Algebra (C,M,MMR)
MATH 118	A Survey of Modern Mathematics (C,M,MMR)
MATH 119	Elementary Statistics (C,M,MMR)
MATH 121	Basic Techniques of Applied Calculus I (C,M,MMR)
MATH 122	Basic Techniques of Calculus II (C,M,MMR)
MATH 141	Precalculus (C,M,MMR)
MATH 150	Calculus with Analytic Geometry I (C,M,MMR)
MATH 151	Calculus with Analytic Geometry II (C,M,MMR)
MATH 181	Mecomtronics College Algebra and Trigonometry I (C)
MATH 182	Mecomtronics College Algebra and Trigonometry II (C)
MATH 183	Mecomtronics Calculus I (C)
MATH 184	Mecomtronics Calculus II (C)
MATH 210A	Concepts of Elementary School Mathematics I (C,M,MMR)
MATH 210B	Concepts of Elementary School Mathematics II (C,M,MMR)
MATH 245	Discrete Mathematics (C,M,MMR)
MATH 252	Calculus with Analytic Geometry III (C,M,MMR)
MATH 254	Introduction to Linear Algebra (C,M,MMR)
MATH 255	Differential Equations (C,M,MMR)
PHIL 100	Logic and Critical Thinking (C,M,MMR)
PHIL 101	Symbolic Logic (C,M,MMR)
PHIL 205	Critical Thinking and Writing in Philosophy (C,M,MMR)
PSYC 258	Behavioral Science Statistics (C,M,MMR)

B. Natural Sciences

A minimum of three semester units, or four quarter units, must be completed. Choose one course from the following:

1. Life Sciences

ANTH 102	Introduction to Physical Anthropology (C,M,MMR)
ANTH 104	Laboratory in Physical Anthropology (C,M,MMR)
BIOL 100	Natural History - Environmental Biology-Lecture/Laboratory (M,MMR)
BIOL 101	Issues in Environmental Biology-Lecture/Laboratory (C)
BIOL 107	General Biology-Lecture/Laboratory (C,M,MMR)
BIOL 110	Introduction to Oceanography (C,M)
BIOL 111	Cancer Biology (C)
BIOL 115	Marine Biology (C,M,MMR)
BIOL 120	The Environment of Man (M)
BIOL 130	Human Heredity (C,M,MMR)
BIOL 131	Introduction to Biotechnology (MMR)
BIOL 160	Elements of Human Anatomy & Physiology-Lecture/Laboratory (M,MMR)
BIOL 180	Plants and People (C,M,MMR)
BIOL 205	General Microbiology (C,M,MMR)
BIOL 210A	Introduction to the Biological Sciences I-Lecture/Laboratory (C,M,MMR)
BIOL 210B	Introduction to the Biological Sciences II-Lecture/Laboratory (C,M,MMR)
BIOL 215	Introduction to Zoology (C,M,MMR)
BIOL 230	Human Anatomy (C,M,MMR)
BIOL 235	Human Physiology (C,M,MMR)
BIOL 250	Introduction to Botany (M,MMR)
BIOL 255	California Plants (M)
BIOL 285	Tropical Biology Field Experience (MMR)
MEDA 55	Fundamentals Human Anatomy and Physiology (M)
NUTR 150	Nutrition (M,MMR)
NUTR 155	Advanced Nutrition (M)
PSYC 260	Introduction to Physiological Psychology (C,M,MMR)

2. Physical Sciences

ASTR 101	Descriptive Astronomy (C,M,MMR)
ASTR 109	Practice in Observing-Laboratory (C,M)
ASTR 111	Astronomy Laboratory (C,M,MMR)
CHEM 100	Fundamentals of Chemistry (C,M,MMR)

CHEM 100L	Fundamentals of Chemistry-Laboratory (C,M,MMR)	PHYS 180A	General Physics I (C,MMR)
CHEM 111	Chemistry in Society (C,M)	PHYS 180B	General Physics II (C,MMR)
CHEM 111L	Chemistry and Society Laboratory (C,M)	PHYS 181A	General Physics Lab I (C,MMR)
CHEM 130	Introduction to Organic & Biological Chemistry (C,M,MMR)	PHYS 181B	General Physics Lab II (C,MMR)
CHEM 130L	Introduction to Organic & Biological Chemistry-Laboratory (C,M,MMR)	PHYS 195	Mechanics (C,M,MMR)
CHEM 152	Introduction to General Chemistry (C,M,MMR)	PHYS 196	Electricity and Magnetism (C,M,MMR)
CHEM 152L	Introduction to General Chemistry Laboratory (C,M,MMR)	PHYS 197	Waves, Optics and Modern Physics (C,M,MMR)
CHEM 200	General Chemistry I-Lecture (C,M,MMR)		
CHEM 200L	General Chemistry I-Laboratory (C,M,MMR)		
CHEM 201	General Chemistry II-Lecture (C,M,MMR)		
CHEM 201L	General Chemistry II-Laboratory (C,M,MMR)		
CHEM 231	Organic Chemistry I-Lecture (C,M,MMR)	AMSL 115	American Sign Language Level I (C,M)
CHEM 231L	Organic Chemistry I-Laboratory (C,M,MMR)	AMSL 116	American Sign Language Level II (C,M)
CHEM 233	Organic Chemistry II-Lecture (C,M,MMR)	AMSL 215	American Sign Language Level III (C,M)
CHEM 233L	Organic Chemistry II-Laboratory (C,M,MMR)	AMSL 216	American Sign Language Level IV (C,M)
CHEM 251	Analytical Chemistry (C,M,MMR)	ARAB 101	First Course in Arabic (C,MMR)
ENGN 110	Science for Technical Applications (C)	ARAB 102	Second Course in Arabic (C,MMR)
GEOG 101	Physical Geography (C,M,MMR)	ARTF 100	Art Orientation (C,M,MMR)
GEOG 101L	Physical Geography-Laboratory (C,M,MMR)	ARTF 107	Contemporary Art (M,MMR)
GEOL 100	General Geology (C,M,MMR)	ARTF 109	History of Modern Art (C,M,MMR)
GEOL 101	General Geology-Laboratory (C,M,MMR)	ARTF 110	Art History: Prehistoric to Gothic (C,M,MMR)
GEOL 104	Earth Science (C,M,MMR)	ARTF 111	Art History: Renaissance to Modern (C,M,MMR)
MCTR 120A	Basic Physics for Technical Applications I (C)	^ ARTF 113	African, Oceanic, and Native American Art (M,MMR)
MCTR 120B	Basic Physics for Technical Applications II (C)	^ ARTF 115	African Art (C,M)
PHYN 100	Survey of Physical Science-Lecture (C,M,MMR)	^ ARTF 120	Native American Indian Art (M)
PHYN 101	Survey of Physical Science-Laboratory (C,M,MMR)	ARTF 125	Art History: Arts of the Asian Continent (M,MMR)
PHYN 120	Physical Oceanography (M,MMR)	ARTF 191	Cultural Influences on Photography (M)
PHYS 100	Introductory Physics Lecture/Laboratory (C,M)	ARTF 194	Critical Photography (M)
PHYS 125	General Physics (C,M,MMR)	ARTG 118	Graphic Design History (C,MMR)
PHYS 126	General Physics II (C,M,MMR)	^ BLAS 110	African American Art (C,M)
		BLAS 111	African Art History (M)
		^ BLAS 120	Black Music (C,M)
		^ BLAS 150	Black Women in Literature and the Media (C,M)
		^ BLAS 155	Afro-American Literature (C,M)

C. Humanities

A minimum of three semester units, or four quarter units, must be completed. Choose one course from the following:

	CHIC 130	Mexican Literature in Translation (C)	^	ENGL 230	Asian American Literature (M,MMR)
^	CHIC 135	Chicana/o Literature (C,M)		ENGL 237	Women in Literature (C,MMR)
	CHIC 138	Literature of La Raza in Latin America in Translation (C,M)		ENGL 238	Evaluating Children's Literature (C,M)
^	CHIC 190	Chicano Images in Film (C,M)		ENGL 240	Shakespeare (C,M)
	CHIC 203	Introductory Spanish for Spanish Speakers (C)		FASH 120	Fashion History and Trends (M)
	CHIC 204	Intermediate Spanish for Spanish Speakers (C)		FREN 101	First Course in French (C,M)
^	CHIC 210	Chicano Culture (C,M)		FREN 102	Second Course in French (C,M)
	CHIC 230	Chicano Art (M)		FREN 201	Third Course in French (C,M)
	CHIN 101	First Course in Mandarin Chinese (M)		FREN 202	Fourth Course in French (C,M)
	CHIN 102	Second Course in Mandarin Chinese (M)		GERM 101	First Course in German (C,M)
	CHIN 201	Third Course in Mandarin Chinese (M)		GERM 102	Second Course in German (C,M)
	CHIN 202	Fourth Course in Mandarin Chinese (M)		GERM 201	Third Course in German (C,M)
	DANC 181	Introduction to Dance (C,M)		HIST 100	World History I (C,M,MMR)
	DFLM 101	Introduction to Film (MMR)		HIST 101	World History II (C,M,MMR)
	DFLM 102	The American Cinema (MMR)	*	HIST 105	Introduction to Western Civilization I (C,M,MMR)
	DRAM 105	Introduction to Dramatic Arts (C,M)	*	HIST 106	Introduction to Western Civilization II (C,M,MMR)
	DRAM 107	Study of Filmed Plays (C)	^	HIST 120	Introduction to Asian Civilizations (C,M,MMR)
	DRAM 108	Playwriting (C)	^	HIST 121	Asian Civilizations in Modern Times (C,M,MMR)
^	DRAM 109	Theatre and Social Issues (C)	^*	HIST 123	U. S. History from the Asian Pacific American Perspective (C,M)
	DRAM 136	History of Canonized Theatre - Ancient Greece to the Restoration (C)	*	HIST 131	Latin America Before Independence (M)
	DRAM 137	History of Canonized Western Theatre - Restoration to the Present (C)	*	HIST 132	Latin America Since Independence (M)
	DRAM 150	Cinema as Art and Communication I (M)		HUMA 101	Introduction to the Humanities I (C,M,MMR)
	DRAM 151	Cinema as Art and Communication II (M)		HUMA 102	Introduction to the Humanities II (C,M,MMR)
	ENGL 207	The Art of the Sentence (M)		HUMA 103	Introduction to the New Testament (C,M)
	ENGL 208	Introduction to Literature (C,M,MMR)		HUMA 104	Introduction to the Old Testament (M)
	ENGL 209	Literary Approaches to Film (C,M,MMR)		HUMA 106	World Religions (C,M,MMR)
	ENGL 210	American Literature I (C,M,MMR)		HUMA 201	Mythology (C,M,MMR)
	ENGL 211	American Literature II (C,M,MMR)		HUMA 202	Mythology: Hero's Journey (C)
	ENGL 215	English Literature I: 800-1799 (C,M,MMR)		HUMA 205	Exploring Human Values Through Film (M)
	ENGL 216	English Literature II: 1800-Present (C,M,MMR)	^	INTE 125	History of Decorative Arts (M)
	ENGL 220	Masterpieces of World Literature I: 1500 BCE - 1600 CE (C,M,MMR)		ITAL 101	First Course in Italian (C,M)
	ENGL 221	Masterpieces of World Literature II: 1600 - Present (C,M,MMR)		ITAL 102	Second Course in Italian (C,M)
				ITAL 201	Third Course in Italian (C,M)
				JAPN 101	First Course in Japanese (M)
				JAPN 102	Second Course in Japanese (M)

JAPN 201	Third Course in Japanese (M)
JAPN 202	Fourth Course in Japanese (M)
LATI 101	First Course in Latin (M)
LATI 102	Second Course in Latin (M)
LATI 201	Third Course in Latin (M)
MULT 116	Flash Game Development (M)
MUSI 100	Introduction to Music (C,M,MMR)
MUSI 101	Music History I: Middle Ages to Mid 18th Century (M)
MUSI 102	Music History II: Mid 18th to Early 20th Century (M)
MUSI 103	History of Rock Music (MMR)
MUSI 105	Music of Our Time (M)
^ MUSI 109	World Music (C,M,MMR)
MUSI 111	Jazz-History and Development (C,M,MMR)
MUSI 125	Music, the Arts and Humanity (M)
PHIL 102A	Introduction to Philosophy: Reality and Knowledge (C,M,MMR)
PHIL 102B	Introduction to Philosophy: Values (C,M,MMR)
PHIL 103	Historical Introduction to Philosophy (M)
PHIL 104A	History of Western Philosophy (C,M)
PHIL 104B	History of Western Philosophy (C,M)
PHIL 105	Contemporary Philosophy (C)
PHIL 106	Asian Philosophy (C,M)
PHIL 107	Reflections on Human Nature (C,M,MMR)
* PHIL 108	Perspectives on Human Nature and Society (C,M)
PHIL 110	Philosophy of Religion (M)
PHIL 111	Philosophy in Literature (C,M)
PHIL 112	Philosophy of Science (M)
^* PHIL 125	Philosophy of Women (C,M)
PHIL 130	Philosophy of Art and Music (C,M)
* PHIL 205	Critical Thinking and Writing in Philosophy (C,M,MMR)
PHOT 150	History of Photography (C)
RTVC 160	Introduction to Cinema (C)
RUSS 101	First Course in Russian (C,M)
RUSS 102	Second Course in Russian (M)
RUSS 201	Third Course in Russian (M)
SPAN 100	First/Second Course in Spanish-Accelerated (M)
SPAN 101	First Course in Spanish (C,M,MMR)

SPAN 102	Second Course in Spanish (C,M,MMR)
SPAN 201	Third Course in Spanish (C,M,MMR)
SPAN 202	Fourth Course in Spanish (C,M,MMR)
SPAN 215	Spanish for Spanish Speakers I (C,M,MMR)
SPAN 216	Spanish for Spanish Speakers II (C,M,MMR)
SUST 102	Environmental Ethics (C)
TAGA 101	First Course in Tagalog (M,MMR)
TAGA 102	Second Course in Tagalog (M,MMR)
TAGA 201	Third Course in Tagalog (M,MMR)
VIET 101	First Course in Vietnamese (M)
VIET 102	Second Course in Vietnamese (M)
VIET 201	Third Course in Vietnamese (M)

D. Social and Behavioral Sciences

A minimum of three semester units, or four quarter units, must be completed. Choose one course from the following:

ADJU 101	Introduction to Administration of Justice (C,MMR)
ADJU 101A	Introduction to Administration of Justice I (MMR)
ADJU 101B	Introduction to Administration of Justice II (MMR)
ADJU 101C	Introduction to Administration of Justice III (MMR)
^ ADJU 106	Diversity and Community Relations (MMR)
ADJU 193	Concepts of Criminal Law (MMR)
ADJU 230	Constitutional Law I (MMR)
AGRI 100	Principles of Sustainable Agriculture (C)
^ AMSL 104	Introduction to Deaf Culture (M)
^ ANTH 103	Introduction to Cultural Anthropology (C,M,MMR)
ANTH 107	Introduction to Archaeology (C,M,MMR)
^ ANTH 200	Introduction to North American Indians (M)
ANTH 205	Introduction to Medical Anthropology (M)
^ ANTH 210	Introduction to California Indians (C,M)
ANTH 215	Cultures of Latin America (C,M)
BLAS 100	Introduction to Black Studies (C,M)

^	BLAS 104	Black Psychology (C,M)		GEOG 104	World Regional Geography (C,M,MMR)
^	BLAS 115	Sociology from a Black Perspective (C)		GEOG 154	Introduction to Urban Geography (M)
^	BLAS 116	Contemporary Social Problems from a Black Perspective (C,M)		* HIST 105	Introduction to Western Civilization I (C,M,MMR)
^	BLAS 125	Dynamics of the Black Community (M)		* HIST 106	Introduction to Western Civilization II (C,M,MMR)
^	BLAS 130	The Black Family (C,M)		HIST 109	History of the United States I (C,M,MMR)
^	BLAS 135	Introduction to Black Politics (C)		HIST 110	History of the United States II (C,M,MMR)
^	BLAS 140A	History of the U.S., Black Perspectives (C,M,MMR)		^ HIST 115A	History of the Americas I (C,M)
^	BLAS 140B	History of the U.S., Black Perspectives (C,M,MMR)		^ HIST 115B	History of the Americas II (C,M)
^	BLAS 145A	Introduction to African History (C,M)		^* HIST 123	U. S. History from the Asian Pacific American Perspective (C,M)
^	BLAS 145B	Introduction to African History (C)		^ HIST 130	The Modern Middle East (M)
	BUSE 100	Introduction to Business (C,M,MMR)		* HIST 131	Latin America Before Independence (M)
	BUSE 140	Business Law and the Legal Environment (C,M,MMR)		* HIST 132	Latin America Since Independence (M)
^	CHIC 110A	Introduction to Chicano Studies (C,M)		HIST 141	Women in United States History I (C,M,MMR)
^	CHIC 110B	Introduction to Chicano Studies (C,M)		HIST 142	Women in United States History II (C,M,MMR)
^	CHIC 141A	United States History from a Chicano Perspective (C,M)		^ HIST 150	Native Americans in United States History (M,MMR)
^	CHIC 141B	United States History from a Chicano Perspective (C,M)		^ HIST 151	Native Americans in United States History (M,MMR)
	CHIC 150	History of Mexico (C,M)		HIST 154	Ancient Egypt (M)
	CHIC 170	La Chicana (C,M)		HIST 175	California History (M)
	CHIC 201	Pre-Columbian Cultures of MesoAmerica (C,M)		JOUR 202	Introduction to Mass Communication (C,M,MMR)
	CHIL 101	Human Growth and Development (C,M,MMR)		MILS 100	Introduction to Military Science (MMR)
	CHIL 103	Lifespan Growth and Development (MMR)		^ NUTR 153	Cultural Foods (M)
^	CHIL 141	The Child, Family and Community (C,M,MMR)		PEAC 101	Introduction to Peace Studies (C)
	ECON 120	Principles of Macroeconomics (C,M,MMR)		PEAC 102	Nonviolence and Conflict Resolution (C)
	ECON 121	Principles of Microeconomics (C,M,MMR)		PEAC 201	Environmental Sustainability, Justice and Ethics (C)
^	ENGL 202	Introduction to Linguistics (C,M)		* PHIL 108	Perspectives on Human Nature and Society (C,M)
^	FILI 100	Filipino American Experience (M,MMR)		PHIL 109	Issues in Social Philosophy (M)
	FUTR 101	Introduction to Futures Studies (C)		^* PHIL 125	Philosophy of Women (C,M)
	FUTR 102	Creating Futures: Methods and Tools (C)		PHIL 126	Introduction to Philosophy of Contemporary Gender Issues (C,M)
	FUTR 103	Emerging Technologies (C)		POLI 101	Introduction to Political Science (C,M,MMR)
	GEND 101	Introduction to Gender Studies (C)		POLI 102	The American Political System (C,M,MMR)
^	GEOG 102	Cultural Geography (C,M,MMR)			

^	POLI 103	Comparative Politics (C,M,MMR)
^	POLI 140	Contemporary International Politics (C,M,MMR)
	PSYC 101	General Psychology (C,M,MMR)
	PSYC 111	Psychological /Social Aspects of Aging, Death and Dying (C,M)
	PSYC 121	Introduction to Child Psychology (M,MMR)
	PSYC 123	Adolescent Psychology (MMR)
	PSYC 133	Psychology of Women (M,MMR)
	PSYC 135	Marriage and Family Relations (C,M,MMR)
	PSYC 137	Human Sexual Behavior (C,M,MMR)
	PSYC 155	Introduction to Personality (C,M,MMR)
	PSYC 166	Introduction to Social Psychology (C,M,MMR)
	PSYC 211	Learning (C,M,MMR)
	PSYC 230	Psychology of Lifespan Development (C,M,MMR)
	PSYC 245	Abnormal Psychology (C,M,MMR)
^	SOCO 101	Principles of Sociology (C,M,MMR)
^	SOCO 110	Contemporary Social Problems (C,M,MMR)
^	SOCO 125	Sociology of the Family (C,M)
^	SOCO 150	Sociology of Latinos/Latinas (C)
	SOCO 201	Advanced Principles of Sociology (C,M,MMR)
^	SOCO 223	Globalization and Social Change (C,M,MMR)
	SUST 101	Introduction to Sustainability (C)

Certificate of Achievement

Programs in which a Certificate of Achievement may be awarded are described in the Degree Curricula and Certificate Programs section of this catalog. Certificate programs are designed for students with specific personal or occupational goals. To qualify for the Certificate of Achievement, students must satisfy the following requirements:

1. meet all standards for admission to the desired certificate program;
2. earn a grade of "C" or higher in each course;
3. complete a minimum of three courses in residence;
4. and a minimum of six semester units of the required courses for the major must be completed at City, Mesa or Miramar College.

Certificate of Performance

Programs in which a Certificate of Performance may be awarded are described in the Degree Curricula and Certificate Programs section of this catalog. A Certificate of Performance recognizes the attainment of knowledge and/or skill through the successful completion of two or more courses as specified by a department. Certificates of Performance are designed to prepare students for employment, job enhancement and/or job advancement. To qualify for the Certificate of Performance, students must satisfy the following requirements:

1. Achieve a grade of "C" or better in each of the required courses.
2. Complete all required course work in the San Diego Community College District.
3. Course substitutions or course equivalencies from other colleges may not be used to satisfy Certificate of Performance requirements.

For additional information, contact the campus Evaluations Office or subject-area department.

Graduation

Petition for Graduation

Student who expect to receive an Associate Degree or a Certificate of Achievement should file a Petition for Graduation. The Petition may be completed online at: <https://studentweb.sdccd.edu>, or obtained in the Counseling Office. See Academic Calendar section for important filing dates.

Official college transcripts from all colleges attended must be on file before submitting the petition for Associate Degree or Certificate of Achievement.

An evaluation is a summary of college work completed and of requirements to be completed for the associate degree or the certificate of achievement. Only evaluations completed by one of the Evaluators are official.

A petition for an associate degree evaluation should be submitted one year before the student plans to graduate.

Students who are working toward a certificate of achievement should file the Petition for Graduation

prior to the beginning of the semester in which they plan to complete the requirements of their certificate program.

Students who have petitioned for graduation should notify the evaluator immediately of any name or address change.

Catalog Rights

Students who maintain continuous enrollment may choose to graduate under the (City College, Mesa College, and Miramar College) catalog in effect at the time they began their studies in a California Community College, California State University, or University of California campus, or under the catalog in effect at the time of graduation.

Certification of a student's completion of CSU general education requirements or the Intersegmental General Education Transfer Curriculum (IGETC) is not a graduation requirement. Therefore, students do not have catalog rights to a certification pattern used by a certifying institution or a CSU or UC campus.

Continuous Enrollment

Continuous enrollment is defined as attendance in one semester or two quarters within a calendar year in either the CSU, UC, or California Community College System.

Awarding of Degrees or Certificates

Associate Degrees/Certificates of Achievement will be awarded at the end of the semester in which the requirements are completed.

The graduation ceremony is held once a year. Candidates for Fall, Spring and Summer graduation may participate in the ceremony which is held at the end of the Spring semester.

Diplomas

Diplomas are issued only after completion of all graduation requirements have been verified. Diplomas will be issued in the name of record at the time the diploma is awarded. For information on obtaining your diploma or certificate of achievement, or a duplicate copy, please contact the Evaluations Office on campus.

Graduation with Distinction

Graduation with honors distinction will be based upon all coursework that is associate degree and lower division baccalaureate degree applicable.

Graduation with Honors is granted to students who achieve an overall 3.5 GPA, High Honors is granted to students who achieve an overall 3.75 GPA, and Highest Honors is granted to students who achieve an overall 4.0 GPA.

Students will be notified that this distinction is pending at the time of the graduation ceremony, when the GPA will be calculated based upon degree or certificate applicable coursework completed through the fall semester of the year of the ceremony. The final distinction will be determined upon completion of all coursework completed through the fall semester for fall graduates, the spring semester for spring graduates or the summer term for summer graduates.

Additional College Degree

A student having received an associate or baccalaureate degree may qualify for an additional Associate in Arts or Associate in Science degree in a new major or concentration.

An additional degree:

1. Permits upgrading or preparation for upgrading current employment.
2. Prepares for employment in an area different from that provided by previous training.
3. Provides general knowledge leading to fulfillment of personal goals.

The following requirements are applicable:

1. The degree to be earned must represent a change in major or concentration from the degree or degrees previously earned.
2. A student must earn a minimum of 18 required semester units in the new major or concentration beyond the minimum 60 units required for the Associate Degree, bringing the total units required for the second degree to a minimum of 78 units, a minimum of 96 units for the third degree, and so on. Twelve (12) semester units of the new major or concentration must be completed in residence.

3. A student must fulfill current catalog associate degree requirements.
4. In order to receive an additional college degree, the student must file a Petition for Graduation in the Evaluations Office. The college evaluator will review all previous college work to determine the student's eligibility for a second degree.

Transfer Guide

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University Transfer

What is Transfer?

Transfer is the process of continuing your education at a four-year college or university, usually after completing your first two years at a community college. If planned correctly, the courses that you pass at community college will count towards requirements for your Bachelor degree just as if they had been taken at the four-year institution. Websites such as www.californiacolleges.edu and www.csumentor.edu provide transfer planners and additional resources to provide you with pertinent information. City College students transfer to a wide variety of universities within California and throughout the world. There are four basic areas that students will focus on prior to transfer:

- General Education
- Preparation for Major
- Minimum Required Transferable Units (usually 60 semester units for public universities)
- Minimum Required GPA (usually 2.0 or higher)
Specific requirements vary depending on the college/ university and major

Transfer Programs

Many of the courses completed at San Diego City College, San Diego Mesa College, and San Diego Miramar College may be applied for transfer credit to four-year colleges and universities. Students have the opportunity to complete their first two years of a four-year degree at this level. The Transfer Center serves as a resource center for students interested in transfer and provides the following: university catalogs, student computer work stations, university brochures and handouts, assistance with transfer information such as articulation agreements for lower division general education, major preparation, transferable electives, workshops on transferring to colleges and universities, access to university advisors, guaranteed university admission programs, and assistance completing college applications.

Students are advised to plan transfer programs as early as possible and enroll in transferable courses in both general education and in courses that prepare for the specific university major. Questions related to transfer programs should be discussed with counselors or the Transfer Center staff. Students

interested in transfer should meet a counselor in the Counseling Department, room A110 to develop a Transfer Educational Plan which will identify the courses needed to transfer. The Transfer/Career Center is located Room A-111. For information, call 619-388-3722.

Transfer Services

College Transfer Center is designed to help you during each step of your transfer experience to ensure a smooth and positive transition. A variety of resources are available, including:

- Academic/Career Counseling
- Guidance in researching and selecting a transfer institution
- Individual appointments with representatives from UC, CSU, and independent colleges and universities
- Transfer Workshops
- Transfer Admissions Agreements and Guarantees with selected universities
- A library of catalogs & publications
- Information on important dates and deadlines
- Computer software for college research
- Transfer Fairs

For additional information regarding specific services, contact the San Diego City College Transfer/Career Center in Room A-111 at 619-388-3722 or the Counseling Department in Room A-110 at 619-388-3540, or visit www.sdccity.edu/transfer.

Steps to Transfer

STEP 1: Career Exploration

Career Objective: Your career objective will determine the type of degree you need and your choices for selecting a major. See a counselor for more assistance.

STEP 2: Choosing Your University Major

Major Objective

Many of the classes you take in college will be determined by your major, which is the field of study

you will emphasize. You are required to major in a specific academic subject to demonstrate sustained, high level work in one field.

- For descriptions of the 75 most popular majors, visit www.petersons.com/majordecision or www.collegesource.com.

University Selection

Selecting a university takes time and planning. It is strongly recommended that you enroll in the Transfer 101 Workshop offered through the Transfer Center or enroll in Personal Growth 127, College Success. Work closely with your counselor to ensure that you are making the choice that is right for you.

STEP 3: Educational Plan

Major Preparation

Some majors require specific lower-division courses to be admitted to a major upon transfer. For public universities in California, visit www.assist.org for this articulation information. Articulation is the process whereby a course (or set of courses) offered at one institution is accepted as equivalent to or in lieu of a comparable course (or set of courses) at another institution. For current City College articulation agreements with private/independent universities, visit the Transfer Center website at www.sdcity.edu, click on Student Services and then Transfer Center.

General Education Requirements:

General Education requirements are courses required of everyone regardless of major. Each university has different general education patterns. City students can choose from the following:

- Complete specific general education requirements for an individual university, or
- Complete the approved Intersegmental General Education Transfer Curriculum (IGETC) pattern of courses acceptable at all campuses of the CSU, most campuses of the UC, and some private institutions, or
- Complete the approved CSU GE Breath pattern of lower-division courses acceptable at all campuses of the CSU system.

It is strongly advised that you work closely with a counselor before making a decision. For a list of transfer GE options for the IGETC coursework patterns see page 96.

General Education Certification

General Education Certification is a legal agreement between the UC or CSU systems and the California

Community Colleges that permits a student to transfer from a community college to a UC or CSU campus without the need to complete additional lower division general education courses to satisfy university GE requirements after transfer. City College will provide an IGETC or CSU GE certification to one university campus when specifically requested by the student. This certification may include courses taken from other colleges, or credit earned through other means, such as Advanced Placement (AP) test credit. Students do not have “catalog rights” to a certification pattern. Additional information on certification rules that are specific to the IGETC and CSU GE patterns are discussed later in those sections.

Students who transfer without certification may have to meet additional GE requirements at the university. This often means taking additional courses after transfer.

Completion of the IGETC or CSU GE pattern also fulfills the requirements for a Certificate of Achievement in General Education (see “General Education” on page 316). Students who complete one of these patterns and additional transfer coursework may also qualify to complete the City College associate degree in Liberal Arts & Sciences (see page 340). The following Areas of Emphasis or Specialization are available:

- Area of Emphasis in Visual and Performing Arts
- Area of Emphasis in Language Arts and Humanities
- Area of Emphasis in Scientific Studies:
 - Biological Science Specialization
 - Mathematics and Pre-Engineering Specialization
 - Physical and Earth Sciences Specialization
- Area of Emphasis in Elementary (Multiple Subject) Teaching Preparation
- Area of Emphasis in Social and Behavioral Sciences

Electives

Electives are additional courses taken to meet the number of required units or to meet additional lower-division graduation requirements. Make sure the courses you select are transferable courses by referring to the course descriptions in this catalog.

STEP 4: Application

Most universities require you to apply for admission about one year prior to your expected transfer date. Visit the Transfer Center in Room A-111 for more information.

Transfer to California State University (CSU)

The California State University (CSU) system is made up of 23 universities throughout the state. These include:

California Maritime Academy
 California Polytechnic State University, San Luis Obispo
 California State Polytechnic University, Pomona
 California State University, Bakersfield
 California State University, Channel Islands
 California State University, Chico
 California State University, Dominguez Hills
 California State University, East Bay
 California State University, Fresno
 California State University, Fullerton
 California State University, Long Beach
 California State University, Los Angeles
 California State University, Monterey Bay
 California State University, Northridge
 California State University, Sacramento
 California State University, San Bernardino
 California State University, San Marcos
 California State University, Stanislaus
 Humboldt State University
 San Diego State University
 San Francisco State University
 San Jose State University
 Sonoma State University

Students who plan to earn a university degree may find it advantageous to complete freshman and sophomore work at a California community college. A student may apply 70 transferable semester units from the community colleges toward a university degree. Courses completed at a community college after the 70-unit maximum course units has been reached will count toward university requirements, but these course units will not count toward the total number of units required to earn a university degree.

California State University Minimum Admission Requirements

Transfer students will be eligible for admission by meeting the following requirements:

1. Complete 60 semester units or 90 quarter units of transferable units. These 60 units consist of:
 - General Education pattern (for details see page 104),
 - Preparation for Major (details on page 95), and
 - any electives needed to reach the 60 unit minimum.
2. Within the General Education, the completion of the Golden 4 (Critical Thinking, Writing, Speech, Math) with a grade of C or better. Pass/No-Pass grades are not recommended in these areas.
3. GPA: Your overall grade point average must be at least 2.0 (2.40 for California nonresidents). Impacted majors may have higher GPA requirements.
4. The CSU designates major programs as impacted when more applications are received in the initial filing period from CSU-eligible applicants than can be accommodated by the campus. The initial filing period is defined as the first month of the filing period (October and November for fall terms). If you are interested in an impacted major, you must apply during the initial filing period. You will be subject to supplementary admission criteria.

CSU U.S. History, Constitution, and American Ideals Certification

The California State University, before awarding a degree, requires students to complete courses or examinations that address:

1. The historical development of American institutions and ideals (Area US-1), and
2. The Constitution of the United States and the operation of representative democratic government under that Constitution (Area US-2), and
3. The process of California state and local government (Area US-3).

This requirement may be fulfilled at a California Community College prior to transfer by completing a combination of courses that satisfies all three areas

of the requirement. The requirement may also be completed at a CSU campus after transfer. Courses approved in two US areas may be used to satisfy both areas.

Although this requirement is not part of the General Education requirements for CSU, all students must

complete course work in U.S. History, Constitution and Government before graduation from a CSU campus. The courses may also be used to partially fulfill Area D of the CSU General Education Breadth Requirements.

A check mark [✓] indicates course has been approved to meet the requirement for the area.

Note: Not required for Certification.

Course	Area US-1: Development of American Institutions	Area US-2: US Constitution	Area US-3: California State & Local Governments
BLAS 140A History of the United States, Black Perspectives (C, M, MMR)	✓	✓	
BLAS 140B History of the United States, Black Perspectives (C, M, MMR)	✓		✓
CHIC 141A U.S. History from a Chicano Perspective (C, M)	✓	✓	
CHIC 141B U.S. History from a Chicano Perspective (C, M)	✓		✓
HIST 109 History of the United States I (C,M,MMR)	✓	✓	
HIST 110 History of the United States II (C,M,MMR)	✓		✓
HIST 115A History of the Americas I (C,M)	✓	✓	
HIST 115B History of the Americas II (C,M)	✓		✓
HIST 123 U.S. History from the Asian Pacific American Perspective (C,M)	✓		✓
HIST 141 Women in United States History I (C,M, MMR)	✓	✓	
HIST 142 Women in United States History II (C,M, MMR)	✓		✓
HIST 150 Native Americans in U.S. History (M,MMR)	✓	✓	
HIST 151 Native Americans in U.S. History (M,MMR)	✓		✓
HIST 175 California History (M)			✓
POLI 102 The American Political System (C,M, MMR)		✓	✓

NOTES:

- **Completion of the Advanced Placement examination in U.S. History with a score of 3 or higher will satisfy the requirement for Area US-1.**
- **Completion of the Advanced Placement examination in U.S. Government & Politics with a score of 3 or higher will satisfy the requirement for Area US-2.**
- **Students who have completed this requirement except for the California government portion must complete one course approved in Area US-3**

California State University Transfer Checklist

- When you begin classes at a California Community College, discuss your transfer plans with a community college counselor or Transfer Center director. Inquire about California State University (CSU) general education requirements and the lower division courses required for your major.
- Review your California Community College catalog for information on which courses are transferable to the CSU.
- Obtain one or more CSU campus catalogs to become familiar with admission, general education, and major requirements.
- If you will need financial assistance to attend CSU, talk to a financial aid advisor at the California Community College you are attending; obtain a copy of the FAFSA form, and note application deadlines.
- Contact a CSU campus Disabled Student Services program to inquire about available services.
- Visit one or more CSU campuses. Call the Admissions Office at your target campus if you would like a campus tour. Contact the Transfer Center in A-111 to see about 4-year representative visits or visit the website at www.city.edu
- Complete and file an application for admission with the CSU campus during the initial filing period (visit www.csumentor.edu).
- Pay the application fee (\$55) with the CSU application for admission.
- Send in your Intent to Enroll response along with the fee to accept the admissions offer.
- Have transcripts from all colleges attended (and high school transcript, if necessary) sent to the CSU campus you have selected.
- After you have applied for admission to a CSU campus, request that the community college Evaluations Office certify on your transcript the courses you have completed to satisfy CSU general education.
- Meet with an admissions representative to ensure you have completed all paperwork.

Take charge of your transfer program. You too, can discover the difference that a CSU education can make in reaching your career goals.

Transfer to University of California

The University of California system includes nine campuses and a Health Sciences Center in San Francisco.

University of California Campuses
 University of California, Berkeley
 University of California, Davis
 University of California, Irvine
 University of California, Los Angeles
 University of California, Merced
 University of California, Riverside
 University of California, San Diego
 University of California, San Francisco
 University of California, Santa Barbara
 University of California, Santa Cruz

Students who plan to earn a university degree may find it advantageous to complete freshman and sophomore work at a California community college. A student may apply 70 transferable semester units (or 105 quarter units) from the community colleges toward a university degree. Courses completed at a community college after the 70-unit maximum course units has been reached will count toward university requirements, but these course units will not count toward the total number of units required to earn a university degree.

The University of California minimum requirements

Transfer students will be eligible for admission if they meet the following requirements:

1. Complete 60 semester units or 90 quarter units of transferable units;
2. A grade point average of at least 2.4, with no more than 14 semester or 21 quarter units taken as Pass/No Pass; and
3. Complete the following course pattern, with a grade of "C" or better in each course:
 - two transferable college courses (3 semester or 4-5 quarter units) in English composition; and
 - one transferable college course (3 semester or 4-5 quarter units) in mathematical concepts and quantitative reasoning; and

- four transferable college courses (3 semester or 4-5 quarter units each) selected from at least two of the following subject areas: arts and humanities; social and behavioral sciences; and physical and biological sciences.

Students who complete the Intersegmental General Education Transfer Curriculum (IGETC) pattern prior to transferring to the University of California system will meet the transfer eligibility coursework requirement listed above (see page 96 for details). Students who did not qualify for admissions to a university when graduating from high school because subjects A-F were not satisfied, must complete the requirements listed above.

Note: Specific admission criteria vary among University of California campuses. The UC system limits credit for transfer of courses in fine arts, music, theater arts, computer science, engineering and independent study.

UC Transfer and Physical Education Activity Courses

UC grants a maximum of four semester units of credit for appropriate Physical Education Activity courses. Courses that are subject to this limit are listed as such on the college's UC Transfer Course Agreement, available on web ASSIST at www.assist.org under the UC Transferable Courses link. Physical Education Theory courses or courses that do not fit either the Theory or Activity category are not included in the four semester credit limit.

UC Transfer and Variable Topics Courses

These courses are also called "Independent Studies", "Special Studies", "Special Topics", "Internships", "Field Work", etc. Credit for variable topics courses is given only after a review of the scope and content of the course by the enrolling UC campus. This usually occurs after transfer and may require recommendations from faculty. UC does not grant credit for variable topics courses in Journalism, Photography, Health, Business Administration, Architecture, Administration of Justice (Criminology) or Library Departments because of credit restrictions in these areas.

University of California Transfer Checklist

- When you begin classes at a California Community College, discuss your transfer plans with a community college counselor in MV-27 or Transfer Center in MV-20. Inquire about University of California (UC) general education requirements and the lower division courses required for your major. Please note that UC stresses the prep for major over the general education requirements.
- Review your California Community College catalog for information on which courses are transferable to the UC.
- Obtain one or more UC campus catalogs to become familiar with admission, general education, and major requirements.
- If you will need financial assistance to attend UC, talk to a financial aid advisor at the California Community College you are attending; obtain a copy of the FAFSA form, and note application deadlines.
- Contact a UC campus Disabled Student Services program to inquire about available services.
- Visit one or more UC campuses. Call the Admissions Office at your target campus if you would like a campus tour. Contact the Transfer Center in A-111 to see about 4-year representative visits or visit the website at www.sdcity.edu
- Complete and file an application for admission with the UC campus during the initial filing period (visit www.universityofcalifornia.edu, see the UC admission booklet, or contact a UC admission office).
- Pay the application fee (\$60) with the UC application for admission.
- Submit the Intent to Enroll form.
- Have transcripts from all colleges attended (and high school transcript, if necessary) sent to the UC campus you have selected.
- After you have applied for admission to a UC campus, request that the community college Evaluations Office certify on your transcript the courses you have completed to satisfy UC general education.
- Attend the UC Transitions workshop.

Take charge of your transfer program. Visit the Transfer Center in A-111 Room 202 for resources, appointments with UC representatives and additional information.

Transfer to Private and Independent Colleges and Universities

Transfer options are available to hundreds of Private and Independent Colleges and Universities throughout the world. Admission requirements are different at each private and independent university. To establish a transfer plan, come to the Transfer Center to research and obtain transfer admissions requirements, then work with a counselor to establish a plan.

Historically Black Colleges and Universities (HBCU)

Any historically black college or university that was established prior to 1964, whose principal mission was, and is, the education of black Americans, and that is accredited by a nationally recognized accrediting agency or association determined by the Secretary [of Education] to be a reliable authority as to the quality of training offered or is, according to such an agency or association, making reasonable progress toward accreditation. There are over 125 HBCU's in the United States.

Hispanic Serving Institutions

The Hispanic Association of Colleges and Universities (HACU) is a national educational association that represents colleges and universities committed to Hispanic higher education success in the United States (including Puerto Rico), Latin America, and Spain. HACU has 193 member Hispanic-Serving Institutions (HSIs) located in 11 U.S. states and Puerto Rico. To be considered a Hispanic-Serving Institution, the Hispanic enrollment at a college or university must be at least 25 percent of the total student enrollment. California is home to 54 Hispanic Serving Institutions.

Tribal Colleges and Universities

There are 35 federally recognized Tribal Colleges and Universities in the United States. Located mainly in the Midwest and Southwest, Tribal Colleges and Universities service approximately 30,000 full- and part-time students. They offer two-year associate degrees in over 200 disciplines with some providing a bachelor's and master's degree. They also offer 200 vocational certificate programs.

Preparation for Major Courses

Many majors require or recommend introductory or prerequisite courses, most of which are offered in California Community Colleges. For public universities in California, visit www.assist.org for the articulation information for your major. For private/independent universities, visit the Transfer Center website at www.sdcity.edu under Student Services. ASSIST, AICCU Mentor, and HBCU Mentor are tools you can utilize to obtain information for preparation for majors.

ASSIST: ASSIST is a computerized student-transfer information system that can be accessed over the World Wide Web. It displays reports of how course credits earned at one California college or university can be applied when transferred to another. ASSIST is the official repository of articulation for California's colleges and universities and therefore provides the most accurate and up-to-date information available about student transfer in California. Visit ASSIST at www.assist.org.

AICCU Mentor: AICCU Mentor is a student services website representing the private colleges and universities of California. Visit www.aiccummentor.org.

HBCU Mentor: HBCU Mentor is a student services website representing the statewide and independent colleges and universities of Historically Black Colleges and Universities. Visit www.hbcumentor.org.

University of California and California State University

Intersegmental General Education Transfer Curriculum (IGETC) (Option 3)

- () Colleges in parenthesis indicate where the course is approved for General Education Requirements.
 C—City College
 M—Mesa College
 MMR—Miramar College
- * Courses with asterisks may satisfy more than one area and/or general education requirement but may not be counted more than once for this
- + Courses with pluses indicate transfer credit may be limited by either UC or CSU, or both. Please consult a counselor for additional information.
- @ Courses with at symbols indicate CSU-only requirements.

The Intersegmental General Education Transfer Curriculum (IGETC) is a general education pattern that will fulfill all lower-division general education requirements at all California State University (CSU) campuses and most University of California (UC) campuses/majors. It is also accepted by some private/independent or out of state universities. IGETC is usually recommended for students who intend to transfer to a UC campus, or who are not yet sure of their intended transfer university. Completion of the IGETC pattern is not an admission requirement for transfer to most UC or CSU campuses, nor is it the only way to fulfill the lower division GE requirements of a UC or CSU campus prior to transfer.

It is strongly recommended that students consult with a counselor to determine which general education pattern is most appropriate for their individual educational goals.

Rules for using the IGETC pattern:

- Each course must have been IGETC approved at the time it was taken. See www.assist.org for a list of certified courses and approval dates.

- Courses may be approved for more than one IGETC area. However, each course may be used to certify only one of the areas it is approved for.
- Students should apply for IGETC certification at the last community college attended prior to transfer. Forms are available from the Counseling or Evaluations office.
- AP credit and coursework completed at accredited U.S. colleges and universities may be used to fulfill some IGETC requirements. All such credit must be evaluated through the Evaluations office. Foreign coursework is not acceptable.
- All courses must be passed with a "C" or higher. "C-" is not acceptable.
- Students transferring to UC need not complete the Oral Communication requirement (Area 1C).
- Students transferring to CSU need not complete the Languages Other than English requirement.
- Some UC campuses do not allow use of IGETC for students who were previously enrolled at a UC campus.
- Some community college courses have limitations on the amount of credit awarded by the receiving university. See a counselor, the course description in the college catalog, or www.assist.org for more information.

IGETC is not recommended for the following transfer destinations:

- UC San Diego Revelle and Eleanor Roosevelt Colleges
- UC Berkeley Colleges of Business, Chemistry, Environmental Design (Architecture), Engineering, Natural Resources, Optometry
- UC Davis College of Engineering
- UC Irvine Schools of Engineering, Biological Sciences, Physical Sciences
- UC Riverside Colleges of Engineering, Natural and Agricultural Sciences
- UC Santa Barbara Colleges of Engineering, Creative Studies
- UC Los Angeles Schools of Engineering and Applied Science, Nursing

The IGETC Pattern

Area 1—English Communication

2-3 courses, 6-9 semester/8-12 quarter units

Group A: English Composition

1 course, 3 semester/4-5 quarter units

- ENGL 101 Reading and Composition (C,M,MMR)
OR
ENGL 105 Composition and Literature (C,M,MMR)

Group B: Critical Thinking - English Composition

1 course, 3 semester/4-5 quarter units

Courses must have English Composition as a prerequisite

- ENGL 205 Critical Thinking and Intermediate Composition (C,M,MMR)
PHIL 205 Critical Thinking and Writing in Philosophy (C,M,MMR)

Group C: Oral Communication

1 course, 3 semester/4-5 quarter units

- @ COMS 103 Oral Communication (C,M,MMR)
@ COMS 160 Argumentation (C,M,MMR)

Area 2—Mathematical Concepts and Quantitative Reasoning

1 course, 3 semester/4-5 quarter units

Courses must have Intermediate Algebra as a prerequisite.

- + BIOL 200 Biological Statistics (C,M)
+ MATH 116 College and Matrix Algebra (C,M,MMR)
+ MATH 119 Elementary Statistics (C,M,MMR)
+ MATH 121 Basic Techniques of Applied Calculus I (C,M,MMR)
+ MATH 122 Basic Techniques of Calculus II (C,M,MMR)
+ MATH 141 Precalculus (C,M,MMR)
+ MATH 150 Calculus with Analytic Geometry I (C,M,MMR)
+ MATH 151 Calculus with Analytic Geometry II (C,M,MMR)
MATH 245 Discrete Mathematics (C,M,MMR)

- MATH 252 Calculus with Analytic Geometry III (C,M,MMR)
MATH 254 Introduction to Linear Algebra (C,M,MMR)
MATH 255 Differential Equations (C,M,MMR)
+ PSYC 258 Behavioral Science Statistics (C,M,MMR)

Area 3—Arts and Humanities

3 courses, 9 semester/12-15 quarter units

At least one course from the Arts and one from the Humanities.

3A: Arts Courses:

- ARTF 100 Art Orientation (C,M,MMR)
ARTF 107 Contemporary Art (M,MMR)
ARTF 109 History of Modern Art (C,M,MMR)
ARTF 110 Art History: Prehistoric to Gothic (C,M,MMR)
ARTF 111 Art History: Renaissance to Modern (C,M,MMR)
+ ARTF 113 African, Oceanic, and Native American Art (M,MMR)
+ ARTF 115 African Art (C,M)
+ ARTF 120 Native American Indian Art (M)
ARTF 125 Art History: Arts of the Asian Continent (M,MMR)
* ARTF 191 Cultural Influences on Photography (M)
ARTF 194 Critical Photography (M)
ARTG 118 Graphic Design History (C)
BLAS 110 African American Art (C,M)
+ BLAS 111 African Art History (M)
BLAS 120 Black Music (C,M)
CHIC 230 Chicano Art (M)
DFLM 101 Introduction to Film (MMR)
DFLM 102 The American Cinema (MMR)
DRAM 105 Introduction to Dramatic Arts (C,M)
DRAM 107 Study of Filmed Plays (C)
DRAM 109 Theatre and Social Issues (C)
DRAM 136 History of Canonized Theatre - Ancient Greece to the Restoration (C)
DRAM 137 History of Canonized Western Theatre -Restoration to the Present (C)
DRAM 150 Cinema as Art & Communication I (M)
DRAM 151 Cinema as Art & Communication II (M)
MUSI 100 Introduction to Music (C,M,MMR)

MUSI 101	Music History I: Middle Ages to Mid 18th Century (M)
MUSI 102	Music History II: Mid 18th - Early 20th Century (M)
MUSI 103	History of Rock Music (MMR)
MUSI 105	Music of Our Time (M)
MUSI 109	World Music (C,M,MMR)
MUSI 111	Jazz - History & Development (C,M,MMR)
MUSI 125	Music, The Arts, and Humanity (M)
PHOT 150	History of Photography (C)

FREN 102	Second Course in French (C,M)
FREN 201	Third Course in French (C,M)
FREN 202	Fourth Course in French (C,M)
GERM 102	Second Course in German (C,M)
GERM 201	Third Course in German (C,M)
* HIST 100	World History I (C,M,MMR)
* HIST 101	World History II (C,M,MMR)
* HIST 105	Introduction to Western Civilization I (C,M,MMR)
* HIST 106	Introduction to Western Civilization II (C,M,MMR)
* HIST 120	Introduction to Asian Civilizations (C,M,MMR)
* HIST 121	Asian Civilizations in Modern Times (C,M,MMR)
* HIST 131	Latin America Before Independence(M)
* HIST 132	Latin America Since Independence(M)
HUMA 101	Introduction to the Humanities I (C,M,MMR)
HUMA 102	Introduction to the Humanities II (C,M,MMR)
HUMA 103	Introduction to the New Testament (C,M)
HUMA 104	Introduction to the Old Testament (M)
HUMA 106	World Religions (C,M,MMR)
HUMA 201	Mythology (C,M,MMR)
HUMA 205	Exploring Human Values through Film (M)
ITAL 102	Second Course in Italian (C,M)
ITAL 201	Third Course in Italian (C,M)
JAPN 102	Second Course in Japanese (M)
JAPN 201	Third Course in Japanese (M)
JAPN 202	Fourth Course in Japanese (M)
LATI 102	Second Course in Latin (M)
LATI 201	Third Course in Latin (M)
PHIL 102A	Introduction to Philosophy: Reality & Knowledge (C,M,MMR)
PHIL 102B	Introduction to Philosophy: Values (C,M,MMR)
PHIL 103	Historical Introduction to Philosophy (M)
PHIL 104A	History of Western Philosophy (C,M)
PHIL 104B	History of Western Philosophy (C,M)
PHIL 105	Contemporary Philosophy (C)
PHIL 106	Asian Philosophy (C,M)
PHIL 107	Reflections on Human Nature (C,M,MMR)

3B: Humanities Courses:

* AMSL 104	Introduction to Deaf Culture (M)
AMSL 116	American Sign Language Level II (C,M)
AMSL 215	American Sign Language Level III(C,M)
AMSL 216	American Sign Language Level IV (C,M)
* ARTF 191	Cultural Influences on Photography (M)
* BLAS 145A	Introduction to African History (C,M)
* BLAS 145B	Introduction to African History (C)
BLAS 150	Black Women in Literature & the Media (C,M)
BLAS 155	Afro-American Literature (C,M)
CHIC 130	Mexican Literature in Translation (C)
CHIC 135	Chicana/o Literature (C,M)
CHIC 138	Literature of La Raza in Latin America in Translation (C,M)
CHIC 190	Chicano Images in Film (C,M)
* CHIC 210	Chicano Culture (C,M)
CHIN 102	Second Course in Mandarin Chinese (M)
CHIN 201	Third Course Mandarin Chinese (M)
ENGL 208	Introduction to Literature (C,M,MMR)
ENGL 209	Literary Approaches to Film (C,M,MMR)
ENGL 210	American Literature I (C,M,MMR)
ENGL 211	American Literature II (C,M,MMR)
ENGL 215	English Literature I: 800-1799 (C,M,MMR)
ENGL 216	English Literature II: 1800-Present (C,M,MMR)
ENGL 220	Masterpieces of World Literature I: 1500 BCE - 1600 CE (C,M,MMR)
ENGL 221	Masterpieces of World Literature II: 1600 - Present (C,M,MMR)
ENGL 230	Asian American Literature (M,MMR)
ENGL 237	Women in Literature (C,MMR)
ENGL 240	Shakespeare (C,M)

PHIL 108	Perspectives on Human Nature & Society (C,M)
PHIL 110	Philosophy of Religion (M)
PHIL 111	Philosophy in Literature (C,M)
PHIL 112	Philosophy of Science (M)
PHIL 125	Philosophy of Women (C,M)
* PHIL 126	Introduction to Philosophy of Contemporary Gender Issues (C,M)
PHIL 130	Philosophy of Art and Music (C,M)
RUSS 102	Second Course in Russian (M)
RUSS 201	Third Course in Russian (M)
+ SPAN 102	Second Course in Spanish (C,M,MMR)
+ SPAN 201	Third Course in Spanish (C,M,MMR)
SPAN 215	Spanish for Spanish Speakers I (C,M,MMR)
SPAN 216	Spanish for Spanish Speakers II (C,M,MMR)
TAGA 102	Second Course in Tagalog (M,MMR)
TAGA 201	Third Course in Tagalog (M,MMR)
VIET 102	Second Course in Vietnamese (M)
VIET 201	Third Course in Vietnamese (M)

Area 4—Social and Behavioral Sciences

3 courses, 9 semester/12-15 quarter units

Courses from at least two disciplines or an interdisciplinary sequence.

4A: Anthropology and Archaeology Courses:

ANTH 103	Introduction to Cultural Anthropology (C,M,MMR)
ANTH 107	Introduction to Archaeology (C,M,MMR)
ANTH 200	Introduction to North American Indians (M)
ANTH 210	Introduction to California Indians (C,M)
ANTH 215	Cultures of Latin America (C,M)

4B: Economics Courses:

ECON 120	Principles of Macroeconomics (C,M,MMR)
ECON 121	Principles of Microeconomics (C,M,MMR)

4C: Ethnic Studies Courses:

* AMSL 104	Introduction to Deaf Culture (M)
BLAS 100	Introduction to Black Studies (C,M)
+ BLAS 104	Black Psychology (C,M)
+ BLAS 115	Sociology from a Black Perspective (C)
BLAS 116	Contemporary Social Problems From a Black Perspective (C,M)
BLAS 130	The Black Family (C,M)
BLAS 135	Introduction to Black Politics (C)
+ BLAS 140A	History of the U.S., Black Perspectives (C,M,MMR)
+ BLAS 140B	History of the U.S., Black Perspectives (C,M,MMR)
* BLAS 145A	Introduction to African History (C,M)
* BLAS 145B	Introduction to African History (C)
CHIC 110A	Introduction to Chicano Studies (C,M)
CHIC 110B	Introduction to Chicano Studies (C,M)
+ CHIC 141A	United States History From a Chicano Perspective (C,M)
+ CHIC 141B	United States History From a Chicano Perspective (C,M)
CHIC 150	History of Mexico (C,M)
CHIC 170	La Chicana (M)
CHIC 201	Pre-Columbian Cultures of MesoAmerica (C,M)
* CHIC 210	Chicano Culture (C,M)
FILI 100	Filipino American Experience (M,MMR)
+ HIST 150	Native Americans in United States History (M,MMR)
+ HIST 151	Native Americans in United States History (M,MMR)
* SOCO 150	Sociology of Latinos/Latinas (C)

4D: Gender Studies:

GEND 101	Introduction to Gender Studies (C)
+ HIST 141	Women in United States History I (C,M,MMR)
+ HIST 142	Women in United States History II (C,M,MMR)
* PHIL 126	Introduction to Philosophy of Contemporary Gender Issues (C,M)
PSYC 133	Psychology of Women (M,MMR)

4E: Geography Courses:

GEOG 102	Cultural Geography (C,M,MMR)
GEOG 104	World Regional Geography (C,M,MMR)

GEOG 154 Introduction to Urban Geography (M)

4F: History Courses:

- + CHIC 141A United States History from a Chicano Perspective (C,M)
- * HIST 100 World History I (C,M,MMR)
- * HIST 101 World History II (C,M,MMR)
- * HIST 105 Introduction to Western Civilization I (C,M,MMR)
- * HIST 106 Introduction to Western Civilization II (C,M,MMR)
- + HIST 109 History of the United States I (C,M,MMR)
- + HIST 110 History of the United States II (C,M,MMR)
- HIST 115A History of the Americas I (C,M)
- HIST 115B History of the Americas II (C,M)
- * HIST 120 Introduction to Asian Civilizations (C,M,MMR)
- * HIST 121 Asian Civilizations in Modern Times (C,M,MMR)
- HIST 123 U.S. History from the Asian Pacific American Perspective (C, M)
- HIST 130 The Modern Middle East (M)
- * HIST 131 Latin America Before Independence (M)
- * HIST 132 Latin America Since Independence(M)
- + HIST 141 Women in United States History I (C,M,MMR)
- + HIST 142 Women in United States History II (C,M,MMR)
- + HIST 150 Native Americans in United States History (M,MMR)
- + HIST 151 Native Americans in United States History (M,MMR)
- HIST 154 Ancient Egypt (M)
- HIST 175 California History (M)

4G: Interdisciplinary, Social & Behavioral Sciences:

- AGRI 100 Principles of Sustainable Agriculture (C)
- + CHIL 101 Human Growth and Development (C,M,MMR)
- + CHIL 103 Lifespan Growth and Development (MMR)
- ENGL 202 Introduction to Linguistics (C,M)
- FUTR 101 Introduction to Futures Studies (C)
- JOUR 202 Introduction to Mass Communication (C,M,MMR)

NUTR 153 Cultural Foods (M)

PEAC 101 Introduction to Peace Studies (C)

PEAC 102 Nonviolence and Conflict Resolution (C)

PEAC 201 Environmental Sustainability, Justice and Ethics (C)

SOCO 223 Globalization and Social Change (C,M,MMR)

SUST 101 Introduction to Sustainability (C)

4H: Political Science, Government & Legal Institutions Courses:

- ADJU 101 Introduction to Administration of Justice (C,MMR)
- ADJU 193 Concepts of Criminal Law (MMR)
- ADJU 230 Constitutional Law I (MMR)
- POLI 101 Introduction to Political Science (C,M,MMR)
- POLI 102 The American Political System (C,M,MMR)
- POLI 103 Comparative Politics (C,M,MMR)
- POLI 140 Contemporary International Politics (C,M,MMR)
- SOCO 223 Globalization and Social Change (C,M,MMR)

4I: Psychology Courses:

- + PSYC 101 General Psychology (C,M,MMR)
- + PSYC 121 Introduction to Child Psychology (M,MMR)
- + PSYC 123 Adolescent Psychology (MMR)
- PSYC 133 Psychology of Women (M,MMR)
- PSYC 135 Marriage and Family Relations (C,M,MMR)
- + PSYC 137 Human Sexual Behavior (C,M,MMR)
- PSYC 155 Introduction to Personality (C,M,MMR)
- PSYC 166 Introduction to Social Psychology (C,M,MMR)
- PSYC 211 Learning (C,M,MMR)
- PSYC 230 Psychology of Lifespan Development (C,M,MMR)
- PSYC 245 Abnormal Psychology (C,M,MMR)

4J: Sociology & Criminology Courses:

- PHIL 109 Issues in Social Philosophy (M)
- + SOCO 101 Principles of Sociology (C,M,MMR)

SOCO 110	Contemporary Social Problems (C,M,MMR)
SOCO 125	Sociology of the Family (C,M)
* SOCO 150	Sociology of Latinos/Latinas (C)
SOCO 201	Advanced Principles of Sociology (C,M,MMR)
SOCO 223	Globalization and Social Change (C,M,MMR)

Area 5—Physical and Biological Sciences

At least 2 courses required, 7-9 semester/9-12 quarter units.

One Physical Science course and one Biological Science course; at least one must include a laboratory.

- One course in 5A (underlined courses include a lab component)
- One course in 5B (underlined courses include a lab component)

5A: Physical Science Courses:

ASTR 101	Descriptive Astronomy (C,M,MMR)
+ ASTR 109	Practice in Observing Lab (C,M)
+ ASTR 111	Astronomy Lab (C,M,MMR)
+ CHEM 100	Fundamentals of Chemistry (C,M,MMR)
+ CHEM 100L	Fundamentals of Chemistry Lab (C,M,MMR)
CHEM 111	Chemistry in Society (C,M)
CHEM 111L	Chemistry in Society Laboratory (C,M)
+ CHEM 130	Introduction to Organic & Biological Chemistry (C,M,MMR)
+ CHEM 130L	Introduction to Organic & Biological Chemistry Lab (C,M,MMR)
+ CHEM 152	Introduction to General Chemistry (C,M,MMR)
+ CHEM 152L	Introduction to General Chemistry Lab (C,M,MMR)
CHEM 200	General Chemistry I - Lecture (C,M,MMR)
CHEM 200L	General Chemistry I - Lab (C,M,MMR)
CHEM 201	General Chemistry II - Lecture (C,M,MMR)
CHEM 201L	General Chemistry II - Lab (C,M,MMR)
+ CHEM 231	Organic Chemistry I - Lecture (C,M,MMR)
+ CHEM 231L	Organic Chemistry I - Lab (C,M,MMR)

CHEM 233	Organic Chemistry II - Lecture (C,M,MMR)
CHEM 233L	Organic Chemistry II - Lab (C,M,MMR)
<u>CHEM 251</u>	Analytical Chemistry (C,M,MMR)
+ <u>ENGN 110</u>	Science for Technical Applications (C)
GEOG 101	Physical Geography (C,M,MMR)
GEOG 101L	Physical Geography Lab (C,M,MMR)
GEOL 100	General Geology (C,M,MMR)
GEOL 101	General Geology Lab (C,M,MMR)
GEOL 104	Earth Science (C,M,MMR)
+ PHYN 100	Survey of Physical Science (C,M,MMR)
+ PHYN 101	Survey of Physical Science Lab (C,M,MMR)
PHYN 120	Physical Oceanography (M,MMR)
+ <u>PHYS 100</u>	Introductory Physics (C, M)
+ <u>PHYS 125</u>	General Physics (C,M,MMR)
+ <u>PHYS 126</u>	General Physics II (C,M,MMR)
+ PHYS 180A	General Physics I (C)
+ PHYS 180B	General Physics II (C)
+ PHYS 181A	General Physics Lab I (C)
+ PHYS 181B	General Physics Lab II (C)
+ <u>PHYS 195</u>	Mechanics (C,M,MMR)
+ <u>PHYS 196</u>	Electricity and Magnetism (C,M,MMR)
+ <u>PHYS 197</u>	Waves, Optics and Modern Physics (C,M,MMR)

5B: Biological Science Courses:

ANTH 102	Introduction to Physical Anthropology (C,M,MMR)
ANTH 104	Laboratory in Physical Anthropology (C,M,MMR)
+ <u>BIOL 100</u>	Natural History Environmental Biology (M,MMR)
<u>BIOL 101</u>	Issues In Environmental Biology (C)
+ <u>BIOL 107</u>	General Biology - Lecture and Lab (C,M,MMR)
BIOL 110	Introduction to Oceanography (C,M)
<u>BIOL 115</u>	Marine Biology (C,M,MMR)
+ BIOL 120	The Environment of Man (M)
BIOL 130	Human Heredity (C,M,MMR)
<u>BIOL 131</u>	Introduction to Biotechnology (MMR)
+ BIOL 180	Plants and People (C,M,MMR)
<u>BIOL 205</u>	General Microbiology (C,M,MMR)
<u>BIOL 210A</u>	Introduction to the Biological Sciences I (C,M,MMR)

	<u>BIOL 210B</u>	Introduction to the Biological Sciences II (C,M,MMR)
+	<u>BIOL 215</u>	Introduction to Zoology (C,M,MMR)
	<u>BIOL 230</u>	Human Anatomy (C,M,MMR)
	<u>BIOL 235</u>	Human Physiology (C,M,MMR)
+	<u>BIOL 250</u>	Introduction to Botany (M,MMR)
	PSYC 260	Introduction to Physiological Psychology (C,M,MMR)

Area 6—Languages other than English

UC Requirement Only. In order to complete IGETC for the University of California system, students are required to demonstrate competence/proficiency in a language other than English equal to two years of high school study. Competence may be demonstrated through the following mechanisms:

1. Completion of two years of the same foreign language of high school level work with grades of "C" or better;
2. Completion of a course or courses at a college or university, with a grade of "C" or better in each course. Usually, one semester of college work in a language other than English is equivalent to two years of high school work;

Any one of the following course or courses completed with a grade of "C" or better, will fulfill the requirement.

6A: Languages Other Than English

	AMSL 115	American Sign Language Level I (C,M)
	AMSL 116	American Sign Language Level II (C,M)
	AMSL 215	American Sign Language Level III (C,M)
	AMSL 216	American Sign Language Level IV (C,M)
	ARAB 101	First Course in Arabic (C,MMR)
	ARAB 102	Second Course in Arabic (C,MMR)
	CHIN 101	First Course in Mandarin Chinese (M)
	CHIN 102	Second Course in Mandarin Chinese (M)
	CHIN 201	Third Course in Mandarin Chinese (M)
	FREN 101	First Course in French (C,M)
	FREN 102	Second Course in French (C,M)
	FREN 201	Third Course in French (C,M)
	FREN 202	Fourth Course in French (C,M)
	GERM 101	First Course in German (C,M)
	GERM 102	Second Course in German (C,M)

	GERM 201	Third Course in German (C,M)
	ITAL 101	First Course in Italian (C,M)
	ITAL 102	Second Course in Italian (C,M)
	ITAL 201	Third Course in Italian (C,M)
	JAPN 101	First Course in Japanese (M)
	JAPN 102	Second Course in Japanese (M)
	JAPN 201	Third Course in Japanese (M)
	JAPN 202	Fourth Course in Japanese (M)
	LATI 101	First Course in Latin (M)
	LATI 102	Second Course in Latin (M)
	LATI 201	Third Course in Latin (M)
	RUSS 101	First Course in Russian (C,M)
	RUSS 102	Second Course in Russian (M)
	RUSS 201	Third Course in Russian (M)
+	SPAN 100	First/Second Course in Spanish-Accelerated (M)
+	SPAN 101	First Course in Spanish (C,M,MMR)
+	SPAN 102	Second Course in Spanish (C,M,MMR)
+	SPAN 201	Third Course in Spanish (C,M,MMR)
+	SPAN 202	Fourth Course in Spanish (C,M,MMR)
	SPAN 215	Spanish for Spanish Speakers I (C,M,MMR)
	SPAN 216	Spanish for Spanish Speakers II (C,M,MMR)
	TAGA 101	First Course in Tagalog (M,MMR)
	TAGA 102	Second Course in Tagalog (M,MMR)
	TAGA 201	Third Course in Tagalog (M,MMR)
	VIET 101	First Course in Vietnamese (M)
	VIET 102	Second Course in Vietnamese (M)
	VIET 201	Third Course in Vietnamese (M)

3. Achieve a satisfactory score on the SAT Subject Test in languages other than English, as listed below. If the test was taken before May 1995, the first score is the minimum; if the test was taken after May 1995, the second score is the minimum:
 - Chinese With Listening: not offered before 1995/520
 - French/French With Listening: 500/540
 - German/German With Listening: 500/510
 - Hebrew (Modern): 500/470
 - Italian: 500/520
 - Japanese With Listening: 500/510

- Korean/Korean With Listening: not offered before 1995/500
 - Latin: 500/530
 - Spanish/Spanish With Listening: 500/520
4. Achieve a score of 3, 4 or 5 on a College Board Advanced Placement (AP) Examination in a language other than English.
 5. Achieve a score of 5 or higher on an International Baccalaureate (IB) Higher Level Examination in a language other than English.
 6. Satisfactorily complete a proficiency test administered by a community college, university or other college in a language other than English. The test must assess the student proficiency at a level equivalent to at least two years of high school language. The San Diego Community College District does not administer this test.
 7. Complete, with grades of C or better, two years of formal schooling at the sixth-grade level or higher in an institution where the language of instruction is not English. If secondary school was completed in a non-English-speaking country and the language of instruction of the secondary school was not English, language other than English proficiency can be certified for IGETC without further evaluation. The student must present appropriate documentation of attendance at the secondary school.
 8. Earn a passing grade on the international A level or O level exam in a language other than English.
 9. If an appropriate achievement test is not available to assert proficiency, have competency verified by a faculty member associated with a California community college. Such verification requires that the college provide a document on letterhead asserting that the student's proficiency in the language is equivalent to two years of high school study. See a counselor for more information. Only students who have no other means to verify foreign language proficiency may pursue this option. Students must petition for faculty member verification through the Evaluations Office.

Completion of courses above proficiency level, with grades of C or better, may also be used to meet the requirement. Special Topics and Civilization courses DO NOT meet this requirement. See a Counselor.

California State University General Education Breadth (CSU GE)

The California State University General Education-Breadth (CSU GE) pattern is one option that allows California community college transfer students to fulfill the lower-division general education requirements of any California State University (CSU) campus. The curriculum consists of a 39-unit pattern with five areas of concentration.

For assistance in determining the most appropriate general education program, consult a counselor.

Certification of CSU GE Requirements

Official notification from a California community college that a transfer student has completed courses fulfilling lower-division general education requirements occurs through a process of "certification". Certification is a legal agreement between the CSU and California Community Colleges.

It is the policy of the San Diego Community College District to provide certification of general education breadth requirements when such service is requested by the student. Certification of general education courses is generally requested when the CSU GE pattern has been completed.

Additional CSU GE Information and Restrictions

- Completion of the CSU GE pattern is not an admission requirement nor does completion guarantee admission to any CSU campus or program.
- Certification is based on approved courses listed in the CSU GE pattern that are completed in the San Diego Community College District or from other regionally accredited institutions.
- Courses completed at a foreign college or university cannot be used to satisfy requirements for certification.
- Catalog rights do not apply to the CSU GE pattern.
- Prior to certification, students must complete a minimum of 3 units of general education within the CSU GE pattern or 12 units in residence at the San Diego Community College District.

- Official transcripts from all colleges and universities attended must be on file before submitting an application for certification. The application is available in the Evaluations Office and/or Counseling Office.
- The CSU GE pattern is accepted by some California private and independent colleges and universities in satisfying lower division general education requirements.

For additional information, consult a counselor.

The CSU GE Pattern (Option 2)

The following information is based on the 2011-2012 agreement and is distributed as follows:

- () Colleges in parenthesis indicate where the course is approved for IGETC Requirements.
 C—City College
 M—Mesa College
 MMR—Miramar College
- * Courses with asterisks are listed in more than one area but shall not be certified in more than one area.
- # Courses with the number sign are listed more than once in the same area, but will only be used for certification once.

Please note: Courses required in Oral Communication (Area A1), Written Communication (Area A2), Critical Thinking (Area A3), and Mathematics and Quantitative Reasoning (Area B4) must be completed with grades of "C" or better for admission to most CSU campuses. *For additional information, consult a counselor.*

Area A. English Language Communication and Critical Thinking:

No fewer than nine semester units (12-15 quarter units) including one course in A1, one course in A2, and one course in A3.

A1: Oral Communication

- | | |
|----------|---------------------------------------|
| COMS 103 | Oral Communication (C,M,MMR) |
| COMS 135 | Interpersonal Communication (C,M,MMR) |
| COMS 170 | Small Group Communication (C,M) |

A2: Written Communication

- | | |
|----------|--------------------------------------|
| ENGL 101 | Reading and Composition (C,M,MMR) |
| ENGL 105 | Composition and Literature (C,M,MMR) |

A3: Critical Thinking

- | | |
|------------|--|
| COMS 160 | Argumentation (C,M,MMR) |
| ENGL 205 | Critical Thinking and Intermediate Composition (C,M,MMR) |
| PHIL 100 | Logic and Critical Thinking (C,M,MMR) |
| * PHIL 103 | Historical Introduction to Philosophy (M) |
| PHIL 205 | Critical Thinking and Writing in Philosophy (C,M,MMR) |

Area B. Scientific Inquiry and Quantitative Reasoning:

No fewer than nine semester units (12-15 quarter units) Including:

- One course in B1 (underlined courses include a lab component)
- One course in B2 (underlined courses include a lab component)
- One of the courses selected to fulfill the requirement for B1 or B2 must include a laboratory component or a separate course must be taken from B3. If a separate laboratory course is taken from B3, it must match one of the two lecture courses taken from B1 or B2.
- One course in B4

B1: Physical Science

- | | |
|----------|--|
| ASTR 101 | Descriptive Astronomy (C,M,MMR) |
| CHEM 100 | Fundamentals of Chemistry (C,M,MMR) |
| CHEM 111 | Chemistry in Society (C,M) |
| CHEM 130 | Introduction to Organic & Biological Chemistry (C,M,MMR) |
| CHEM 152 | Introduction to General Chemistry (C,M,MMR) |
| CHEM 200 | General Chemistry I-Lecture (C,M,MMR) |
| CHEM 201 | General Chemistry II-Lecture (C,M,MMR) |
| CHEM 231 | Organic Chemistry I-Lecture (C,M,MMR) |

CHEM 233	Organic Chemistry II-Lecture (C,M,MMR)
<u>CHEM 251</u>	Analytical Chemistry (C,M,MMR)
<u>ENGN 110</u>	Science for Technical Applications (C)
GEOG 101	Physical Geography (C,M,MMR)
GEOL 100	General Geology (C,M,MMR)
GEOL 104	Earth Science (C,M,MMR)
<u>MCTR 120A</u>	Basic Physics for Technical Applications I (C)
<u>MCTR 120B</u>	Basic Physics for Technical Applications II (C)
PHYN 100	Survey of Physical Science (C,M,MMR)
PHYN 120	Physical Oceanography (M,MMR)
<u>PHYS 100</u>	Introductory Physics (C,M)
<u>PHYS 125</u>	General Physics (C,M,MMR)
<u>PHYS 126</u>	General Physics II (C,M,MMR)
PHYS 180A	General Physics I (C,MMR)
PHYS 180B	General Physics II (C,MMR)
<u>PHYS 195</u>	Mechanics (C,M,MMR)
<u>PHYS 196</u>	Electricity and Magnetism (C,M,MMR)
<u>PHYS 197</u>	Waves, Light and Modern Physics (C,M,MMR)

B2: Life Science

ANTH 102	Introduction to Physical Anthropology (C,M,MMR)
<u>BIOL 100</u>	Natural History-Environmental Biology (M,MMR)
<u>BIOL 101</u>	Issues in Environmental Biology (C)
<u>BIOL 107</u>	General Biology-Lecture and Laboratory (C,M,MMR)
BIOL 110	Introduction to Oceanography (C,M)
BIOL 111	Cancer Biology (C)
<u>BIOL 115</u>	Marine Biology (C,M,MMR)
BIOL 130	Human Heredity (C,M,MMR)
<u>BIOL 131</u>	Introduction to Biotechnology (MMR)
<u>BIOL 160</u>	Elements of Human Anatomy & Physiology (M,MMR)
BIOL 180	Plants and People (C,M,MMR)
<u>BIOL 205</u>	General Microbiology (C,M,MMR)
<u>BIOL 210A</u>	Introduction to the Biological Sciences I (C,M,MMR)
<u>BIOL 210B</u>	Introduction to the Biological Sciences II (C,M,MMR)
<u>BIOL 215</u>	Introduction to Zoology (C,M,MMR)
<u>BIOL 230</u>	Human Anatomy (C,M,MMR)

<u>BIOL 235</u>	Human Physiology (C,M,MMR)
<u>BIOL 250</u>	Introduction to Botany (M,MMR)
<u>BIOL 255</u>	California Plants (M)
PSYC 260	Introduction to Physiological Psychology (C,M,MMR)

B3: Laboratory Activity

ANTH 104	Laboratory in Physical Anthropology (C,M,MMR)
ASTR 109	Practice in Observing (C,M)
ASTR 111	Astronomy Laboratory (C,M,MMR)
CHEM 100L	Fundamentals of Chemistry Laboratory (C,M,MMR)
CHEM 111L	Chemistry in Society Laboratory (C,M)
CHEM 130L	Introduction to Organic & Biological Chemistry Laboratory (C,M,MMR)
CHEM 152L	Introduction to General Chemistry Laboratory (C,M,MMR)
CHEM 200L	General Chemistry I-Laboratory (C,M,MMR)
CHEM 201L	General Chemistry II-Laboratory (C,M,MMR)
CHEM 231L	Organic Chemistry I-Laboratory (C,M,MMR)
CHEM 233L	Organic Chemistry II-Laboratory (C,M,MMR)
GEOG 101L	Physical Geography Laboratory (C,M,MMR)
GEOL 101	General Geology Laboratory (C,M,MMR)
PHYN 101	Survey of Physical Science Laboratory (C,M,MMR)
PHYS 181A	General Physics Lab I (C,MMR)
PHYS 181B	General Physics Lab II (C,MMR)

B4: Mathematics/Quantitative Reasoning

BIOL 200	Biological Statistics (C,M)
MATH 104	Trigonometry (C,M,MMR)
MATH 107	Introduction to Scientific Programming (C)
MATH 107L	Introduction to Scientific Programming Laboratory (C)
MATH 115	Gateway to Experimental Statistics (C)
MATH 116	College and Matrix Algebra (C,M,MMR)
MATH 118	A Survey of Modern Mathematics (C,M,MMR)
MATH 119	Elementary Statistics (C,M,MMR)

MATH 121	Basic Techniques of Applied Calculus I (C,M,MMR)	ARTG 118	Graphic Design History (C,MMR)
MATH 122	Basic Techniques of Calculus II (C,M,MMR)	BLAS 110	African American Art (C,M)
MATH 141	Precalculus (C,M,MMR)	BLAS 111	African Art History (M)
MATH 150	Calculus with Analytic Geometry I (C,M,MMR)	BLAS 120	Black Music (C,M)
MATH 151	Calculus with Analytic Geometry II (C,M,MMR)	CHIC 230	Chicano Art (M)
MATH 181	Mecomtronics College Algebra and Trigonometry I (C)	DANC 181	Introduction to Dance (C,M)
MATH 182	Mecomtronics College Algebra and Trigonometry II (C)	DFLM 101	Introduction to Film (MMR)
MATH 183	Mecomtronics Calculus I (C)	DFLM 102	The American Cinema (MMR)
MATH 184	Mecomtronics Calculus II (C)	DRAM 105	Introduction to Dramatic Arts (C,M)
MATH 210A	Concepts of Elementary School Mathematics I (C,M,MMR)	DRAM 107	Study of Filmed Plays (C)
MATH 210B	Concepts of Elementary School Mathematics II (C,M,MMR)	DRAM 109	Theatre and Social Issues (C)
MATH 245	Discrete Mathematics (C,M,MMR)	DRAM 136	History of Canonized Theatre - Ancient Greece to the Restoration (C)
MATH 252	Calculus with Analytic Geometry III (C,M,MMR)	DRAM 137	History of Canonized Western Theatre - Restoration to the Present (C)
MATH 254	Introduction to Linear Algebra (C,M,MMR)	DRAM 150	Cinema as Art and Communication I (M)
MATH 255	Differential Equations (C,M,MMR)	DRAM 151	Cinema as Art and Communication II (M)
PSYC 258	Behavioral Science Statistics (C,M,MMR)	FASH 120	Fashion History and Trends (M)
		MUSI 100	Introduction to Music (C,M,MMR)
		MUSI 101	Music History I: Middle Ages to Mid 18th Century (M)
		MUSI 102	Music History II: Mid 18th to Early 20th Century (M)
		MUSI 103	History of Rock Music (MMR)
		MUSI 105	Music of Our Time (M)
		MUSI 109	World Music (C,M,MMR)
		MUSI 111	Jazz-History and Development (C,M,MMR)
		MUSI 125	Music, the Arts and Humanity (M)
		PHOT 150	History of Photography (C)
		RTVC 160	Introduction to Cinema (C)

Area C. Arts and Humanities:

Nine semester units (12-15 quarter units) with at least one course each in Arts and Humanities.

C1: Arts (Art, Cinema, Dance, Music, Theater)

ARTF 100	Art Orientation (C,M,MMR)
ARTF 107	Contemporary Art (M,MMR)
ARTF 109	History of Modern Art (C,M,MMR)
ARTF 110	Art History: Prehistoric to Gothic (C,M,MMR)
ARTF 111	Art History: Renaissance to Modern (C,M,MMR)
ARTF 113	African, Oceanic, and Native American Art (M,MMR)
ARTF 115	African Art (C,M)
ARTF 120	Native American Indian Art (M)
ARTF 125	Art History: Arts of the Asian Continent (M,MMR)
* ARTF 191	Cultural Influences on Photography (M)
ARTF 194	Critical Photography (M)

C2: Humanities (Literature, Philosophy, Languages Other than English)

* AMSL 104	Introduction to Deaf Culture (M)
AMSL 115	American Sign Language Level I (C,M)
AMSL 116	American Sign Language Level II (C,M)
AMSL 215	American Sign Language Level III (C,M)
AMSL 216	American Sign Language Level IV (C,M)
ARAB 101	First Course in Arabic (C,MMR)
ARAB 102	Second Course in Arabic (C,MMR)
* ARTF 191	Cultural Influences on Photography (M)

BLAS 150	Black Women in Literature and the Media (C,M)	* HIST 120	Introduction to Asian Civilizations (C,M,MMR)
BLAS 155	Afro-American Literature (C,M)	* HIST 121	Asian Civilizations in Modern Times (C,M,MMR)
CHIC 130	Mexican Literature in Translation (C)	* HIST 131	Latin America Before Independence (M)
CHIC 135	Chicana/o Literature (C,M)	* HIST 132	Latin America Since Independence (M)
CHIC 138	Literature of La Raza in Latin America in Translation (C,M)	* HIST 154	Ancient Egypt (M)
CHIC 190	Chicano Images in Film (C,M)	HUMA 101	Introduction to the Humanities I (C,M,MMR)
CHIC 203	Introductory Spanish for Spanish Speakers (C)	HUMA 102	Introduction to the Humanities II (C,M,MMR)
CHIC 204	Intermediate Spanish for Spanish Speakers (C)	HUMA 103	Introduction to the New Testament (C,M)
CHIC 210	Chicano Culture (C,M)	HUMA 104	Introduction to the Old Testament (M)
CHIN 101	First Course in Mandarin Chinese (M)	HUMA 106	World Religions (C,M,MMR)
CHIN 102	Second Course in Mandarin Chinese (M)	HUMA 201	Mythology (C,M,MMR)
CHIN 201	Third Course in Mandarin Chinese (M)	HUMA 202	Mythology: Hero's Journey (C)
CHIN 202	Fourth Course in Mandarin Chinese (M)	HUMA 205	Exploring Human Values through Film (M)
ENGL 208	Introduction to Literature (C,M,MMR)	ITAL 101	First Course in Italian (C,M)
ENGL 209	Literary Approaches to Film (C,M,MMR)	ITAL 102	Second Course in Italian (C,M)
ENGL 210	American Literature I (C,M,MMR)	ITAL 201	Third Course in Italian (C,M)
ENGL 211	American Literature II (C,M,MMR)	JAPN 101	First Course in Japanese (M)
ENGL 215	English Literature I: 800-1799 (C,M,MMR)	JAPN 102	Second Course in Japanese (M)
ENGL 216	English Literature II: 1800-Present (C,M,MMR)	JAPN 201	Third Course in Japanese (M)
ENGL 220	Masterpieces of World Literature I: 1500 BCE - 1600 CE (C,M,MMR)	JAPN 202	Fourth Course in Japanese (M)
ENGL 221	Masterpieces of World Literature II: 1600 - Present (C,M,MMR)	LATI 101	First Course in Latin (M)
ENGL 230	Asian American Literature (M,MMR)	LATI 102	Second Course in Latin (M)
ENGL 237	Women in Literature (C,MMR)	LATI 201	Third Course in Latin (M)
ENGL 238	Evaluating Children's Literature (C,M)	PHIL 102A	Introduction to Philosophy: Reality and Knowledge (C,M,MMR)
ENGL 240	Shakespeare (C,M)	PHIL 102B	Introduction to Philosophy: Values (C,M,MMR)
FREN 101	First Course in French (C,M)	* PHIL 103	Historical Introduction to Philosophy (M)
FREN 102	Second Course in French (C,M)	PHIL 104A	History of Western Philosophy (C,M)
FREN 201	Third Course in French (C,M)	PHIL 104B	History of Western Philosophy (C,M)
FREN 202	Fourth Course in French (C,M)	PHIL 105	Contemporary Philosophy (C)
GERM 101	First Course in German (C,M)	PHIL 106	Asian Philosophy (C,M)
GERM 102	Second Course in German (C,M)	PHIL 107	Reflections on Human Nature (C,M,MMR)
GERM 201	Third Course in German (C,M)	PHIL 108	Perspectives on Human Nature and Society (C,M)
* HIST 100	World History I (C,M,MMR)	PHIL 110	Philosophy of Religion (M)
* HIST 101	World History II (C,M,MMR)	PHIL 111	Philosophy in Literature (C,M)
* HIST 105	Introduction to Western Civilization I (C,M,MMR)	PHIL 112	Philosophy of Science (M)
* HIST 106	Introduction to Western Civilization II (C,M,MMR)	PHIL 125	Philosophy of Women (C,M)

* PHIL 126	Introduction to Philosophy of Contemporary Gender Issues (C,M)
PHIL 130	Philosophy of Art and Music (C,M)
RUSS 101	First Course in Russian (C,M)
RUSS 102	Second Course in Russian (M)
RUSS 201	Third Course in Russian (M)
SPAN 100	First/Second Course in Spanish-Accelerated (M)
SPAN 101	First Course in Spanish (C,M,MMR)
SPAN 102	Second Course in Spanish (C,M,MMR)
SPAN 201	Third Course in Spanish (C,M,MMR)
SPAN 202	Fourth Course in Spanish (C,M,MMR)
SPAN 215	Spanish for Spanish Speakers I (C,M,MMR)
SPAN 216	Spanish for Spanish Speakers II (C,M,MMR)
TAGA 101	First Course in Tagalog (M,MMR)
TAGA 102	Second Course in Tagalog (M,MMR)
TAGA 201	Third Course in Tagalog (M,MMR)
VIET 101	First Course in Vietnamese (M)
VIET 102	Second Course in Vietnamese (M)
VIET 201	Third Course in Vietnamese (M)

Area D. Social Sciences:

Nine semester units (12-15 quarter units) required with courses in at least two disciplines.

D0: Sociology and Criminology

ADJU 106	Diversity and Community Relations (MMR)
# BLAS 115	Sociology from a Black Perspective (C)
# BLAS 116	Contemporary Social Problems from a Black Perspective (C,M)
# BLAS 125	Dynamics of the Black Community (M)
# BLAS 130	The Black Family (C,M)
SOCO 101	Principles of Sociology (C,M,MMR)
SOCO 110	Contemporary Social Problems (C,M,MMR)
SOCO 125	Sociology of the Family (C,M)
# SOCO 150	Sociology of Latinos/Latinas (C)
SOCO 201	Advanced Principles of Sociology (C,M,MMR)
# SOCO 223	Globalization and Social Change (C,M,MMR)

D1: Anthropology and Archaeology

ANTH 103	Introduction to Cultural Anthropology (C,M,MMR)
ANTH 107	Introduction to Archaeology (C,M,MMR)
# ANTH 200	Introduction to North American Indians (M)
ANTH 205	Introduction to Medical Anthropology (M)
# ANTH 210	Introduction to California Indians (C,M)
# ANTH 215	Cultures of Latin America (C,M)

D2: Economics

ECON 120	Principles of Macroeconomics (C,M,MMR)
ECON 121	Principles of Microeconomics (C,M,MMR)

D3: Ethnic Studies

* AMSL 104	Introduction to Deaf Culture (M)
# ANTH 200	Introduction to North American Indians (M)
# ANTH 210	Introduction to California Indians (C,M)
# ANTH 215	Cultures of Latin America (C,M)
BLAS 100	Introduction to Black Studies (C,M)
# BLAS 104	Black Psychology (C,M)
# BLAS 115	Sociology from a Black Perspective (C)
# BLAS 116	Contemporary Social Problems from a Black Perspective (C,M)
# BLAS 125	Dynamics of the Black Community (M)
# BLAS 130	The Black Family (C,M)
# BLAS 135	Introduction to Black Politics (C)
# BLAS 140A	History of the U.S., Black Perspectives (C,M,MMR)
# BLAS 140B	History of the U.S., Black Perspectives (C,M,MMR)
CHIC 110A	Introduction to Chicano Studies (C,M)
CHIC 110B	Introduction to Chicano Studies (C,M)
# CHIC 141A	United States History from a Chicano Perspective (C,M)
# CHIC 141B	United States History from a Chicano Perspective (C,M)
# CHIC 170	La Chicana (C,M)
CHIC 201	Pre-Columbian Cultures of MesoAmerica (C,M)
FILI 100	Filipino American Experience (M,MMR)

#	HIST 123	U.S. History from the Asian Pacific American Perspective (C,M)
#	HIST 150	Native Americans in United States History (M,MMR)
#	HIST 151	Native Americans in United States History (M,MMR)
#	SOCO 150	Sociology of Latinos/Latinas (C)

D4: Gender Studies

#	CHIC 170	La Chicana (C,M)
	GEND 101	Introduction to Gender Studies (C)
#	HIST 141	Women in United States History I (C,M,MMR)
#	HIST 142	Women in United States History II (C,M,MMR)
*	PHIL 126	Introduction to Philosophy of Contemporary Gender Issues (C,M)
*#	PSYC 133	Psychology of Women (M,MMR)

D5: Geography

	GEOG 102	Cultural Geography (C,M,MMR)
	GEOG 104	World Regional Geography (C,M,MMR)
	GEOG 154	Introduction to Urban Geography (M)

D6: History

#	BLAS 140A	History of the U.S., Black Perspectives (C,M,MMR)
#	BLAS 140B	History of the U.S., Black Perspectives (C,M,MMR)
	BLAS 145A	Introduction to African History (C,M)
	BLAS 145B	Introduction to African History (C)
#	CHIC 141A	United States History from a Chicano Perspective (C,M)
#	CHIC 141B	United States History from a Chicano Perspective (C,M)
	CHIC 150	History of Mexico (C,M)
*	HIST 100	World History I (C,M,MMR)
*	HIST 101	World History II (C,M,MMR)
*	HIST 105	Introduction to Western Civilization I (C,M,MMR)
*	HIST 106	Introduction to Western Civilization II (C,M,MMR)
	HIST 109	History of the United States I (C,M,MMR)
	HIST 110	History of the United States II (C,M,MMR)

	HIST 115A	History of the Americas I (C,M)
	HIST 115B	History of the Americas II (C,M)
*	HIST 120	Introduction to Asian Civilizations (C,M,MMR)
*	HIST 121	Asian Civilizations in Modern Times (C,M,MMR)
#	HIST 123	U.S. History from the Asian Pacific American Perspective (C,M)
	HIST 130	The Modern Middle East (M)
*	HIST 131	Latin America Before Independence (M)
*	HIST 132	Latin America Since Independence (M)
#	HIST 141	Women in United States History I (C,M,MMR)
#	HIST 142	Women in United States History II (C,M,MMR)
#	HIST 150	Native Americans in United States History (M,MMR)
#	HIST 151	Native Americans in United States History (M,MMR)
*	HIST 154	Ancient Egypt (M)
	HIST 175	California History (M)

D7: Interdisciplinary Social or Behavioral Science

	AGRI 100	Principles of Sustainable Agriculture (C)
*	CHIL 101	Human Growth and Development (C,M,MMR)
*	CHIL 103	Lifespan Growth and Development (MMR)
	CHIL 141	The Child, Family and Community (C,M,MMR)
	ENGL 202	Introduction to Linguistics (C,M)
	FUTR 101	Introduction to Futures Studies (C)
	FUTR 102	Creating Futures: Methods and Tools (C)
	FUTR 103	Emerging Technologies (C)
	JOUR 202	Introduction to Mass Communication (C,M,MMR)
	NUTR 153	Cultural Foods (M)
	PEAC 101	Introduction to Peace Studies (C)
	PEAC 102	Nonviolence and Conflict Resolution (C)
	PEAC 201	Environmental Sustainability, Justice and Ethics (C)
	PHIL 109	Issues in Social Philosophy (M)
#	SOCO 223	Globalization and Social Change (C,M,MMR)

SUST 101 Introduction to Sustainability (C)

D8: Political Science, Government, and Legal Institutions

ADJU 101	Introduction to Administration of Justice (C,MMR)
ADJU 193	Concepts of Criminal Law (MMR)
ADJU 230	Constitutional Law I (MMR)
# BLAS 135	Introduction to Black Politics (C)
POLI 101	Introduction to Political Science (C,M,MMR)
POLI 102	The American Political System (C,M,MMR)
POLI 103	Comparative Politics (C,M,MMR)
POLI 140	Contemporary International Politics (C,M,MMR)
# SOCO 223	Globalization and Social Change (C,M,MMR)

D9: Psychology

# BLAS 104	Black Psychology (C,M)
PSYC 101	General Psychology (C,M,MMR)
PSYC 121	Introduction to Child Psychology (M,MMR)
PSYC 123	Adolescent Psychology (MMR)
*# PSYC 133	Psychology of Women (M,MMR)
* PSYC 135	Marriage and Family Relations (C,M,MMR)
* PSYC 137	Human Sexual Behavior (C,M,MMR)
PSYC 155	Introduction to Personality (C,M,MMR)
PSYC 166	Introduction to Social Psychology (C,M,MMR)
PSYC 211	Learning (C,M,MMR)
* PSYC 230	Psychology of Lifespan Development (C,M,MMR)
PSYC 245	Abnormal Psychology (C,M,MMR)

Area E. Lifelong Learning and Self-Development:

Three semester units (4-5 quarter units).

BIOL 120	The Environment of Man (M)
* CHIL 101	Human Growth and Development (C,M,MMR)
* CHIL 103	Lifespan Growth and Development (MMR)

COMS 180 Intercultural Communication (C,M,MMR)

HEAL 101 Health and Life Style (C,M,MMR)

MILS 110 Leadership Theory and Practice (MMR)

NUTR 150 Nutrition (M,MMR)

NUTR 153 Cultural Foods (M)

PERG 120 College Success and Lifelong Learning (C,M,MMR)

PERG 130 Career - Life Planning (C,M,MMR)

PERG 140 Life Skills and Personal Adjustment (C,M,MMR)

PHYE 103 Aerobic Dance (C,M,MMR)

PHYE 123 Fitness Activities (C,M,MMR)

PHYE 132 Individual Conditioning (C,M,MMR)

PHYE 168 Yoga (C,M)

PHYE 182 Adapted Weight Training (C,M)

PSYC 111 Psychological/Social Aspects of Aging, Death and Dying (C,M)

PSYC 112 Interpersonal Relations (M)

PSYC 128 Biofeedback and Stress Management (M)

* PSYC 135 Marriage and Family Relations (C,M,MMR)

* PSYC 137 Human Sexual Behavior (C,M,MMR)

* PSYC 230 Psychology of Lifespan Development (C,M,MMR)

Other Transfer General Education Options

Some transfer students are best served by following a general education pattern other than the IGETC or CSU GE patterns. These typically include students who fall into one of the following three categories:

1. Students entering high unit majors such as an engineering or science discipline. Major preparation for the engineering and science fields typically consists of a high number of units. Most universities prefer (and some require) that these preparation for major courses be completed prior to transfer. Therefore, it may be more beneficial for students entering these majors to complete relatively fewer GE courses and more major preparation courses at the community college, while still meeting the minimum admission

requirements of the university. Students should review the catalog or other published advising materials of the university and major to which they intend to transfer and then consult a City counselor for assistance in selecting appropriate courses.

2. Students transferring to a private/independent or out-of-state university. Some private/independent and out-of-state universities accept IGETC or CSU GE, but most do not. Instead, each university has its own unique GE pattern. City College has established articulation agreements with many of these institutions. These agreements specify the courses students can complete at City to fulfill the university's GE requirements. They are available at www.sdcity.edu/transfer/articulation. For more information on transferring to a private/independent or out-of-state university, visit the Transfer Center (A-111) or see a counselor.
3. Students who wish to complete the general education requirements of one specific university. Some students decide to complete the GE requirements for one specific university, rather than the more universally applicable IGETC or CSU GE patterns, for several reasons:
 - Some universities and/or majors do not accept IGETC and instead suggest following the university's own GE pattern.
 - Some students know that they will attend only one university (such as those with a guarantee of transfer admission) and so plan to complete the specific GE pattern for that institution only.
 - Some university-specific GE patterns require fewer total units than IGETC or CSU GE.

Each university's unique GE pattern can be found in the university catalog. In addition, some UC and CSU campuses have posted their unique general education patterns to the ASSIST website at www.assist.org.

Guarantee Admission Programs

City College offers a number of Guarantee Admissions Programs. Come to the Transfer Center for program requirements. Plan early as many

agreements must be signed at least a year in advance of the transfer semester/quarter.

The two most popular Guarantee Admission Programs are:

- **University of California, San Diego Transfer Admission Guarantee (TAG)**
Guarantees admission to the student's choice of college (see page 112 for requirements).
- **San Diego State University Transfer Admission Guarantee (TAG)**
Guarantees admission to the university. For admission to a major, students must meet specified requirements.

Other Transfer programs include:

- **California State University, Northridge Transfer Admission Guarantee Program (TAG)**
Guarantees admission to the university during transfer semester of choice and provides CSU Northridge advising and other services.
- **University of California, San Diego UniversityLink Program**
Guarantees admission to the university and provides counseling, workshops and other activities to help you succeed in the university. Open to students who are recent graduates of a San Diego County high school.
- **University of California, Davis Transfer Admission Guarantee Program (TAG)**
Guarantees admission to the university and the major of your choice. Limited numbers available. Apply in August of the year before transfer. You must have completed 30 UC-transferable units and have a 2.8 GPA to apply.
- **University of California, Irvine Transfer Admission Guarantee (TAG)**
Guarantees admission to the university. Administered through UC Irvine Admissions Office.
- **University of California, Riverside Transfer Admission Guarantee Program (TAG)**
Guarantees admission to the university. Administered through UC Riverside Admissions Office.
- **University of California, Santa Barbara Transfer Admission Guarantee (TAG)**
Guarantees admission to the university. No agreement form is necessary - just meet the requirements and apply.

- **University of California, Santa Cruz Transfer Admission Guarantee (TAG)**
Guarantees admission to the university. Apply in early Fall of year before transfer. You must have completed 30 UC-transferable units and have a 3.0 GPA to apply.
- **Humboldt State University**
Guarantees admission to the university and offers priority registration for transfers.

Note: Eligibility and coursework requirements differ for each of these programs. See a counselor or visit the Transfer Center for more information.

Students who qualify for the college Honors Program may also be eligible for additional transfer guarantee programs and benefits. Visit the Honors Program office for more information.

University of California, San Diego Transfer Admission Guarantee (UCSD-TAG) Fall 2009-Winter 2011

The TAG for UCSD applies to students transferring through Winter 2011. TAG will guarantee students admission to the university, but not to a specific college or major. In order to take advantage of TAG, students must attend a TAG workshop and plan their academic programs with a counselor and comply with all TAG provisions.

TAG students must satisfy the following requirements:

1. Maintain a minimum cumulative GPA of 3.0 in all UC-transferable units and be in good academic standing.
2. Complete UC-transferable Math course and both UC-transferable English courses a year prior to transfer.
3. Establish California Community College (CCC) Residency for admission to UCSD by:
 - a. Completing thirty (30) UC-transferable semester units at a California Community College and
 - b. Attending the last regular term (Fall or Spring, not Summer) at a California Community College

Note: California residency status at the community college does NOT guarantee residency status for tuition purposes at UCSD

4. Earn a minimum of sixty (60) UC-Transferable semester units.
5. Complete the IGETC pattern with a "C" or better
6. Complete courses to prepare for the major as required (see www.assist.org)
7. Submit a UC Admission Application within the published deadlines of the filing period.

High School Courses for College Credit (Credit by Exam)

As part of an early college program called Tech Prep, high school students may earn college credit equivalent to the courses in the table below. To receive credit, students must: 1) demonstrate acquisition of the college student learning outcomes by earning a grade of 'B' or better in the approved course and on the college approved examination 2) successfully complete the SDCCD online college application and Tech Prep certification process. The high school instructor must verify grades, ensure successful completion of enrollment process and submit each request to the Tech Prep office. Approved requests are processed annually each July. Students may request an SDCCD transcript after July 31st. For questions and more information, contact the Tech Prep program at 619-388-6572.

TECH PREP COURSES

For the most updated list visit: <http://techprep.sdccd.edu>

HIGH SCHOOL COURSE(S)/PROGRAM	HIGH SCHOOL SITE(S)	CITY COURSE(S)	UNITS
ROP Drafting, Computer Aided or ROP Civil Engineering and Architecture	Kearny Educational Complex, Crawford Educational Complex, Madison, Lincoln Center for Science and Engineering, and Patrick Henry	ARCH 105	ARCH 105 may waive prerequisite w/ final dept. approval
ROP Tools for the Digital Age	Clairemont, Hoover, Mira Mesa, Point Loma, San Diego Educational Complex, Scripps Ranch, Serra, Lincoln Center for Public Safety	CBTE 101 CBTE 120 CBTE 122 CBTE 127 CBTE 140 CBTE 151 CBTE 170 CBTE 210	up to 16
Computer Applications or Computer Applications in Business	Clairemont, Crawford Educational Complex, Hoover, Kearny Educational Complex, Mira Mesa, Mission Bay, Patrick Henry, Point Loma, San Diego Educational Complex, Scripps Ranch, Serra, University City, Morse, Lincoln Center for Public Safety & the Arts	CBTE 101 CBTE 120	up to 3
ROP Computerized Graphic Design	Crawford Educational Complex, Hoover, Morse, Patrick Henry, Point Loma, Kearny Educational Complex, San Diego Educational Complex, Scripps Ranch, Serra, Twain, Mira Mesa, Mission Bay	CBTE 162 CBTE 170 CISC 114 (City)	up to 6
ROP Developmental Psychology of Children 1-4	Clairemont, Garfield, Hoover, , Morse, Scripps Ranch, Twain and University City	CHIL 160 CHIL 161 CHIL 270	up to 6
Academy of Finance	San Diego Educational Complex	ACCT 102 (City, Miramar) BUSE 90A (City) BUSE 90B (City) BUSE 90C (City) BUSE 90D (City) BUSE 92 (City) BUSE 113 (City) CONF 110	up to 17.5
ROP Introduction to Teaching and Learning	Clairemont, Hoover, Mira Mesa, Morse, Patrick Henry, Point Loma, Scripps Ranch and University City	CHIL 270	up to 4
Teaching Academy	Mira Mesa, Patrick Henry, Morse, and Scripps Ranch	EDUC 200	2

TECH PREP COURSES

For the most updated list visit: <http://techprep.sdccd.edu>

HIGH SCHOOL COURSE(S)/PROGRAM	HIGH SCHOOL SITE(S)	CITY COURSE(S)	UNITS
Teaching Academy	Mira Mesa, Patrick Henry, Morse, and Scripps Ranch	EDUC 203	1
ROP Culinary Arts Management or Food Preparation & Nutrition 1-2 AND Gourmet & International Foods	Garfield, Hoover, Madison, Mira Mesa, Morse, San Diego Educational Complex, and Scripps Ranch	CACM 105 CACM 110	up to 7
ROP Hospitality & Tourism	Garfield, San Diego Educational Complex	HOSP 101	up to 3
ROP Multimedia Production	Clairemont, Kearny Educational Complex, Crawford Educational Complex, Hoover, High Tech High, Hoover, Lincoln Center for the Arts, Mission Bay, Point Loma, S.D.S.C.P.A., Scripps Ranch, San Diego Educational Complex, Serra, University City, High Tech High Media Arts, Mira Mesa	MULT 101 MULT 112 MULT 123	up to 11
ROP Website Design	Crawford Educational Complex, Hoover, Lincoln Center for Public Safety, , Mission Bay, San Diego Educational Complex, Serra, Twain	MULT 101	4
ROP Health Care Essentials	Crawford Educational Complex, Hoover, Lincoln Center for Public Safety, Point Loma, University City	ALLH 049	1.5
ROP GIS & Global Technologies	San Diego Ed Complex, Kearny Ed Complex, Patrick Henry, Hoover, Madison	GISG 110	3

Programs of Instruction



General Course Information

Not all courses listed will be offered each semester, and San Diego City College reserves the right to cancel any course if enrollment in such course is below a minimum number as set by the San Diego Community College District Board of Trustees. The hours indicated at the beginning of each course description, except where otherwise specified, denote the total number of clock hours the class meets each week.

Effective 2009-2010 catalog year (and each year thereafter), students must earn a grade of "C" or better in courses required for the major.

Students enrolled in occupational and health occupation programs must earn a grade of "C" or better in courses required for the major.

Only one course in a student's major discipline may be used to meet the San Diego Community College district general education requirement.

Course Numbering System

The course numbering system has meaning with regard to level and transfer. See the description below:

- **1-49** Basic Skills or college preparatory courses. Credit does not apply toward the associate degree and is not intended for transfer to a four-year college or university. Final determination regarding the transfer of credit rests with the receiving institution.
- **50-99** Course credit applies toward the associate degree and is not intended for transfer to a four-year college or university. Final determination regarding the transfer of credit rests with the receiving institution.
- **100-299** Course credit applies toward the associate degree and is intended for transfer to a four-year college or university. (Some courses may be identified as associate degree applicable **only**. See catalog course description.) Final determination regarding the transfer of credit rests with the receiving institution.
- **300-391** Apprenticeship and in-service courses. See Catalog course description to determine credit for Associate Degree or Transfer.
- **392-399** Special Topics courses that employ a consistent disciplinary framework as described

by a complete course outline of record, but utilize a specific focus area that may change from term to term may be offered in some disciplines. See the class schedule for specific titles and course details. (See catalog course description to determine credit for Associate Degree or Transfer.)

Apprenticeship 345, 349, 349-D, DSPS 065, Field Experience/Internship 275, Independent Study 290, Individualized Instruction 296, Experimental Topics 18, 23, 63, 265, Tutoring 44, and Work Experience courses 270 and 272 have Districtwide designated numbers. Service Learning 277A, 277B, 277C, 277D, Special Topics 392.

Prerequisites, Corequisites, Limitations on Enrollment, Advisories

All prerequisites, corequisites, and limitations on enrollment stated in the course descriptions listed in this catalog will be strictly enforced by Reg-e at the time of registration. Students who do not meet the prerequisite, corequisite, or other limitation according to the college's records, will not be permitted to register for the course. Students are strongly advised to have all transcripts of prior college work and other documentation on file well in advance of registration. This will minimize registration delays. Students should plan their schedule early and see a counselor for assistance. For more information see page 21.

Challenge Procedures

Students may challenge a prerequisite, corequisite or limitation on enrollment. Contact the Counseling Office to obtain a Petition to Challenge and a copy of Procedures 5500.2. The completed petition must be filed no later than ten working days prior to the published add deadline for the course being challenged.

Generic Course Information

Any discipline or department may offer the courses listed below which do not appear individually in the catalog. If applicable to a particular subject area, it will be listed under the appropriate departmental heading (subject indicator) in the college class schedule. For further information, please check with the instructor or department chair.

Supervised Tutoring (044)

Supervised tutoring courses are available in each discipline. To enroll in a supervised tutoring course, a student must be enrolled in a college or basic skills course in the respective discipline. The courses are designed to prepare the student to succeed in the corequisite or subsequent courses. Supervised tutoring may be taken four times, each time with a different corequisite. Credit does not apply to the associate degree.

Experimental Topics (265)

Experimental topics courses that examine an immediate specialized need or focused academic inquiry may be offered in some disciplines. See the class schedule for specific titles and course details.

Special Topics Courses (392–399)

Special topics courses that employ a consistent disciplinary framework as described by a complete course outline of record, but utilize a specific focus area that may change from term to term may be offered in some disciplines. See the class schedule for specific titles and course details. (See catalog course description to determine credit for Associate Degree or Transfer.)

Work Experience (270)

Program of on-the-job learning experiences for students employed in a job related to the major. Students may enroll in a maximum of 16 units of work experience in a lifetime, including a maximum of 6 units from General Work experience. Students may enroll in a maximum of 8 units per semester of Occupational Work experience. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Service Learning

Students gain hands-on experience in project planning, development, implementation and evaluation. Students meet weekly to receive support training and development opportunities regarding best practices in Service Learning. The service-learning options are as follows:

Service Learning—High School Projects (277A)

Students in this course develop and implement service-learning projects to help high school students under the supervision of college faculty and in cooperation with high school teachers, counselors and resource teachers. Projects may include collaboration with high school classes, educational projects for high school students, mentoring and shadowing. This course is intended for students from any discipline who are interested in project development, development of teaching skills or enhancement of communication and planning skills. Course segments may be taken in any order. The combined credit for all 277A discipline courses may not exceed three units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Elementary and Junior High School Projects (277B)

Students in this course develop and implement service learning projects to help elementary and junior high school students under the supervision of college faculty and in cooperation with elementary and junior high school teachers, counselors and resource teachers. Projects may include collaboration with elementary and junior high school classes, educational projects for elementary and junior high school students, mentoring, and shadowing. This course is intended for students from any discipline who are interested in project development, development of teaching skills, or enhancement of communication and planning skills. Course segments may be taken in any order. The combined credit for all 277B discipline courses may not exceed three units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Service Learning—Community (277C)

Students in this course develop and implement service-learning projects to help the college's community under the supervision of college faculty and in cooperation with the staff of community organizations and agencies. Projects may include collaboration with off-campus community organizations and educational service oriented projects for the college's community. This course is intended for students from any discipline who are interested in project development, development of

teaching skills, or enhancement of communication and planning skills. Course segments may be taken in any order. The combined credit for all 277C discipline courses may not exceed three units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Service Learning—On Campus (277D)

Students in this course develop and implement service-learning projects to help the college's students under the supervision of college faculty and in cooperation with college counselors and staff. Projects may include collaboration with college classes, educational projects for college students, mentoring, and shadowing. This course is intended for students from any discipline who are interested in project development, development of teaching skills, or enhancement of communication and planning skills. Course segments may be taken in any order. The combined credit for all 277D discipline courses may not exceed three units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Independent Study (290)

This course is for students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course in the discipline. In this course students will have a written contract with their instructor for activities such as: preparing problem analysis, engaging in primary research, preparing reports, and meeting with the instructor at specific intervals. This course may be taken four times with different content, for a maximum of six units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Individualized Instruction (296)

This course provides supplemental instruction to reinforce achievement of the learning objectives of a course in the same discipline under the supervision of the instructor of the designated course. Learning activities may employ a variety of self-paced multimedia learning systems, language labs, print and electronic resources, laboratory, or field research arrangements, to assist student in reaching specific learning objectives. This open entry/open exit course is offered concurrently with designated courses.

Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Explanation of Terms

Courses in the San Diego Community College District that are associate degree applicable and/or transfer to public four-year universities in California are identified at the end of each course description with the following statements:

Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: The course will apply toward the units required for the associate degree at San Diego Community College District colleges. The course is also likely to apply toward the total number of lower division units required for the baccalaureate degree at private, independent, and/or out-of-state colleges and universities; however, the final evaluation of course credit will be determined by the individual private, independent, or out-of-state institution.

Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor: The course will apply toward the units required for the associate degree at San Diego Community College District colleges. There may be limitations on the number of units that are applied from this course toward the total number of lower division units required for the baccalaureate degree at the University of California. Students should see a counselor concerning these limitations. The course is also likely to apply toward the total number of lower division units required for the baccalaureate degree at private, independent, and/or out-of-state colleges and universities; however, the final evaluation of course credit will be determined by the individual private, independent, or out-of-state institution.

The University of California limits the maximum amount of lower division credit that can be applied toward the baccalaureate degree in a variety of disciplines, including Journalism, Photography, Health, Business Administration, Architecture, Administration of Justice (Criminology) and Library Science.

Associate Degree Credit & transfer to CSU and/or private colleges and universities: The course will apply toward units required for the associate degree at San Diego Community College District colleges. The course is also likely to apply toward the total number of lower division units required for

the baccalaureate degree at private, independent, and/or out-of-state colleges and universities; however, the final evaluation of course credit will be determined by the individual private, independent, or out-of-state institution.

Information concerning transferability to CSU or UC systems is based on information available at the time the catalog is printed. For the latest information, see a counselor. Other symbols include:

Field Trip: (FT) All courses identified at the end of the course description with the symbol (FT) may have field trips required. Detailed information concerning costs incurred will be provided by the instructor.

Physical Education Classes/ Intercollegiate Sports-disclaimer

Participation in all sports and physical education activities involves certain inherent risks. Risks may include, but are not limited to, neck and spinal injuries that may result in paralysis or brain injury, injury to bones, joints, ligaments, muscles, tendons and other aspects of the muscular skeleton system; and serious injury, or impairment, to other aspects of the body and general health, including death. The San Diego Community College District, its officers, agents and employees are not responsible for the inherent risks associated with participation in physical education classes/intercollegiate sports. Students are strongly advised to consult a physician prior to participating in any physical education activity.

UC Transfer and Physical Education Courses

The University of California divides physical education courses into three categories: 1) Activity; 2) Theory, and 3) Academic/Scholarly. Credit for Activity courses is limited to four (4) units. Credit for Theory courses is limited to eight (8) units. No credit limitation is established for Academic/Scholarly courses. All UC-transferable physical education courses and their associated unit limitations are listed on Web ASSIST at www.assist.org.

UC Transfer and Variable Topics Courses

These courses are also called "Independent Studies", "Special Studies", "Experimental Topics", "Field Work", etc. Credit for variable topics courses is given only

after a review of the scope and content of the course by the enrolling UC campus. This usually occurs after transfer and may require recommendations from faculty. Information about internships may also be presented for review, but credit for internships rarely transfers to UC. UC does not grant credit for variable topics courses in Journalism, Photography, Health, Business Administration, Architecture, Administration of Justice (Criminology) or Library Departments because of credit restrictions in these areas.

Accounting

See "Business Studies" on page 156

Administration of Justice

There is currently no program in Administration of Justice. The following courses are offered and may be used as associate degree electives.

Courses

Administration of Justice (ADJU)

101 Introduction to Administration of Justice 3 hours lecture, 3 units Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Administration of Justice 101A and/or 101B and/or 101C.

This course introduces students to the philosophy and history of administration of justice. It provides an overview of crime, police problems, and the organization and jurisdiction of law enforcement agencies. Students survey professional career opportunities and qualifications. This course is intended for students majoring in Administration of Justice. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Administration of Justice (ADJU) 101 and 101A, 101B, 101C combined: maximum

credit, 3 units. 101A, 101B, 101C must all be taken for transfer credit to be granted.

102 Criminal Law I

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course introduces students to the scope and source of criminal law and classification of crimes. It covers types of intent, capacity to commit crimes, legal defenses, parties to crime, laws of arrest, offenses against the public peace, types of assault, and constitutional background. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Air Conditioning, Refrigeration, and Environmental Control Technology

See "Engineering Technology" on page 263

Allied Health

There is currently no program in Allied Health. The following courses are offered.

Courses

Allied Health (ALLH)

49 Introduction to Health Careers

**.5 hours lecture, 1.5 units
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49 and Mathematics 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 and M40.

This introductory course is designed for students interested in entering the human or veterinary health care industry. This course explores the history and key aspects of the practice of health care in the United States. The content provides ways to identify general aptitudes and skills required in health careers and provide students with an opportunity to match individual aptitudes, interests and abilities

to specific health careers. (FT) Not Applicable to Associate Degree and not a basic skills course.

Alcohol and Other Drug Studies

See "Behavioral Sciences" on page 125.

American Sign Language

See "Languages" on page 334

Anthropology

See "Behavioral Sciences" on page 125.

Arabic

See "Languages" on page 334.

Art-Fine Arts and Art-Graphic Arts

See "Visual and Performing Arts" on page 422

Astronomy

See "Physical and Earth Sciences" on page 387

Agriculture

Award Type	Units
Certificate of Performance	
Intro to Ecological Landscaping	6
Organic Gardening for the Culinary Arts	7
Certificate of Achievement	
Urban Farming	26
Urban Gardening	12

Ecological Landscaping

Program Description:

The Ecological Landscaping Certificates offer a hands-on approach for students to enter into the academic and/or professional fields related to sustainable landscaping. Students gain skills to critically analyze historical, current and future horticultural practices in order to offer alternative solutions to create more sustainable green industry models. The program allows students to gain practical and theoretical experience working alongside professional urban farmers and organic horticulture educators in the Seeds at City Urban Farm on the City College campus.

Program Goals:

This program provides the opportunity for students to analyze issues and implement solutions related to ecological landscaping and apply their knowledge in hands-on learning at the Seeds at City Urban Farm. The primary aim is to train a diverse group of skilled professionals in sustainable landscaping methods.

Program Emphasis:

This program provides a foundation in plant and soil science, integrated pest management, and organic gardening techniques while focusing on ecological principles of sustainable landscaping. Courses emphasize the how-to aspects of organic gardening and problem solving with out chemicals, including use of compost, low volume irrigation, and integrated pest management.

Career Options:

These certificates prepare students to enter into professional and educational fields related to sustainable urban landscaping and agriculture. Career options include home gardeners, new and experienced horticulture professionals, plant nursery industry professionals, and small to large institutional gardeners.

Student Learning Outcomes:

Students who complete this program should be able to:

- Understand and explain the three facets of sustainability (economic, environmental and social) both in general and as they apply specifically to landscaping, practices.
- Understand and explain the components of a landscape system, including plant varieties for the Southern California region, soil fertility design organic pest control and high efficiency-low volume irrigation.
- Design a landscape layout that accounts for biological pest control, natural habitat, water conservation usability by residents as/or visitor and compatibility with surrounding land uses.
- Develop proper irrigation base on the knowledge of the relationships between plants, soil water and climate.
- Solve environmental issues as they arise at existing landscaping sites (e.g. pest damage, nutrient depletion, water deficiency, etc.) using organic techniques.
- Obtain employment in a field related to landscaping.

**Certificate of Performance:
Intro to Ecological Landscaping***

This certificate prepares students to utilize organic methods for landscape design and maintenance.

Courses:		Units
AGRI 108	Building Fertile Soil Organically	3
AGRI 118	Sustainable Landscaping Using Organic Methods	3
		Total Units = 6

Recommended Electives: Agriculture 110, 116, 126.

Sustainable Urban Agriculture**Program Description:**

Sustainable Urban Agriculture offers a hands-on approach for students to enter into the academic and/or professional fields related to sustainable agriculture. Students gain skills to critically analyze historical and current food systems in order to offer alternative solutions to create more sustainable food system models. Students gain practical experience working alongside professional urban farmers and farm educators in the Seeds at City Urban Farm on the City College campus.

Program Goals:

This program provides students the opportunity to analyze issues and implement solutions related to small-scale urban agriculture and to apply their knowledge in hands-on learning at the Seeds at City Urban Farm. The primary aim is to train a diverse group of skilled organic practitioners who actively participate in improving the health of their environment, food, and communities through small-scale organic food production, education, advocacy, and social service programs.

Program Emphasis:

This program provides a foundation in plant and soil science, integrated pest management, and crop production while focusing on ecological principles of sustainable agriculture. Courses emphasize the how-to aspects of organic gardening and farming, including compost production, greenhouse propagation, crop planning and production.

Career Options:

San Diego City College offers certificates, degrees and transfer options in the Sustainable Urban Agriculture program. The Certificate of Performance, Organic Gardening for the Culinary Arts, compliments educational programs in the culinary arts. The Urban Gardener Certificate of Achievement

provides skills and knowledge for careers at an organic farm, nursery, commercial greenhouse or to manage a community garden. The Certificate of Achievement in Urban Farming prepares students and professionals to establish and operate an organic urban farm business. The Sustainable Urban Agriculture, Associate in Science Degree, prepares students to transfer to a four-year college to study agriculture, sustainable agriculture, plant science, crop science, agricultural business, or ecology.

Student Learning Outcomes:

Students who complete this program should be able to:

- Understand and explain the three facets of sustainability (economic, environmental and social) both in general and as they apply specifically to landscaping, practices.
- Understand and explain the components of a food system.
- Design an organic urban farm that support natural ecosystems, human health, and water conservation.
- Evaluate the soil food web.
- Create a crop plan that is appropriate for the southwest region.
- Identify plant disease and pests and incorporate integrated pest management and other organic strategies for a resilient food system.
- Demonstrate basic propagation techniques.

Certificate of Performance: Organic Gardening for the Culinary Arts*

This certificate is designed for students who want to learn or improve their organic gardening knowledge and skills. The program provides the skills and knowledge to implement a healthier, sustainable food system that emphasizes small-scale urban food production.

Courses:		Units
AGRI 102	Sustainable Urban Agricultural Practice	3
AGRI 128	Food Preservation Skills	1
AGRI 104	Cool Season Organic Production or	
AGRI 106	Warm Season Organic Production	3
Total Units = 7		

*A Certificate of Performance is a departmental award that does not appear on the student's

transcript. All courses must be completed within the San Diego Community College District.

Certificate of Achievement: Urban Farming

This certificate prepares students and professionals to establish and operate an organic urban farm business.

Courses:		Units
AGRI 100	Principles of Sustainable Agriculture	3
AGRI 102	Sustainable Urban Agricultural Practice	3
AGRI 104	Cool Season Organic Production	3
AGRI 106	Warm Season Organic Production	3
AGRI 108	Building Fertile Soil Organically	3
AGRI 110	Organic Fruit Tree Care	3
AGRI 112	Organic Greenhouse Management and Plant Propagation	2
AGRI 116	Drip Irrigation Basics	2
BUSE 157	Starting a Small Business or	
BUSE 155	Managing the Small Business	3
BUSE 245F	Small Business Internship - Operations	1
Total Units = 26		

Recommended Electives: Agriculture 118, 126, 128, Architecture 155, Biology 101, Marketing 100.

Certificate of Achievement: Urban Gardening

This certificate prepares students for careers at an organic farm, nursery, commercial greenhouse or to manage a community garden.

Courses:		Units
AGRI 102	Sustainable Urban Agricultural Practice	3
AGRI 104	Cool Season Organic Production	3
AGRI 106	Warm Season Organic Production	3
Choose 3 units from the following electives:		
AGRI 100	Principles of Sustainable Agriculture	3
AGRI 108	Building Fertile Soil Organically	3
AGRI 110	Organic Fruit Tree Care	3
AGRI 112	Organic Greenhouse Management and Plant Propagation	2
AGRI 116	Drip Irrigation Basics	2
AGRI 118	Sustainable Landscaping Using Organic Methods	3
AGRI 126	Introduction to Permaculture Design	2
AGRI 128	Food Preservation Skills	1
Total Units = 12		

Courses

Agriculture (AGRI)

100 Principles of Sustainable Agriculture **3 hours lecture, 3 units** **Letter Grade or Pass/No Pass Option**

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6. This course is an overview of the historical, social and ecological foundations for a sustainable agriculture. Students gain an understanding of the origins of agriculture, the rise of industrial agriculture, the rise of sustainable agriculture, and the context in which we find ourselves today. This course is intended for students interested in agriculture, environmental science and sustainability. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

102 Sustainable Urban Agricultural Practice **1.5 hours lecture, 4.5 hours lab, 3 units** **Letter Grade or Pass/No Pass Option**

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Level R6 and W6. This course integrates theoretical and practical aspects of small-scale organic urban farming. It includes hands-on instruction and an introduction to a range of farm-related topics, including composting and vermicomposting, irrigation systems, propagation and greenhouse management, soil fertility, integrated pest management, plant pathology and disease management, permaculture techniques, and small fruit orchard management. Students explore personal agricultural interests through research projects, visit local farms and gardens and attend key sustainable garden and farm events throughout the semester. This course is intended for students interested in Agriculture, Environmental Science and Sustainability. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

104 Cool Season Organic Production **1.5 hours lecture, 4.5 hours lab, 3 units** **Letter Grade or Pass/No Pass Option**

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6. This course is a hands-on study of cultural practices,

varieties, and economics of production of major cool season vegetable crops in San Diego County. Topics include strategies for starting and maintaining cool season crops, innovative irrigation methods, essential weed and pest control measures, and marketing. Organic methods are emphasized. This course is intended for students interested in agriculture, environmental science, agricultural education and sustainability. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

106 Warm Season Organic Production **1.5 hours lecture, 4.5 hours lab, 3 units** **Letter Grade or Pass/No Pass Option**

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6. This course is a hands-on study of cultural practices, varieties, and economics of production of major warm season vegetable crops in San Diego County. Topics include strategies for starting and maintaining crops, innovative irrigation methods, essential weed and pest control measures, and marketing. Organic methods are emphasized. This course is intended for students interested in agriculture, environmental science, agricultural education and sustainability. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

108 Building Fertile Soil Organically **1.5 hours lecture, 4.5 hours lab, 3 units** **Letter Grade or Pass/No Pass Option**

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6. This course demonstrates the vital connection between soil and the food chain that sustains life on this planet. Topics include current trends in soil erosion and degradation, the many roles that soil plays in our environment, symbiotic relationships between beneficial microorganisms and plants, and disease and pest suppression through proper soil management practices. Students participate in creating and maintaining enhanced soil fertility. This course is intended for students interested in the theory and practice of organic soil conservation and management. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

110 Organic Fruit Tree Care **1.5 hours lecture, 4.5 hours lab, 3 units** **Letter Grade or Pass/No Pass Option**

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6.

This course introduces students to fruit tree selection, planting and care for small-scale orchards or home gardens. The course includes knowledge about desirable varieties, hands-on pruning and training methods, and details on pest management. The emphasis is on organic production methods. This course is intended for students interested in agricultural production, agricultural education and sustainability. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

112 Organic Greenhouse Management and Plant Propagation

1 hour lecture, 3 hours lab, 2 units
Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6. This course introduces skills and concepts associated with the propagation of crop plants. Beginning with seed and seedling biology, the course introduces the cultural requirements and management practices involved in seed germination and seedling development, propagation media, soil mixes, greenhouse structures, greenhouse pest and pathogen management, and general skills in getting plants off to a healthy start, which is critical to successful crop production. Organic methods are emphasized. This course is intended for students interested in agricultural production, management and education and ecology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

116 Drip Irrigation Basics

2 hours lecture, 2 units
Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6. This course integrates theoretical and practical aspects of modern high efficiency, low volume irrigation design, installation and maintenance. Topics include water use in California's Southwestern desert climate, site analysis, soil/water relationships, and transformation of existing wasteful irrigation systems to efficient low volume systems. Students troubleshoot and solve irrigation system problems and prepare a cost estimate for an irrigation system. This course is intended for students interested in agriculture, water conservation, or landscape technology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

118 Sustainable Landscaping Using Organic Methods

3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6. This course integrates theoretical and practical aspects of chemical-free environmentally friendly landscape design, installation and maintenance. The course provides tried and true alternative horticultural practices that work with, rather than control, nature. This course is intended for students interested in landscaping, agriculture, water conservation, green landscape architecture, landscape technology, environmental design and sustainability. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

126 Introduction to Permaculture Design

2 hours lecture, 2 units
Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6. This course introduces students to the strategies and techniques of applied permaculture design for creating resilient and livable human communities. Through observation of natural patterns and understanding mutually beneficial relationships in gardens as well as other permaculture principles, students learn how to grow food and plants in harmony with nature. This course is intended for students pursuing careers in agriculture, environmental studies, landscaping and urban planning. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

128 Food Preservation Skills

1 hour lecture, 1 unit
Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6. This course introduces students to the practice of Food Preservation in a time of energy descent. Topics include canning, dehydrating, fermenting, food preservation history and philosophical approaches associated with insuring food security. This course is intended for students interested in agricultural production, culinary arts and food science. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Behavioral Sciences

Alcohol and Other Drugs Studies, Anthropology, Community Health Work, Human Services, Psychology, Sociology, Social Work, Youth Development Work

Award Type	Units
Certificate of Performance:	
Archaeology	16
Community Health Work	16
Youth Development Work	16
Certificate Of Achievement:	
Alcohol and Other Drug Studies	33.5
Associate in Arts Degree:	
Anthropology	18*
Psychology	18*
Psychology for Transfer	18-21*
Sociology	18*
Associate in Science Degree:	
Alcohol and Other Drug Studies	33.5*
Social Work	25*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Behavioral Sciences: Alcohol and Other Drug Studies

Description

This program prepares students for certification as Alcohol and/or Drug Abuse Counselors. The Certificate of Achievement is designed to prepare students for entry level alcohol and drug counselor employment. The associate degree provides academic preparation for baccalaureate study in psychology, social work and related disciplines.

Program Emphasis

This program is both vocational and academic. It trains students in the core functions of an alcohol and drug counselor while providing a theoretical foundation in the behavioral sciences and human service professions.

Faculty	Office	Telephone
James Evans	A-1R	619-388-3257
Wendy Zizzo	A-1R	619-388-3097

Career Options

Upon completion of the certificate of achievement or associate degree, students may be eligible for

entry level employment as alcohol and/or drug counselors. However, most students find that further credentialing is required. The California Association of Alcohol and Drug Abuse Counselors (CAADAC) offers the Certified Alcohol and Drug Counselor (CADC) Credential. The Alcohol and Other Drug Studies program satisfies academic requirements for all ten California Alcohol and Drug Counseling credentialing agencies. This includes opportunities for continuing education and/or credentialing in nursing, drunk driver education programs, American Indian Certification and others.

Student Learning Outcomes

Students who complete the Alcohol and Other Drug Studies Program will:

- Recognize, describe, and explain a variety of models and theories of substance use, abuse, and dependence.
- Identify diagnostic criteria and apply assessment skills for substance abuse and dependence.
- Describe and explain the social, political, economic, and cultural contexts within which substance use, abuse, and dependence exist, including the risk and resilience factors that characterize individuals and groups and their environments.
- Identify the behavioral, psychological, physical health, and social effects of psychoactive substances on the person and their significant others.
- Recognize the potential for substance use disorders to mimic a variety of medical and mental health conditions.
- Explain the potential for medical and mental health conditions to coexist with substance use, abuse, and dependence.
- Assess and evaluate the philosophies, practices, policies, and outcomes of the most accepted and scientifically validated models of treatment, recovery, relapse prevention, and continuing care for addiction and other substance-related problems, and value an interdisciplinary approach to addiction treatment.
- Explain the importance of family, social networks, and community systems in the treatment and recovery process.
- Apply research and outcome data in clinical practice.

- Practice in an internship the eight addiction counselor competencies: clinical evaluation; treatment planning; referral; service coordination; counseling; client, family, community education; documentation; professional and ethical responsibilities.

Academic Programs

The Certificate of Achievement in Behavioral Sciences, Alcohol and Other Drug Studies program requires completion of the courses listed below.

Certificate of Achievement: Behavioral Sciences

Alcohol and Other Drug Studies

Courses Required for the Major:		Units
AODS 150	Introduction to Chemical Dependency	3
AODS 152	Physiology & Pharmacology of Psychoactive Drugs	3
AODS 154	Prevention, Intervention, Legal & Ethical Issues of Psychoactive Drug Use	3
AODS 156	Chemical Dependency Case Management	3
AODS 158	Chemical Dependency Family Counseling Techniques	3
AODS 160	Group Dynamics in Chemical Dependency Counseling	3
AODS 162	Chemical Dependency Internship Seminar	3
AODS 163*	Chemical Dependency Internship	3.5
PSYC 101	General Psychology	3
PSYC 161	Introduction to Counseling	3
SOCO 101	Principles of Sociology	3

Total Units = 33.5

*Alcohol and Other Drug Studies 270 must be substituted for 163 if a student has a paid internship.

Associate in Science: Behavioral Sciences

Alcohol and Other Drug Studies

The associate degree with an emphasis in Alcohol and Other Drug Studies requires completion of the Certificate of Achievement, Alcohol and Other Drug Studies. Recommended elective: Alcohol and Other Drug Studies 270. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Transfer Information

Common university majors related to the field of Alcohol and Other Drug Studies include:

Human Development, Psychology, Human Services.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Alcohol and Other Drug Studies (AODS)

150 Introduction to Chemical Dependency 3 hours lecture, 3 units Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; and completion of or concurrent enrollment in Psychology 101 or Sociology 101 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Behavioral Sciences 150 or Psychology 265: Introduction to Chemical Dependency.

This course is a study of the basic concepts of chemical dependency. Emphasis is placed on understanding chemical dependency from an interdisciplinary level and on examining the socio-cultural patterns of dependency. Individual student's potential as a chemical dependency counselor will also be addressed. Students beginning the certificate program should start with this course. This course is also appropriate for any student wishing to learn more about alcohol and other drug use, abuse and dependency. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

152 Physiology and Pharmacology of Psychoactive Drugs

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; and completion of or concurrent enrollment in Psychology 101 or Sociology 101 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Behavioral Science 152 or Psychology 265: Physiology and Pharmacology of Psychoactive Drugs.

This course is a study of the neurochemical, physical and mental effects of commonly used addictive psychoactive substances on the human biological system. Emphasis is placed on the basic pharmacology of psychoactive drugs, the medical consequences of abuse and addiction, and therapeutic approaches for managing chemical dependency. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

154 Prevention, Intervention, Legal & Ethical Issues of Psychoactive Drug Use

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; and completion of or concurrent enrollment in Psychology 101 or Sociology 101 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Behavioral Sciences 154 or Psychology 265: Prevention, Intervention, Legal and Ethical Issues of Psychoactive Drug Use.

This course is a study of ethical and legal components of the chemical dependency field. Emphasis is placed on professional responsibility and patients' rights as they relate to various models of primary prevention and intervention. Topics also include community needs and resources and the influence of the media on prevention and intervention. This course is primarily intended for students pursuing the Alcohol and Other Drug Studies certificate. It is a required course for that program but this course is also intended for persons interested in how to keep individuals from developing alcohol and other drug problems and for persons wanting to learn how to help someone with an alcohol or drug problem when that person with

the problem doesn't want help. This course is also intended for students wanting to learn the ethical and legal responsibilities of a helping professional. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

156 Chemical Dependency Case Management

**3 hours lecture, 3 units
Grade Only**

Advisory: Alcohol and Other Drug Studies 150, 152, and 154 and Psychology 161 and Sociology 101, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit in Behavioral Sciences 156 or Psychology 265: Chemical Dependency Case Management.

This course is a study of the theory and practical application of the twelve core functions of chemical dependency counseling as they apply to case management. Emphasis is placed on preparing students to work effectively in the field of chemical dependency. This course should only be taken by students who have completed Alcohol and Other Drug Studies 150 and 154. Extensive knowledge of the DSM IV diagnostic criteria for Substance-Related Disorders and the Federal Confidentiality Regulations for Alcohol/Drug Records is required to achieve in this course. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

158 Chemical Dependency Family Counseling Techniques

**3 hours lecture, 3 units
Grade Only**

Advisory: Alcohol and Other Drug Studies 150, 152 and 154, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Behavioral Sciences 158 or Psychology 265: Chemical Dependency Family Counseling Techniques.

This course is a study of the theory and techniques involved in treating the family as well as the chemically dependent person as the client. Emphasis is placed on diagnosing family codependency, treatment strategies, prevention and intervention with an interdisciplinary perspective. This course is open to students who have completed Alcohol and Other Drug Studies 150, 152 and 154 and should be taken after a student's first semester in the Alcohol and Other Drug Studies program. It is a required

advanced course for the Certificate in Alcohol and Other Drug Studies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

160 Group Dynamics in Chemical Dependency Counseling

**3 hours lecture, 3 units
Grade Only**

Advisory: Alcohol and Other Drug Studies 150, 152, and 154, and Psychology 161 and Sociology 101, each with a grade of "C" or better, or equivalent.
Limitation on Enrollment: This course is not open to students with previous credit for Behavioral Sciences 160.

This course is a study of the theory and application of group counseling approaches, methods and techniques with an emphasis on chemical dependency problems. Course content includes the dynamics of small group interaction and allows students to develop effective communication, interpersonal and leadership skills from an interdisciplinary perspective. This course is designed for students majoring in Behavioral Sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

162 Chemical Dependency Internship Seminar

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Alcohol and Other Drug Studies 156 with a grade of "C" or better, or equivalent.
Corequisite: Alcohol and Other Drug Studies 163 or 270.
Advisory: Alcohol and Other Drug Studies 158 and 160 each with a grade of "C" or better, or equivalent.
Limitation on Enrollment: This course is not open to students with previous credit for Behavioral Science 162.

This course is a study of the nature of chemical dependency treatment with an emphasis on developing the skills and abilities of the student-as-intern. Emphasis is placed on supporting students enrolled in the Chemical Dependency Internship. Throughout this course, students engage in critical analysis of their strengths and weaknesses as interns and as potential professionals in the field. This is a restricted class. This course is open to students only in their final semester within the Alcohol and Other Drug Studies Certificate Program. Students taking this class must be doing an internship (Alcohol and Other Drug Studies 163 or 270) in the same semester.

(FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

163 Chemical Dependency Internship **Hours by Arrangement, 3.5 units Grade Only**

Corequisite: Alcohol and Other Drug Studies 162.
Advisory: Alcohol and Other Drug Studies 156, 158, and 160, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Behavioral Sciences 163.

This course provides students with a hands-on learning experience via a directed field study resulting from the cooperative effort of a provider agency, the instructor and the student. Emphasis is placed on enabling the student intern to learn and experience the work of a chemical dependency professional while receiving college credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

270 Work Experience in Chemical Dependency

**Hours by Arrangement (One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.), 1-4 units
Grade Only**

Corequisite: Alcohol and Other Drug Studies 162.
Limitation on Enrollment: Must obtain an Add Code from Work Experience Coordinator for registration. A program of on-the-job learning experiences for students employed in a job related to their major or their educational goals. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Behavioral Sciences:

Anthropology

Description

Anthropology is a scientific discipline that studies humans and human behavior. The subject is divided into five broad fields: physical and cultural anthropology, linguistics and archaeology, and applied anthropology. Physical anthropology is concerned with hominid evolution and the biological features of human populations. Cultural anthropology deals with cross-cultural studies of learned behavior, such as language, kinship, religion, economics, technology, values and personality. Linguistics is the study of the origin and evolution of languages and how they reflect the behavioral patterns of people. Archaeology is involved in the recovery of material remains of past peoples with the objective of reconstructing the past. Applied Anthropology applies what we have learned from the other four fields to promote change. As both a biological and social science, anthropology seeks to understand and describe humankind.

Program Emphasis

The anthropology program has been developed to provide the student with a broad perspective of human biological and cultural origins and change which prepares the student for transfer to a four-year institution. It also offers a limited course curriculum in archaeology. A certificate of performance is available for the student who has an interest in the recovery, identification, and analysis of prehistoric and early historic artifacts related to archaeological research projects.

Faculty	Office	Telephone
Stephen J. Bouscaren	A1-S	619-388-3260

Career Options

Most careers related to anthropology require education beyond the associate degree, however, an understanding of broad anthropological and archaeological concepts provides some preparation for work in museums and local excavations. A partial list of possible career options follows: archaeologist, cultural anthropologist, ethnic relations specialist, ethnologist, exhibit designer, expedition guide, film ethnographer, health researcher, linguist, medical anthropologist, museum curator, physical anthropologist, primatologist, paleoanthropologist, population analyst, public health analyst, social

gerontologist, transcultural nurse specialist, travel consultant, urban planner, international business consultant, international law development specialist, environmentalist, conflict resolution, and peace studies.

Student Learning Outcomes

Students who complete the program will be able to:

- Define Anthropology, identify and discuss its various subfields including: Cultural Anthropology, Physical Anthropology, Comparative Linguistics, Archaeology, and Applied Anthropology;
- Identify and discuss Anthropological methods of inquiry;
- Identify, discuss, compare, contrast and critically analyze the various theoretical orientations used in the different subfields of Anthropology;
- Discuss and critically evaluate the Anthropological Perspective including its global emphasis and cross-cultural and comparative approach to understanding the various ways in which people organize themselves, meet their various needs, and have adapted to their environments;
- Identify, describe and discuss different cultural systems ranging from band societies to the state;
- Identify, critically evaluate, and discuss the contributions Anthropology has made to describing and understanding the human condition including human physical and cultural diversity;
- Identify and critically evaluate Anthropology's contributions to other disciplines of study in the Social Sciences, Behavioral Sciences and the Humanities.

Certificate of Performance: Archaeology*

Courses:	Units
ANTH 103 Introduction to Cultural Anthropology	3
ANTH 107 Introduction to Archaeology	3
ANTH 210 Introduction to California Indians	3
ANTH 115 Introduction to Archaeological Field Work	4
ANTH 120 Archaeological Artifact Analysis	3
Total Units = 16	

* A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Associate in Arts Degree: Behavioral Sciences

Anthropology

The associate degree in anthropology requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Courses Required for the Major:		Units
ANTH 102	Introduction to Physical Anthropology	3
ANTH 103	Introduction to Cultural Anthropology	3
ANTH 107	Introduction to Archaeology	3
**PSYC 258	Behavioral Science Statistics or	
MATH 119	Elementary Statistics	3
	Electives, transferable, lower division	6
Total Units = 18		

Recommended electives: Anthropology 215, 290.

****Note: Check University Statistics course requirement.**

Transfer Information

Common university majors related to the field of Anthropology include:

Anthropology, Archaeology, Biological Anthropology, Global Studies, Conflict Resolution Studies and Peace Studies.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Anthropology (ANTH)

102 Introduction to Physical Anthropology 3 hours lecture, 3 units Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is a survey of human evolution, variation and adaptation. Emphasis is placed on the study of primates, human heredity, variability of modern populations and fossil records of early hominids and hominoids. This course is the basis for advanced courses in Life and/or Behavioral Sciences or students majoring in Anthropology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

103 Introduction to Cultural Anthropology 3 hours lecture, 3 units Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course presents an overview of cultural anthropology using a comparative, cross-cultural approach. Emphasis is placed on the study of how various peoples around the world have adapted to their environments and developed behaviors to meet their biological, economic, psychological, social and political needs. This course is designed for students planning to take advanced courses in Social and/or Behavioral Sciences or students majoring in Anthropology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

104 Laboratory in Physical Anthropology 3 hours lab, 1 unit Letter Grade or Pass/No Pass Option

Prerequisite: Anthropology 102 with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is intended for anthropology majors, as well as non-majors who have an interest in

biological anthropology. Students perform field and laboratory studies in genetics, human variation, human osteology, anthropometry, hominid evolution, comparative primate anatomy, primate behavior, and forensic anthropology. Students practice the ability to think critically through data analysis, written reports, and classroom discussions. In addition, students develop an educational exhibit to teach fellow students about some aspect of biological anthropology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

107 Introduction to Archaeology
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is an introductory study of the history and theory of archaeology. Emphasis is placed on the techniques of archaeological data collection and analysis, cultural innovations, reconstruction and interpretation of the past and Cultural Resource Management (CRM) work. This course is designed for students planning to major in Anthropology and/or to conduct upper division work in archaeology at a four-year institution. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

115 Introduction to Archaeological Field Work
2 hours lecture, 6 hours lab, 4 units
Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6.

Limitation on Enrollment: This course is not open to students with previous credit for Anthropology 265: Introduction to Archaeological Field Work.

This course is an introduction to the basic techniques of archaeological field work. Emphasis is placed on site survey, site layout, excavation, artifact identification, laboratory analysis and report writing. Topics also include use of compass and transit, Global Positioning Systems (GPS) and Geographic Information Systems (GIS). This course is designed for Anthropology and Archaeology majors as well as students interested in prehistoric and/or historic research. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

120 Archaeological Artifact Analysis
2 hours lecture, 3 hours lab, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6.

Limitation on Enrollment: This course is not open to students with previous credit for Anthropology 265: Archaeological Artifacts Analysis or Laboratory Analysis of Archaeological Materials.

This course is a practical study of archaeological artifact analysis. Emphasis is placed on artifact typology and seriation methods used in the preparation of archaeological reports. Students learn the most current techniques for describing, classifying, cataloging and documenting archaeological materials. This course is designed for students majoring in anthropology with an emphasis in archaeology and for anyone interested in a career in the field of archaeology or employment in Cultural Resource Management (CRM). (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

210 Introduction to California Indians
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is a comparative study of numerous Native American cultures located in California and peripherally related cultural areas. Anthropological materials for ethnographic, ethnohistorical, ethnological and archaeological sources will be utilized. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

215 Cultures of Latin America
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

A review of the non-industrialized people living in contemporary Latin America will include Native American Indian cultures in Mexico, Central America and South America in contrast with their peasant Mestizo neighbors, and in turn these cultures in contrast with their urban counterparts. Contemporary anthropological research, ethnohistoric, historic and archaeological data will be used to discover the diversity of cultures

throughout Spanish and Portuguese America. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

392 Cross-Cultural Studies--Study Abroad
1-3 hours lecture, 1-3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course is a study of the contemporary life and culture of a study abroad destination. Emphasis is placed on providing the student with the opportunity to observe and participate in a variety of areas, including the arts, sciences, sports, contemporary history, politics, economics, humanities, philosophy, sociology and anthropology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Courses

Gender Studies (GEND)

Faculty	Office	Telephone
Sarah M. Pitcher	A1-T	619-388-3606

101 Introduction to Gender Studies
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

This course is an interdisciplinary study of gender. Emphasis is placed on the theoretical approaches to studying gender. These approaches include examining the impact of race/ethnicity in gender roles, socialization of men and women, and the role of gender in major institutions (for example, the family, media, and education). This course is designed for developing critical thinking skills in exploring issues of gender through feminist analysis of structures of privilege and oppression. This course will be useful for those considering careers in the social sciences, social work, teaching, counseling, and nursing. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

Behavioral Sciences

Community Health Work

Description

The Certificate of Performance in Community Health Work is designed to introduce current and potential Community Health Workers (CHWs) to core concepts in the field of community health. This program prepares students to work in a variety of health settings that utilize entry level front line health workers. These settings may include public and private health and human service institutions, especially those that address underserved communities.

Program Emphasis

Program emphasis is placed on providing students with both vocational and academic aspects of Community Health Work through a combination of coursework and practical experience.

Faculty	Office	Telephone
Veronica Ortega	A-1P	619-388-3238

Career Options

Career options for students completing the Certificate of Performance in Community Health Work include Health Educator, Information Resource personnel for health facilities and the community, Organizer, Interpreter, and Health Advocate. In addition, this program includes core academic courses that provide a basis for continued formal academic pursuits in the field of Health, Human Services, or Behavioral Sciences.

Certificate of Performance: Behavioral Sciences*

Community Health Work

The Community Health Work Certificate Program provides students who work in, or plan to work in, the field of Community Health Work with a fundamental academic and practical base for success in the field.

Courses:	Units
HUMS 103 Introduction to Community Health Work	3
PSYC 101 General Psychology	3
HEAL 101 Health and Life-Style	3
PSYC 230 Psychology of Lifespan Development	3

HUMS 95	Public Assistance and Benefits Program	1
HUMS 113	Capstone for Community Health Workers	3
		Total Units = 16

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Transfer Information

Common university majors related to the field of Human Services include: Human Development, Child Development, Gerontology, Social Work.

Behavioral Sciences

Youth Development Work

Description

The Youth Development Work Certificate Program is designed to offer certification to current and potential frontline community youth development workers working in a variety of settings, including public and private after school programs, service related agencies, recreational programs and job development centers. This program is both vocational and academic, offering courses in theoretical and practical topics related to youth development.

Program Emphasis

Emphasis is placed on providing students with a balance of vocational training and academic instruction in the area of Youth Development.

Career Options

Career options include employment in public and private after school programs, service related agencies, recreational programs and job development centers. In addition, the coursework provides the foundation for pursuing more advanced work in behavioral science, human service, social work or public health.

Certificate of Performance: Behavioral Sciences*

Youth Development Work

<u>Courses Required</u>	<u>Units</u>
HUMS 106 Introduction to Youth Development Work	3

HUMS 95	Public Assistance and Benefits Program	1
COMS 180	Intercultural Communication	3
HUMS 116	Capstone for Youth Development Workers	3

Choose one of the following:

CHIL 101	Human Growth and Development	or	
PSYC 230	Psychology of Lifespan Development		3

Choose one of the following:

ANTH 103	Introduction to Cultural Anthropology	or	
CHIL 141	The Child, Family and Community		3

Total Units= 16

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Human Services (HUMS)

Student Learning Outcomes:

- Differentiate the major areas of professional practice that are contained within the field of human services.
- Describe core theoretical perspectives for a give major area of emphasis within the field of human services.

- Explain who the practice of human services contribute to community health and well-being.
- Describe how the practice of human services addresses cultural diversity.

95 Public Assistance and Benefits Program
1 hour lecture, 1 unit
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for HUMS 100. This course is a practical study of current public assistance and benefits programs at the local, state and federal levels. Emphasis is placed on assistance program structures, eligibility requirements and scope and duration of benefits. This course is designed for Human Services students and anyone interested in public assistance and benefits programs. (FT) Associate Degree Credit only and not Transferable.

101 Introduction to Human Aging
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is an introduction to the field of social gerontology. A multidisciplinary approach is utilized to examine the basic biological, psychological and social theories of aging. Emphasis is placed on the special needs and problems impacting the aged population. Historical, social and cross-cultural issues in aging are examined. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

103 Introduction to Community Health Work
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; Personal Growth 120 with a grade of "C" or better, or equivalent.

This course is an introduction to Community Health Work (CHW). Emphasis is placed on the role of the Community Health Worker as a promoter of health and healthy living within the health care and public health systems. Topics include the fundamentals of public and preventive health in global and

community perspective, community health challenges, and the role of education and advocacy in creating and maintaining healthy communities. This course is designed for Human Services students and anyone interested in Community and Public Health. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

105 Family Support Model
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course is a practical study of the family support model as it applies to mental health challenges. Emphasis is placed on the various support programs available to individuals and families, how to access those resources, how to advocate for care and how to implement care to promote health and wellbeing. This course is designed for human services students and individuals currently working in the mental health field or interested in entry-level positions in the field. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

106 Introduction to Youth Development Work
3 hours lecture, 3 units
Grade Only

This course is a theoretical and practical study of youth development work. Emphasis is placed on preparing youth workers to assist and mentor young people through youth development and workforce readiness programs. This course is designed for students interested in the field of youth development and is required for students pursuing the Certificate Program in Youth Development Work. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

110 Social Work Fields of Service
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is an introduction to the major fields of social work practice in institutions, public and private agencies and other community settings. Students examine and differentiate between the predominant settings in which social work is practiced and the role of social work in contemporary society in

relation to social injustice, diversity, cross-cultural issues and economic factors. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

112 Community Service Practicum

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Human Services 103 with a grade of "C" or better, or equivalent or Human Services 106 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Human Services 113 or Human Services 116.

This course is a practical application of the skills and tools required to work in the community. Emphasis is placed on creating needs assessments and focus groups in order to define an issue to be addressed through a community organization project. Students may develop and execute an individual project, take part in a group project or complete an internship at a community organization. This course is designed for Human Services students and anyone interested in community organizing. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

113 Capstone for Community Health Workers

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Human Services 103 with a grade of "C" or better, or equivalent.

This course provides students in the Community Health Work (CHW) Certificate Program the opportunity to discuss and analyze their experiences while performing their roles and responsibilities as community health workers (CHWs) in the field. Emphasis is placed on helping students apply knowledge gained through the Certificate Program to improve performance, especially in the areas of healthy lifestyles, preventive care, community development, team participation, and health behavior modification. This course is designed and required for students completing the CHW Certificate Program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

115 Human Services Internship

**1 hour lecture, 6 hours lab, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment

Skill Levels R5 and W5; and Human Services 110 and 120, each with a grade of "C" or better, or equivalent. This course is designed to provide students in the Human Services Certificate program with practical experience in the field of human services. Students will provide internship support, working as a paraprofessional or professional aide in public or private community service agencies under the supervision of workers with professional degrees. (FT) This course offered during the spring semester. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

116 Capstone for Youth Development Workers

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Human Services 106 with a grade of "C" or better, or equivalent.

This course provides students completing the Youth Development Work (YDW) Certificate Program the opportunity to integrate course material and practical field experience in a seminar setting using a case-study format. Emphasis is placed on assessing community assets, resource acquisition, and the application of youth development models to actual program and individual cases. This course is designed for students pursuing the Youth Development Work Certificate Program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

118 Diversity and Cultural Competency

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course is a practical study of the concepts of diversity, cultural competency and inclusion as they relate to human services organizations and delivery systems. Emphasis is placed on the identification of institutional racism and the application of the principles of organizational inclusion to facilitate increased organizational effectiveness in serving diverse communities. This course is for students majoring in human services and those working in the field. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

120 Introduction to Social Work**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is an introduction to the field of social work. It covers the historical development of social work as a profession. The core knowledge base, including theoretical perspectives underpinning the profession are introduced. Emphasis is placed on social work roles, training, and methods on intervention and core social work values and ethics. Human Services 120 requires students to complete 40 hours of volunteer work with a social services agency. (FT) This course offered during the fall semester. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

125 Health Services Fields of Practice**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is an introduction to and overview of private, public and clinical community health settings and the health services field. Students gain a working knowledge of public and private community health care systems and delivery, with emphasis on services provided by public and social agencies. Issues relating to access to health care, vulnerable populations, ethical issues and policy development are examined. This course helps prepare for beginning positions and/or retraining in public and private agencies and for community volunteer work in health and human service settings. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

270 Work Experience**Hours by Arrangement (One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.), 1-4 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; and Human Services 110 and 120, each with a grade of "C" or better, or equivalent. A program of on-the-job learning experiences for students employed in a job related to their major or their educational goals. The combined maximum credit for all work experience courses from all

disciplines may not exceed 16 units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**Behavioral Sciences:
Psychology****Description**

Psychology is a behavioral science that emphasizes the understanding of behavior (feelings, actions, and thoughts) of individuals. It should be noted that psychology typically focuses on the study of humans though psychologists have interests in other species. Psychology as a science is most closely related to the biological sciences, although its application often involves personal and/or cultural philosophical beliefs or values. Students who major in psychology are expected to be able to think critically and scientifically about behavior, and be able to apply the principles of psychology to the understanding of behavior.

Program Emphasis

The psychology program has two primary goals. The first is to provide the basic science courses that are foundations for further understanding of other courses in psychology and related fields as well as preparation for transfer to other institutions for further study. The second goal is to provide courses that may include additional information regarding psychology that are of general interest to community college students or are applications of psychological principles.

Faculty	Office	Telephone
Kristen Cole	A-1P	619-388-3651
James Evans	A-1R	619-388-3257
Marie St. George	A-1U	619-388-3371
Veronica Ortega	A-1P	619-388-3238

Career Options

Most career options directly related to psychology require graduate level degrees. However, there are several applied and paraprofessional occupations that may not require education beyond the associate degree. The following is a sample of the many career options available with preparation in this major beyond the associate degree: advertising researcher, clinical psychologist, community college instructor, school counselor, counseling psychologist, drug abuse counselor, employment counselor, engineering psychologist, industrial psychologist,

manager, marriage and family counselor, mental health worker, organizational psychologist, personnel analyst, probation officer, psychometrist, and research psychologist.

Student Learning Outcomes

Students who complete the program will be able to:

- Describe the field of psychology including its philosophical, theoretical, and scientific roots and the multitude of professional options.
- Explain how the scientific method lends itself to the goals of psychological research and statistical analysis of research data.
- Distinguish between various components of the nervous system, and explain how they work together to influence behavior and mental health processes.
- Analyze the influence of biological and environmental factors in the development of psychological processes such as sensation & perception, learning, memory, intelligence, personality, emotion, motivation, sexuality, mental health and social behavior.

Academic Programs

The associate degree in Behavioral Sciences with an emphasis in Psychology requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. The associate degree requires a minimum of 60 units.

Associate in Arts Degree: Behavioral Sciences

Psychology Emphasis

Courses Required for the Major:		Units
PSYC 101	General Psychology	3
PSYC 211	Learning	3
PSYC 258	Behavioral Science Statistics or	
MATH 119	Elementary Statistics	3
PSYC 260	Introduction to Physiological Psychology	3

Select two courses from the following:

PSYC 137	Human Sexual Behavior	
PSYC 166	Introduction to Social Psychology	
PSYC 230	Psychology of Lifespan Development	
PSYC 245	Abnormal Psychology	
		6

Total Units = 18

Recommended electives: Psychology 135, 137, 155, 290, 296; transferable science, computer, mathematics, and other general education courses in biology and philosophy. **SDSU Note:** Current lower division psychology course requirements for San Diego State University psychology majors are met by the City College Associate in Arts degree, Psychology Emphasis. Consult with a counselor for other District requirements.

Transfer Information

Common university majors related to the field of Psychology include:

Behavioral Science, Biopsychology, Clinical Psychology, Cognitive Psychology, Cognitive Science, Counseling, Developmental Psychology, Psychobiology, Psychology, Social Psychology.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Associate in Arts Degree: Behavioral Sciences

Psychology for Transfer

The Associate in Arts in Psychology for Transfer is intended for students who plan to complete a bachelor's degree in Psychology or a related major in the California State University (CSU) system. It is accepted by some but not all CSU campuses. Students who complete this degree and transfer to a participating CSU campus will be required to complete no more than 60 units after transfer to earn a bachelor's degree. It may not be appropriate preparation for students transferring to a CSU campus that does not accept the degree. Students who plan to complete this degree should consult a counselor for additional information about participating CSU campuses as well as university admission, degree and transfer requirements.

NOTE: At the time of the 2011-2012 catalog printing, this degree is not accepted by San Diego State University (SDSU). Students intending to transfer to one of these campuses should consult a counselor and visit www.assist.org for guidance on appropriate coursework.

Courses Required for the Major:		Units:
PSYC 101	General Psychology*	
PSYC 255	Introduction to Psychological Research	
MATH 119	Elementary Statistics* or	
PSYC 258	Behavioral Science and Statistics	
		9

Select one of the following courses:

BIOL 107	General Biology – Lecture and Laboratory* or	
PSYC 260	Introduction to Physiological Psychology*	
		3-4

Select one of the following courses (not selected above) to meet the lower division preparation for the major to your transfer university:

BIOL 210A	Introduction to the Biological Sciences I*	
BIOL 230	Human Anatomy*	
CHEM 100	Fundamentals of Chemistry*	
CHEM 100L	Fundamentals of Chemistry Laboratory*	
CHEM 130	Introduction to Organic and Biological Chemistry*	
CHEM 130L	Introduction to Organic and Biological Chemistry*	
CHIL 101	Human Growth and Development*	
ENGL 105	Composition and Literature*	
ENGL 205	Critical Thinking*	
MATH 104	Trigonometry*	
MATH 116	College and Matrix Algebra	
MATH 118	A Survey of Modern Math	
MATH 121	Basic Techniques of Applied Calculus I	
MATH 141	Precalculus	
PHYS 125	General Physics*	
PHYS 126	General Physics II*	
PHYS 180A/180B,	General Physics I/Laboratory I*	
PHYS 181A/181B,	General Physics II/Laboratory II*	
PSYC 155	Introduction to Personality*	
PSYC 166	Introduction to Social Psychology*	
PSYC 211	Learning*	
PSYC 230	Psychology of Lifespan Development*	
PSYC 260	Introduction to Physiological Psychology*	
SOCO 101	Principles of Sociology*	
SOCO 110,	Contemporary Social Problems*	
		3-5

If needed to total 18 units, select one of the following courses (not completed above) to meet the lower division preparation for the major to your transfer university:

BIOL 210A	Introduction to the Biological Sciences I*	
BIOL 230	Human Anatomy*	
CHEM 100	Fundamentals of Chemistry*	
CHEM 100L	Fundamentals of Chemistry Laboratory*	
CHEM 130	Introduction to Organic and Biological Chemistry*	
CHEM 130L	Introduction to Organic and Biological Chemistry*	
CHIL 101	Human Growth and Development*	
CISC 192	C/C++ Programming	
ENGL 105	Composition and Literature*	
ENGL 205	Critical Thinking *	
MATH 104	Trigonometry*	
MATH 116	College and Matrix Algebra	
MATH 118A	Survey of Modern Math	
MATH 121	Basic Techniques of Applied Calculus I	
MATH 141	Precalculus	
MATH 150	Calculus with Analytic Geometry I*	
MATH 151	Calculus with Analytic Geometry II*	
PHIL 100	Logic and Critical Thinking*	
PHIL 205	Critical Thinking and Writing in Philosophy*	
PHYS 125	General Physics*	
PHYS 126	General Physics II*	
PHYS 180A/180B,	General Physics I/Laboratory I*	
PHYS 181A/181B,	General Physics II/Laboratory II*	
PSYC 111	Psychological/Social Aspects of Aging, Death and Dying*	
PSYC 135	Marriage and Family Relations*	
PSYC 137	Human Sexual Behavior*	
PSYC 155	Introduction to Personality*	
PSYC 161	Introduction to Counseling*	
PSYC 165	Theories of Consciousness*	
PSYC 166	Introduction to Social Psychology*	
PSYC 211	Learning*	
PSYC 230	Psychology of Lifespan Development*	
PSYC 245	Abnormal Psychology*	
PSYC 260	Introduction to Physiological Psychology *	
SOCO 101	Principles of Sociology*	
SOCO 110	Contemporary Social Problems*	
		3-5

Total Units = 18-21

*Course also fulfills general education requirements for the CSU GE or IGETC pattern.

General Education: In addition to the courses listed above, students must complete one of the following general education options:

- The IGETC pattern (page 96) is accepted by all CSU campuses and most UC campuses and majors. It is also accepted by some private/independent or out of state universities.
- The CSU GE pattern (page 104) is accepted by all CSU campuses and some private/independent or out of state universities. It is not accepted by the UC system.

It is strongly recommended that students consult with a counselor to determine which general education option is most appropriate for their individual educational goals.

Electives as needed to meet minimum of 60 CSU-transferable units required for the degree.

Courses

Psychology

101 General Psychology

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is a survey of the concepts, principles and terminology of psychology as a science. Emphasis is placed on introducing students to the diverse areas that make up the field of psychology, preparing students for further study in the behavioral sciences and providing students with greater insight into human behavior. This course is designed for students planning to take advanced courses in the Social and Behavioral Sciences and/or students majoring in Psychology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Psychology (PSYC) 101 and Black Studies (BLAS) 104 combined: maximum credit, one course.

111 Psychological/Social Aspects of Aging, Death and Dying

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course explores the psychological, physiological and social factors influencing behavior during the later years of life. Through improving their understanding of the conditions and problems of growing older in today's world, students may increase their empathy with the aged in society as well as enhance their adaptation to their own aging process. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

135 Marriage and Family Relations

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Level R5 and W5.

This course examines the behaviors related to courtship, engagement, marriage, and family life as well as how science helps us understand these experiences. It surveys historical, cross cultural, and social perspectives of families. The course addresses interpersonal communication, economic management, and sexuality as they relate to the family. This course can be beneficial to students pursuing advanced degrees in child development or family studies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

137 Human Sexual Behavior

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course explores the psychological, social, and physiological dimensions of human sexual behavior. Students review specific theories and research findings and focus on individual sexual development, functioning, and healthy decision making. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Psychology (PSYC) 137 and Black Studies (BLAS) 165 combined: maximum credit, one course.

155 Introduction to Personality**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6. This course is a survey of the fundamental personality theories within the field of psychology. Emphasis is placed on the personal life experiences of each of the major personality theorists, their research methods and approaches to the study and understanding of personality, and clinical applications of their theories. This course is designed for psychology majors and anyone seeking a stronger understanding of psychological theory. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

161 Introduction to Counseling**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6. This course is an introductory study of the history and complexity of the counseling relationship. Emphasis is placed on the skills required to be an effective counselor. Topics include various counseling approaches and settings as well as related legal and ethical issues. This course is intended for psychology majors and anyone interested in the therapeutic aspects of psychology/counseling. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

165 Theories of Consciousness**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5. A scientific and systematic introduction to the historical perspectives and concepts basic to the understanding of consciousness. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

166 Introduction to Social Psychology**3 hours lecture, 3 units****Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

Social psychology examines how individuals are influenced by their social environment. Special attention is given to social cognition and perception, self-justification, conformity, group dynamics, prejudice, aggression, prosocial behavior and applied social psychology. Emphasis will be placed on developing critical and integrative ways of thinking about theory and research in social psychology. This course is for anyone who is interested in the subject of social psychology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

201 Academic and Career Opportunities in Psychology**1 hour lecture, 1 unit****Pass/No Pass**

Prerequisite: Psychology 101 with a grade of "C" or better, or equivalent.

Advisory: 30 units of college course work. This course is a study of career options in the field of Psychology. Emphasis is placed on the identification of career-related strengths and interests and information on post-baccalaureate options in psychology and related fields. This course is designed for students interested in majoring in psychology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

211 Learning**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Prerequisite: Psychology 101 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Psychology 210. Students learn about the basic principles and research in animal and human learning. Subjects include scientific versus nonscientific approaches to behavior studies, operant and respondent conditioning, observational and cognitive learning, and motivation as related to self-control. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

230 Psychology of Lifespan Development**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Prerequisite: Psychology 101 with a grade of "C" or better, or equivalent.

This course is designed for students interested in studying the psychological development of humans

in all their sociocultural diversity from conception to death. Students learn major theoretical positions related to growth and change. The course emphasizes the variety of factors that shape similarities and differences in life. Psychology majors wishing to transfer are advised to take this course. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

245 Abnormal Psychology

3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course provides a comprehensive survey of troubled patterns of behavior. Students explore theoretical models as they relate to etiology, treatment, and prognosis of psychopathologies. Students also learn how the DSM-IV helps identify and assess various disorders. Topics include legal and social policy issues. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

255 Introduction to Psychological Research

3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Prerequisite: Psychology 101 with a grade of "C" or better, or equivalent.

This course is an introduction to scientific methodology in psychology. Emphasis is placed on descriptive, experimental, and applied research. Students learn the American Psychological Association writing style for empirical report writing. This course is intended for psychology majors and behavioral science students interested in the processes of research. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

258 Behavioral Science Statistics

3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is an introductory study of statistics for the Behavioral Sciences. Emphasis is placed on acquainting students with the concepts underlying

statistical methods and research approaches, basic statistical analyses and principles. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Mathematics (MATH) 119, Biology (BIOL) 200 or Psychology (PSYC) 258 combined: maximum credit, one course.

259 Behavioral Science Statistics Laboratory

3 hours lab, 1 unit
Letter Grade or Pass/No Pass Option

Corequisite: Psychology 258.

This laboratory course offers students practice in using statistical analysis software for the behavioral sciences. Emphasis is placed on data entry, graphing, hypothesis testing and statistical analyses. This course is intended for psychology and other behavioral science majors and anyone interested in using statistical analysis software for research purposes. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

260 Introduction to Physiological Psychology

3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Prerequisite: Psychology 101 with a grade of "C" or better, or equivalent.

Students learn about the physiological determinants of behavior. Subjects include behavior evolution, the nervous system, and endocrine glands as well as their relationship to perception, learning, motivation, emotion, and personality. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

276 Field Work in Psychological Services

2 hours lecture, 3 - hours other, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

This supervised field experience course enables the student to be of service to the community while learning about the function of human care services. Emphasis is placed on providing students with the chance to explore the varied career choices in the field of psychology as well as on practical experience with basic helping skills in current social service situations. This course is intended for students who want to work with people in human care services. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Behavioral Sciences: Social Work

Description

Social Work is an applied behavioral science that emphasizes the application of behavioral science principles in a variety of cultural contexts. Social Work students are expected to think critically and scientifically about behavior, to apply the principles of the behavioral sciences, and to understand the role of values in diverse cultural settings. As a profession, social work focuses on methods for helping people from many different social groups to improve the quality of their lives.

Program Goals

The Social Work program has two primary goals. The first is to provide students with the basic science and social work courses that prepare them for entry-level work in the field and/or transfer to four-year colleges, universities or other institutions. The second goal is to provide students with general knowledge related to the behavioral sciences that compliments their interests in the field of Social Work.

Career Options

Most career options directly related to professional (licensed) social work require graduate level degrees. However, there are applied and paraprofessional occupations that value the associate degree. Social services departments, hospitals, academic and community mental health facilities, child care programs, services for the aged, alcohol and other drug treatment programs, family services agencies, and other community organizations are all examples of settings which employ both professional and paraprofessional social service providers. Education at each academic level enhances skills, knowledge, and employability.

Academic Programs

The associate degree in social work requires completion of the courses listed for the degree. Additional general education and graduation requirements for the associate degree are listed in the catalog. The associate degree requires a minimum of 60 units.

Associate in Science Degree: Behavioral Sciences

Emphasis in Social Work

Courses Required for the Major:		Units
HUMS 110	Social Work Fields of Service	3
HUMS 120	Introduction to Social Work	3
BIOL 107	General Biology-Lecture and Laboratory	4
ECON 120	Principles of Economics I	3
PSYC 101	General Psychology	3
PSYC 258	Behavioral Science Statistics or	
MATH 119	Elementary Statistics	3
SOCO 101	Principles of Sociology	3

Select two courses from the following:

PSYC 161	Introduction to Counseling	3
PSYC 230	Psychology of Lifespan Development	3
PSYC 245	Abnormal Psychology	3
SOCO 110	Contemporary Social Problems	3

Total Units = 28

Transfer Information

Common university majors related to the field of Social Work include:

Counseling, Social Work.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

There are no courses specific to the Social Work discipline.

Behavioral Sciences:

Sociology

Description

Sociology is a behavioral science that emphasizes relationships among people from simple face-to-face relationships through formal organizations to whole societies. Sociology's subject matter ranges from the intimate family to the hostile mob, from crime to religion, from divisions of race and social class to the shared beliefs of a common culture, from the sociology of work to the sociology of sports. Sociologists seek to understand interaction of individuals with institutions and social organizations and the norms, values, beliefs, and traditions that make social life possible and meaningful. It stresses how behavior is influenced by societal structures and how consensus (agreement) and conflict (disagreement) among groups affects society. Sociology students are expected to be able to think critically and scientifically about human behavior, and to be able to apply the principles of sociology to an understanding of behavior.

Program Emphasis

The sociology program has two goals. The first goal is to provide basic sociology courses that are foundations for further understanding of other courses in sociology and related fields and to prepare for transfer to baccalaureate institutions for further study. The second goal is to offer courses that may provide additional information regarding sociology of interest to community college students, or that are applications of sociological principles.

Faculty	Office	Telephone
Francisco Moreno	A1T	619-388-3653
Sarah Pitcher	A1T	619-388-3606

Career Options

Most career options directly related to sociology require graduate level degrees. However, there are several applied and paraprofessional occupations that may not require education beyond the associate degree. The list following includes some of the many career options available with preparation in sociology beyond the associate degree: advertising researcher, community college professor, criminologist, manager, probation officer, social services professional, and university professor.

Student Learning Outcomes

Students who complete the program will be able to:

- Apply the sociological imagination and be able to differentiate between sociology and other social sciences.
- Analyze critical inquiry of personal experience, over-generalization, and simplistic understandings of human behavior through the application of various sociological theories.
- Propose critical questions and issues facing our society today, particularly the US role in a globalized world.
- Critically assess how the theoretical underpinnings of sociology explicitly challenge the dominant ideologies in US society and the role of sociology to produce social change.

Academic Programs

The associate degree with a major in Behavioral Sciences with an emphasis in Sociology requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. The associate degree requires a minimum of 60 units.

Associate in Arts Degree: Behavioral Sciences

Sociology Emphasis

Courses Required for the Major:		Units
SOCO 101	Principles of Sociology	3
SOCO 110	Contemporary Social Problems	3
PSYC 258	Behavioral Statistics or	
MATH 119	Elementary Statistics	3
Electives - transferable, general education		9
		Total Units = 18

Recommended electives: Sociology 290; transferable computer, mathematics and philosophy courses.

Transfer Information

Common university majors related to the field of Sociology include:

Behavioral Science, Community Studies, Gerontology, Law, Policy Analysis, Social Ecology, Social Science, Sociology, Social Work, Counseling.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the

Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Sociology (SOCO)

101 Principles of Sociology

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

The basic facts, concepts and generalizations of sociology are covered. Content includes the scientific study of social interaction and organization with special reference to present-day America, including cross-cultural and multicultural analysis. This course is useful for those considering careers in counseling, teaching, social work, and nursing. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Sociology (SOCO) 101 and Black Studies (BLAS) 115 combined: maximum credit, one course.

110 Contemporary Social Problems

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course requires students to identify and analyze present day social problems in the United States, with emphasis on sociological factors involved, while including cross-cultural and multicultural analysis. Students will use scientific methods of approaches to and criteria for evaluating proposals for social betterment. This course is useful for students pursuing careers in criminology, counseling, education, law, medicine, and dental hygiene. (FT)

Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

125 Sociology of the Family

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is a study of the structures and functions of the family as a social, cultural and historical institution in the United States and throughout the world. Emphasis is placed on an analysis of the family's relationship to economic structures, political institutions and belief systems. Topics include definitions of family, gender roles and family stability. This course is intended for students majoring in sociology, psychology, social work and counseling as well as any student interested in the study of the family as an institution. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

150 Sociology of Latinos/Latinas

3 hours lecture, 3 units

Grade Only

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6.

This course is an in-depth sociological examination of the Latino Culture. Students focus on family structure and gender roles, religion, economics, racism, social movements, border issues and education. Emphasis is placed on social interactions and individual identity formation. This course is designed for sociology majors or any student interested in social sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

201 Advanced Principles of Sociology

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Level R5 and W5.

A course designed to continue the examination of the major ideas that have shaped contemporary sociology. Special attention is given to classical social thinkers and to the origin of sociology as a science. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

223 Globalization and Social Change
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of “C” or better, or equivalent, or Assessment Skill Levels R6 and W6; Sociology 101 with a grade of “C” or better, or equivalent.

This course evaluates the social and political changes brought on by globalization among industrialized, industrializing, and underdeveloped nations. It presents arguments and theories for and against globalization and supplements with empirical examples. The course is useful for those considering careers in law, politics, business, teaching, and non-profit organizations dealing with human rights issues, political advocacy, and international affairs. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

Bilingual Studies

Award Type	Units
Associate in Art Degree	
Bilingual Studies	28*
*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.	

Description

The Bilingual Studies program provides an interdisciplinary approach to the interaction of the Chicano with other cultures in a bilingual, multicultural setting. It helps to prepare students for transfer to a four-year university major in Liberal Studies with an emphasis in Elementary Education. Bilingual Studies enhances understanding of one of the country’s fastest growing population groups.

Program Emphasis

Bilingual Studies courses are taught in English and the curriculum is designed to meet District and baccalaureate general education and multicultural course requirements. The program offers courses in bilingual studies, Chicano culture, history of Mexico and the United States, language and literature, speech, music and physical education.

Faculty	Office	Telephone
Vacant	A1-M	619-388-3634
Vacant	A1-C	619-388-3237

Career Options

Students completing the associate degree in Bilingual Studies will be able to work as teachers’ aides in bilingual elementary classrooms. Students who complete the additional lower division transfer requirements for San Diego State University will be able to transfer with junior standing in the Liberal Studies major with emphasis in Elementary Education. This major prepares students to become elementary school teachers both in traditional and bilingual, bicultural classrooms.

Academic Programs

The associate degree in Bilingual Studies requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Associate in Arts Degree: Bilingual Studies

Courses Required for the Major:		Units
CHIC 141A	U.S. History from a Chicano Perspective	3
CHIC 141B	U.S. History from a Chicano Perspective.	3
CHIC 203	Introduction to Spanish for Spanish Speakers and	
CHIC 204	Intermediate Spanish for Spanish Speakers or	
SPAN 201	Third Course in Spanish and	
SPAN 202	Fourth Course in Spanish	10
COMS 103	Oral Communication	3
ENGL 101	Reading and Composition	3
MUSI 110	Music for Elementary School Teachers	3
PHYE 240	Physical Education in the Elementary School	3
Total Units = 28		

Recommended electives: Courses that meet lower division preparation for the San Diego State University Liberal Studies major with an emphasis in Education. See a counselor.

Transfer Information

Common university majors related to the field of Bilingual Studies include: Liberal Studies, Education.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor’s degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate

major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Biology

Award Type	Units
Certificate of Performance	
Applied Biotechnology	11
Associate in Science Degree:	
Transfer Track	23-24*
Allied Health Track	21*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

Biology is a natural science that focuses on physical and chemical processes of living organisms. This discipline explores how organisms acquire and use energy to maintain homeostasis, how they reproduce, and how they interact with each other and their environment. Scientific processes are emphasized as a means of answering these biological questions. Biologists rely heavily on a chemistry foundation since living organisms are chemical systems.

Program Emphasis

The biology program serves four areas of study. First, it provides a broad background of studies for the biology major preparing for transfer to a four-year institution. Second, the Applied Biology curriculum provides preparation for entry level employment as a biotechnology technician. The biology program also offers support courses in human anatomy, human physiology and general microbiology which may be used to satisfy prerequisites for nursing programs and other allied health fields. Fourth, the biology program provides courses in natural science to fulfill general education requirements.

Faculty	Office	Telephone
Donna DiPaolo	A-228	619-388-3715

Minou Djawdan Spradley	A-208	619-388-3520
Anita Hettena	A-229	619-388-3581
Michael J. Leboffe	A-208	619-388-3285
Roya Lahijani	A-229	619-388-3289
Erin Rempala	A-227	619-388-3712
David Singer	A-227	619-388-3277
Gary Wisehart	A-227	619-388-3550

Career Options

The following list is a sample of the many career options available for the biology major. A few of these require an associate degree; most require a baccalaureate degree and some require a graduate level degree: agricultural consultant, animal health technician, biotechnology technician, dentist, environmental consultant, field biologist, forester, horticulturist, high school or college teacher, marine biologist, microbiologist, public health technician, physician, pharmaceutical researcher, research biologist and veterinarian. In addition, a background in biology may be required for the following: registered nurse, physical therapist, respiratory therapist, dental hygienist, medical technician, physician's assistant and optometrist.

Academic Programs

The three associate degrees in biology require completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The Associate Degree requires a minimum of 60 units.**

Student Learning Outcomes

All Biology students will be able to:

- Apply core biological concept that service as the foundation for higher-level science courses. These include theories of evolution, natural selection, processes of scientific inquiry, and proper laboratory techniques, among others.
- Evaluate the quality of scientific methodology when it is report by the popular media.
- Describe the relationship between the process of science, human culture and the environment.

Students in the Applied Biology track will also be able to:

- Apply the skill sets necessary to work in the biotechnology industry.

- Describe applications, regulations, ethical, legal and social issues related to biotechnology.
- Demonstrate the soft skill sets necessary to acquire employment in the biotechnology field.

Student satisfying prerequisites of nursing programs and other allied health fields will also be able to:

- Demonstrate a detailed mastery of human body structure and function, from micro- to macroscopic levels, including its homeostatic states and processes.
- Demonstrate a working knowledge of microbial systems, their role in Nature and their impact on humans.

Certificate of Performance Applied Biotechnology*

Students may take the specific biotechnology courses (Biology 206) and receive a Certificate of Completion authorized and issued by the academic department. It is not intended to nor will it be recognized as an official state approved program. It is intended to provide students with intensive laboratory skills development experience to meet entry-level employment requirements in the biotechnology industry.

Courses required for the Certificate		Units
BIOL 109	Preparation for Biotechnology	5
BIOL 206	Biotechnology Instrumentation	6
Total Units = 11		

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Associate in Science Degree: Biology

Transfer Track

Courses Required for the Major:		Units
BIOL 210A	Introduction to the Biological Sciences I	4
BIOL 210B,	Introduction to the Biological Sciences II	4
CHEM 200	General Chemistry I	3
CHEM 200L	General Chemistry I Laboratory	2
CHEM 201	General Chemistry II	3
CHEM 201L	General Chemistry II Laboratory	2

MATH 121	Basic Techniques of Applied Calculus I and	
MATH 122	Basic Techniques of Calculus II or	
MATH 150	Calculus Analytical Geometry I	5-6
Total Units = 23-24		

Recommended electives: Biology 100 (Mesa), 101, 110, 115, 130, 180, 200, 205, 215, 230, 232, 235, 250 (Mesa & Miramar) 290, 296.

Associate in Science Degree: Biology

Allied Health Track

Consult the Nursing Education faculty (City College) or a counselor to verify current course requirements for associate degree and baccalaureate nursing program preparation.

Courses Required for the Major:		Units
BIOL 107	General Biology - Lecture & Laboratory	4
BIOL 205	General Microbiology	5
BIOL 230	Human Anatomy	4
BIOL 235	Human Physiology	4
CHEM 100	Fundamentals of Chemistry	3
CHEM 100L	Fundamentals of Chemistry Laboratory	1
Total Units = 21		

Recommended electives: Biology 101, 130, 180, 215, 250; Chemistry 130, 130L.

Transfer Information

Common university majors related to the field of Biology include:

Agricultural Science, Biochemistry, Bioengineering, Bioinformatics, Biological Sciences, Biophysics, Botany and Plant Sciences, Cell Biology, Conservation, Developmental Biology, Ecology, Entomology, Exercise Science, Genetics, Kinesiology, Marine Biology, Medical Sciences, Microbiology, Molecular Biology, Natural Sciences, Neuroscience, Nursing, Nutrition and Food Science, Psychobiology, Toxicology, Zoology and Animal Science.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer

institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Biology

101 Issues in Environmental Biology **3 hours lecture, 3 hours lab, 4 units** **Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Biology 100. This is a course in contemporary issues in environmental biology. Topics include basic ecological principles, biodiversity, human population dynamics, human resource management, and pollution. These are viewed within the context of their environmental, economic, cultural, and ethical setting. Issues are examined utilizing the process of scientific inquiry. The laboratory is coordinated with lectures, and emphasizes the environmental issues of Southern California. Several field trips will be required, some on the weekend. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

107 General Biology - Lecture and Laboratory **3 hours lecture, 3 hour lab, 4 units** **Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40.

Limitation on Enrollment: This course is not open to students with credit for Biology 103, 104, or 105, 106, or 210A and 210B.

This course is an examination of living organisms and their environment. The lecture and laboratory are intended for students planning on taking more advanced courses in the Life Sciences or students

majoring in Education, Child Development, Physiological Psychology, or related areas. Topics that are emphasized in this course include the fundamental chemical and physical processes common to all living organisms, the interactions between organisms and their environment, classical and molecular genetics, metabolism, plant and animal anatomy and physiology, animal behavior, evolution, cellular and molecular biology, and the experimental and cognitive processes used to examine these fields. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course Limitation: No credit for Biology (BIOL) 105, 106 or 107 if taken after 210A, 210B.

109 Preparation for Biotechnology **3 hours lecture, 6 hours lab, 5 units** **Grade Only**

Advisory: English 48 and English 49 and Mathematics 46 each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40.

Limitation on Enrollment: This course is not open to students with previous credit for Biology 265B. This course is intended as a preparation course for students interested in further studies in biotechnology. The course provides the fundamental knowledge in mathematics, chemistry, biology, and microbiology for additional biotechnology coursework. Topics include the fundamental chemical processes common in prokaryotic and eukaryotic biology, chemistry of biomolecules, cellular and molecular biology, gene expression and genetic engineering. The laboratory experience provides basic skills and techniques essential to advanced biotechnology courses. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

110 Introduction to Oceanography **3 hours lecture, 3 units** **Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This is an introductory course designed to acquaint the student with general oceanography. Topics include history of oceanography, sea floor properties, plate tectonics, properties of sea water, ocean currents, waves and tides, life in the sea, pollution, and the significance of the oceans to humans. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

111 Cancer Biology**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Biology 123. This is an introductory course that examines the basic biology of cancer and the approaches currently taken in cancer treatment. Basic principles of cell biology and genetics are explored to unravel the mechanisms of cancer development and the development of effective cancer therapeutics and preventative measures. The course emphasizes the process of scientific inquiry to illustrate how cancer biologists gather and analyze data in order to better understand and treat this disease estimated to be the number two killer in the US. The course is intended for all that want to learn about the types of cancer, causes of cancer, treatments of cancer, and the social impact of this disease on patients, families and society. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

115 Marine Biology**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Advisory: English 101 or English 105, each with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6.

This course is a study of marine biology. Emphasis is placed on marine organisms, their natural history and special adaptations to the ocean environment. Topics include the marine environment, plankton, marine plants, marine invertebrates, fishes, marine birds, marine reptiles, and marine mammals. Students participate in several field trips to local marine habitats and museums. This course is intended for all students interested in marine biology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

130 Human Heredity**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course introduces students to the concepts and applications of human heredity. It deals with both

classical Mendelian genetics and modern molecular genetics. Topics include gamete formation, human karyotypes, genetic crosses, sex-linked inheritance, structure and function of DNA and RNA, gene expression, transcription and translation, genetic engineering, and population genetics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

135 Biology of Human Nutrition**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 49 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5.

A course which relates biological concepts and principles to human nutrition. Lecture and discussion topics will include food composition, carbohydrates, proteins, lipids, vitamins, and minerals; food absorption and utilization; food fads and diets; malnutrition and mental retardation; food value and cost; food processing, food additives, world food and population problems; nutrition and pregnancy, and other topics. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

180 Plants and People**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This is an introductory course that examines the interdependence of humans and plants. This course is intended for all that want to learn about the uses of plants, especially those students with an interest in biology, anthropology, environmental sciences, and/or agriculture. Emphasis is on plant ecology as well as the basic biology of plant groups that provide us with food, medicine, recreation, decoration, and material goods as well as those that produce stimulating, intoxicating, or harmful effects. Basic principles of taxonomy, cell structure, plant physiology, plant anatomy, ecology and genetics are explored as they relate to these plants. Current environmental and economic issues and the role of molecular genetics in future plant development and the importance of genetic diversity are also examined. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course Limitation: Credit will only be granted for either Biology (BIOL) 180 or 215 and 250

combined. No credit for Biology (BIOL) 180, 215 or 250 if taken after 210A or 210B.

200 Biological Statistics

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Biology 107, or 210A, and Mathematics 116, each with a grade of "C" or better, or equivalent. This is an introductory course in statistics using biological examples and experimental design. Students learn methods and gain experience in defining and solving quantitative problems in biology. Descriptive and inferential statistics, basic probability, binomial and normal distributions are introduced. Students learn to estimate population parameters, test hypotheses, linear regression and correlation using clinical and biological data and experiments. This course is applicable for biological science majors and required for preparation for San Diego State University biology majors. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course Limitation: Mathematics (MATH) 119, Biology (BIOL) 200 or Psychology (PSYC) 258 combined: maximum credit, one course.

205 General Microbiology

**3 hours lecture, 6 hours lab, 5 units
Grade Only**

Prerequisite: Biology 107 and Chemistry 100 and 100L or Chemistry 152 and 152L, each with a grade of "C" or better, or equivalent.

This introductory course covers fundamental aspects of microbiology including taxonomy, structure, physiology, reproduction, genetics, control, immunology, diversity, and host-symbiont relationships. Lab work emphasizes basic techniques for culturing, staining, counting, and identifying microorganisms. This course is intended for students pursuing careers in allied health fields and may meet entry requirements for these allied health fields. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

206 Biotechnology Instrumentation

**3 hours lecture, 9 hours lab, 6 units
Grade Only**

Prerequisite: Biology 205 and Chemistry 201 and 201L, or Biology 109, with a grade of "C" or better, or equivalent.

This is an advanced lecture/laboratory course implementing major techniques used in the

biotechnology industry. Topics include tissue culture methods, purification and analysis of nucleic acids and proteins, DNA amplification and cloning procedures, protein identification methods, scientific information retrieval, and technical writing. This course is intended for students seeking employment opportunities in biotechnology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

210A Introduction to the Biological Sciences I

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50; and Chemistry 152 and Chemistry 152L, each with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; and concurrent enrollment in Chemistry 200 and Chemistry 200L.

This course covers biological chemistry, cell structure and function, cellular metabolism, classical and molecular genetics, and evolutionary biology. This is the first semester of a two-semester sequence designed for biological science and pre-professional majors. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

210B Introduction to the Biological Sciences II

**3 hours lecture, 3 hours lab, 4 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Biology 210A with a grade of "C" or better, or equivalent; and Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50.

This is an introductory course which is a continuation of Biology 210A. This course emphasizes the developmental and physiological processes of the Five Kingdoms, the phylogenetic relationships of major evolutionary groups of organisms, behavior, and ecological principles including population and community ecology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

215 Introduction to Zoology**2 hours lecture, 6 hours lab, 4 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Biology 107 with a grade of "C" or better, or equivalent.

Advisory: English 48 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5.

This is an introductory course that surveys the basic principles of animal biology. These principles include morphology, life processes and evolutionary relationships of the invertebrates and vertebrates. Laboratories include the identification of organisms, dissection and recognition of the anatomy of varied animal representatives, embryological development, histology, behavior and physiology. This course is designed for Biology Majors and for students seeking to satisfy degree requirements in allied health and animal sciences majors. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course Limitation: Credit will only be granted for either Biology (BIOL) 180 or 215 and 250 combined. No credit for Biology (BIOL) 180, 215 or 250 if taken after 210A or 210B.

230 Human Anatomy**2 hours lecture, 6 hours lab, 4 units
Grade Only**

Prerequisite: Biology 107, or Biology 160 with a grade of "C" or better, or equivalent.

This course is a systems approach to the study of human body structure from the microscopic level of organization to the gross level. Structure related to function from study of histological slides, photomicrographs, anatomical models and charts, and mammalian (cat) dissection. This course is intended to meet the requirements of students in the fields of nursing, physical therapy, recreational therapy, occupational therapy, athletic training, chiropractic, psychology, physical education, and biology or those who wish to extend their knowledge of the human body beyond the scope of introductory biology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

232 Experience in Human Dissection**3 hours lab, 1 unit
Letter Grade or Pass/No Pass Option**

Prerequisite: Biology 230 with a grade of "C" or better, or equivalent.

Advisory: Preregistration counseling with instructor is highly recommended.

This course provides a supervised study and actual experience in human dissection. Mastery of dissection techniques and human anatomy at this level assists students pursuing careers in nursing, medicine, and other allied health professions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

235 Human Physiology**3 hours lecture, 3 hours lab, 4 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Biology 107 with a grade of "C" or better, or equivalent.

Advisory: Biology 230 and Chemistry 100 and 100L, each with a grade of "C" or better, or equivalent.

This is an introductory course which investigates the functions of the human body with emphasis on the nervous, endocrine, muscular, cardiovascular, respiratory, digestive, excretory and reproductive systems. This course is intended to meet requirements for students in the fields of nursing, paramedical sciences, psychology, biology and physical education. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

290 Independent Study**Hours by Arrangement, 1-3 units
Letter Grade or Pass/No Pass Option**

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

A student may sign up for 1 to 3 units each semester for a maximum of 6 units. For advanced students in biology who wish to continue with a special investigation. The course consists of individualized research problems, conferences with the instructor at prearranged intervals and a final report on the work completed. This course may be taken four times with different content for a maximum of six units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Black Studies

Award Type	Units
Associate in Arts Degree	
Black Studies	21*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

The Black Studies program at City College provides an interdisciplinary and systemic approach to the historical and contemporary study of African people in Africa and in the Americas. The program is designed to provide enrichment in the social sciences and humanities by giving students in these areas the opportunity to link the tools of formal analysis to a specific cultural area in the African experience. The student's career and future alternatives may be increased by adding a specialized dimension at the undergraduate level. Students preparing for transfer to a four-year university may major in a African Studies or humanities, law, social work, or public administration. This will enhance their opportunities in local, national and international organizations, both public and private, through participation in the program.

Program Emphasis

Black Studies courses are taught in English. The curriculum includes transfer courses which help to meet District and baccalaureate general education and multicultural requirements. The program offers courses in African history, as well as art, economics, United States history, literature, music, Psychology, Sociology and politics from a Black perspective.

Faculty	Office	Telephone
Alazar Tesfamariam	A1- (E)	619-388-3366
Darius Spearman	A1- (E)	619-388-3187

Career Options

Most careers related to Black Studies require education beyond the associate degree. A list of some sample careers include: social scientist, counselor, international business person, historian, social worker, teacher and public administrator.

Student Learning Outcomes

Upon successful completion the student will acquire the skills and knowledge for preparation in:

- Evaluating the aesthetics, social, and political significance of Black artistic, musical and literary expression from its African origins to the present.
- Analyzing the underlying causes of such social problems as racism and sexism and class conflict.
- Critically analyzing current social policies and their historical origins, both on the local and national levels, aimed at addressing current social problems that most effect African-Americans.
- Evaluating the role of active citizens who will be engaged in the global community.

Academic Programs

The associate degree in Black Studies requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Associate in Arts Degree: Black Studies

Courses Required for the Major:	Units
BLAS 100 Introduction to Black Studies	3
BLAS 104 Black Psychology or	
BLAS 130 The Black Family	3
BLAS 110 African American Art or	
BLAS 120 Black Music	3
BLAS 115 Sociology from a Black Perspective or	
BLAS 116 Contemporary Social Problems from a Black Perspective or	
BLAS 135 Introduction to Black Politics	3
BLAS 140A History U.S., Black Perspective or	
BLAS 140B History U.S., Black Perspective	3
BLAS 145A Introduction to African History or	
BLAS 145B Introduction to African History	3
BLAS 150 Black Women in Literature and the Media or	
BLAS 155 Afro-American Literature	3
Total Units = 21	

Recommended electives: Black Studies 165, 290, 296.

Transfer Information

Common university majors related to the field of Black Studies include: Africana Studies, Afro-American Studies, Black Studies, Ethnic Studies, Liberal Studies.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this

discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Black Studies

100 Introduction to Black Studies

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 or English 49 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 or W5.

This course is a survey of the Black Studies discipline including its social and academic origins, goals and development. Emphasis is placed on providing students with an understanding of the fundamental areas of study within the field and of the interdisciplinary approach to studying the African experience in America and the world. This course is intended for students who wish to major in Black Studies and/or who wish to gain general knowledge of the Black experience. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

104 Black Psychology

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is an introduction to psychological concepts and principles as they relate to African American behaviors and lifestyles. Emphasis is placed on comparing Euro-American theories as they have been traditionally applied to African Americans with contemporary Afro-centric theories and the ways in which they may be applied to create a greater understanding of the behaviors, lifestyles

and psychological needs of African Americans. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Psychology (101) and Black Studies (BLAS) 104 combined: maximum credit, one course.

110 African American Art

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6. This course is a historical survey of African American art from 1650 to present, including the influence of African, European and Native American art styles and traditions. This course is intended not only for Black Studies and art students but also for those who are interested in history, humanities, teaching, travel, and cultural enrichment. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

115 Sociology from a Black Perspective

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is a study of African American society and culture. Emphasis is placed on analyzing the origins, nature, structure and dynamics of African American life from a systemic perspective. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Sociology (SOCO) 101 and Black Studies (BLAS) 115 combined: maximum credit, one course.

116 Contemporary Social Problems from a Black Perspective

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 or English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 or W5.

This course is a sociological analysis of institutional racism, the process of social change and how it affects African Americans. Emphasis is placed on broad contemporary issues as they relate to African Americans, such as the prison industrial complex, gender and health care. This course is intended for Black Studies majors and anyone interested in history, teaching and current events. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

120 Black Music**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is a study of African American musical forms and styles in historical perspective. Emphasis is placed on providing students with an understanding and appreciation for the African roots of a variety of African American music genres. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

130 The Black Family**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is a study of the African American family. Emphasis is placed on the socio-cultural and psychological issues surrounding the history of the Black family in America and contemporary African American dating, marriage and divorce patterns, gender roles and extended family, kin and community networks. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

135 Introduction to Black Politics**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 48 or English 49 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5 or W5.

This course is a survey of African American experiences with the United States political system from the Colonial era to the present. Emphasis is placed on the role of race in American political culture, practices and institutions as well as the ideas, tactics and organizations developed and employed by African Americans in their struggle for political power. This course is intended for students who wish to major in Black Studies and/or who wish to gain general knowledge of the Black experience. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

140A History of the U.S., Black Perspectives**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 48 or English 49 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5 or W5.

This course is a survey of American history from the colonial period to 1877, with emphasis on the experience of African Americans and the contributions they have made to the political, social, economic, and cultural development of the country. This course is intended for transfer students planning to major in African American Studies, history, political science, or other social sciences. The complete one-year course, 140A and 140B, satisfies the graduation requirement in American Institutions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: History (HIST) 109-110, 141-142, 150- 151, Black Studies (BLAS) 140A-140B, and/or Chicano Studies (CHIC) 141A-141B combined: maximum credit, one series.

140B History of the U.S., Black Perspectives**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 48 or English 49 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5 or W5.

This course covers the history of the United States from Reconstruction to the present with emphasis on African American experience and contributions. It focuses on political, social, economic, cultural, and intellectual trends, the persistence of racism, and the struggle for full equality for all Americans. NOTE: The complete one-year course of Black Studies 140A and 140B satisfies the graduation requirements in American institutions and California state government. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: History (HIST) 109-110, 141-142, 150- 151, Black Studies (BLAS) 140A-140B, and/or Chicano Studies (CHIC) 141A-141B combined: maximum credit, one series.

145A Introduction to African History**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is a survey of African History from the Stone Age through the beginnings of European colonization in the 1870s. Emphasis is placed on providing students with a broad presentation of the geographical features of the continent and its connections to the rest of the world, local and regional ways of life and institutions, slavery, European conquest and colonization and African resistance to colonization. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

145B Introduction to African History

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is a survey of African History from the late nineteenth century to the present. Emphasis is placed on providing students with a broad presentation of European colonization and colonial rule, African independence movements, nation-building, economic development and the continuing quest for African unity. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

150 Black Women in Literature and the Media

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 or English 49 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5 or W5.

Analyzes the literary achievements of Black women. Examines the images of Black women in literature and the media, past and present, including realistic self-images as presented by Black women themselves. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

155 Afro-American Literature

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 or English 49 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5 or W5.

This course is a survey of African American cultural expression through language and literature in historical perspective. Emphasis is placed on understanding and interpreting the cultural, ethnic and political dynamics that influence literary, musical

and theoretical texts. Topics include African praise songs, slave narratives, African American folktales, poetry, lyrics, spirituals, raps, short stories, novels, speeches and essays. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

165 Sexuality and Black Culture

3 hours lecture, 3 units

Grade Only

Advisory: English 48 or English 49 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5 or W5.

Limitation on Enrollment: This course is not open to students with credit for Black Studies 265: Psychology and Social Aspects of Black Sexuality. An in-depth examination and analysis of social and psychological factors that determine the nature of human sexuality in the Black community. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Psychology (PSYC) 137 and Black Studies (BLAS) 165 combined: maximum credit, one course.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Business Studies

Accounting, Business, Economics, Consumer Studies, Marketing, Real Estate, Supervision

Description

A wide variety of programs are offered for both transfer and career-focused students. Employment certificates of performance, certificates of achievement and associate degree programs are available to students interested in entry-level employment or in upgrading business skills.

Program Emphasis

The Business Studies department offers five program areas. These include the Business Studies Transfer area and four areas with entry level vocational coursework: Small Business Accounting, Small Business Management, Retail Management, and Real Estate. There are many certificates in each area that students may take to prepare them for certain job skills. However only one associate degree can be awarded. **A student must choose an associate degree in Transfer or Small Business Accounting or Small Business Management or Retail Management.** See each area for course requirements for specific vocations.

Faculty	Office	Telephone
Leroy Brady	T-311	619-388-3999
M. Salley Deaton	A-1 (I)	619-388-3279
Alex Obiya	A-1 (I)	619-388-3665
Julie Tunnell	A-16	619-388-3110
Joe Rangus	T-311	619-385-3899

Careers

Career opportunities available upon successful completion of each of the Business Studies awards are described in each area section. Most careers listed may require education beyond the associate degree level.

Student Learning Outcomes

Students who complete the program will be able to:

- Analyze, organize, and compose various types of written and oral business communications.
- Develop clear, concise, and persuasive letters, memorandum, and reports.
- Understand the legal system and apply laws that govern business in America-including judicial and administrative systems, ethics, contracts,

torts, bankruptcy, agency, business organizations, security regulations, regulation of property, and protection of intellectual property interest-to evaluate legal solutions to various business situations.

- Analyze and solve business problems using computers and software packages including data processing systems, decision support systems, and systems analysis.
- Study macro-economic situations and analyze how changes in income levels, employment and output, economic stability and growth, fiscal and monetary policy affect decision-making in business organizations.
- Articulate, analyze, and evaluate their own beliefs/ positions in the context of meaningful philosophical inquiry and use these beliefs to successfully manage a business organization.
- Develop entry-level job skill sets in one or more areas-tax preparation, bookkeeping, owning and operating a small business, managing in a retail environment, or real estate sales person.
- Develop critical thinking skills required for transfer in business administration, accounting, economics, finance, or real estate.

Academic Programs

The associate degree in Business Studies requires completion of the courses listed in each degree emphasis. Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of the catalog. The Business Studies Transfer area provides lower division transfer preparation for the School of Business Administration at San Diego State University. **The associate degree requires a minimum of 60 units.**

BUSINESS STUDIES DEGREE						
CORE						
Units	Class	Description	The Core is required for the Business Studies associate degrees. All courses in the Core are articulated with San Diego State University courses and some meet California State University and University of California general education requirements. To receive a degree in Business Studies, the student must complete the Core and complete one of the four areas below. In Small Business Management the student has a choice of coursework. Real Estate does not offer a degree option, only Certificates of Performance.			
3	BUSE 119*	Business Communications				
3	BUSE 140*	Business Law & the Legal Environment				
4	CISC 181*	Information Processing & Computer Programming				
3	ECON 120*	Principles of Macroeconomics				
3	PHIL 102B*	Introduction to Philosophy Values & Ethics				
16 Total						
<p>Only one associate degree can be earned in the Business Studies area: Transfer or Small Business Accounting or Small Business Management or Retail Management.</p>						
Transfer (SDSU)	Small Business Accounting	Small Business Management Coursework in			Retail Management	Real Estate
		Starting & Managing a Small Business	Community Service	Financial Services		
ACCT 116A/B	ACCT 128A/B	BUSE 155	6 units from BUSE 245A/B/C/D	ACCT 102	ACCT 116A	REAL 101
ECON 121*	ACCT 102	BUSE 150		BUSE 113 or ECON 121	BUSE 101	REAL 105
MATH 119*	ACCT 150	MARK 100		CBTE 180	BUSE 150	REAL 110
MATH 121*	ACCT 121	ACCT 128A/B	6 units from BUSE 158A/B/C/D or 277A/B/C/D	CONF 110	MARK 100	REAL 115
Area A1*	ACCT 120	BUSE 157		BUSE 90A/B/C/D or BUSE 277C	MARK 100	REAL 120
Area A2*	ACCT 116A/B	COMS 103*			COMS 103	REAL 125
Area A3*	BUSE 101	COMS 180*	CBTE 180	ACCT 150	BUSE 100	
Area B1*	BUSE 245C	BUSE 101*	COMS 103*	ACCT 128A/B	COMS 135	
Area B2*	COMS 180*	6 units from BUSE 245A/B/C/D	MARK 100	BUSE 92 or BUSE 119*		Mortgage Banking
Area B3*	BUSE 277C or BUSE 245C		BUSE 101*	BUSE 245C		Certificates of Performance only
Area C1*			BUSE 150	BUSE 101*		BANK 102
Area C2*or 1		CBTE 180	BUSE 155	COMS 180*	COMS 180*	BANK 104
Area D* (not 2)			COMS 180*			BANK 106
Science	BIOL 101*	BIOL 101*	BIOL 101*	BIOL 101*	BIOL 101*	BANK 108
Health Ed.*	Health Ed.*	Health Ed.*	Health Ed.*	Health Ed.*	Health Ed.*	
Am. Inst.*	Am. Inst.*	Am. Inst.*	Am. Inst.*	Am. Inst.*	Am. Inst.*	
PE*	PE*	PE*	PE*	PE*	PE*	
Total 70	Total 63	Total 63	Total 63	Total 62	Total 60	
BOLD = articulate to SDSU and other four year institutions				* = class meets general education or district graduation requirements		

Core Curriculum

The Business Studies Core Curriculum is required for the associate degree in all Business Studies areas. All courses in the core are articulated with San Diego State University courses and some meet California State University and University of California general education requirements.

Courses:	Units
*BUSE 119 Business Communications or	
ENGL 101 Reading and Composition	3
BUSE 140 Business Law & the Legal Environment	3
CISC 181 Principles of Information Systems	4
ECON 120 Principles of Macroeconomics	3
PHIL 102B Introduction to Philosophy: Values	3
Total Units = 16	

*Business 119 is required for San Diego State University School of Business Administration degrees in Finance, Information Decision Systems, Management, and Marketing.

**Business 119 is required for all non-transfer course work and degrees.

Transfer

Associate in Science Degree: Business Studies

San Diego State University Business Administration

Courses Required for the Major:	Units
Business Studies Core Curriculum	16
ACCT 116A Financial Accounting	4
ACCT 116B Managerial Accounting	4
ECON 121 Principles of Microeconomics	3
MATH 119 Elementary Statistics	3
MATH 121 Basic Techniques of Applied Calculus I	3
Total Units = 33	

Transfer Information

Common university majors related to the field of Business include:

Accounting, Agricultural Business, Apparel Design and Merchandising, Business Administration, Business Economics, Business Information Systems, Business Law, Construction Management, E-Business, Economics, Entrepreneurship, Finance/Financial Services, Health Administration, Hospitality Management, Human Resources, Industrial

Engineering and Technology, International Business, Management, Marketing, Public Administration, Real Estate, Transportation.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major.

Small Business Accounting

SMALL BUSINESS ACCOUNTING REQUIREMENTS:
Core
Certificate of Performance (Some courses may be repeated in the certificates and/or core but only need to be taken once) Small Business Bookkeeper Tax preparer
Other Requirements Accounting 116A/B Biology 101 Business 101 Business 245C Communication Studies 180
Many general education and district requirements are already included in the degree requirement. For additional requirements for an AS degree, see page 73.

Certificate of Performance: Small Business Bookkeeper*

The Small Business Bookkeeper's certificate prepares for entry-level employment as a small business bookkeeper.

Student Learning Outcomes

Students who complete the certificate will be able to:

- Students accurately complete an accounting cycle-preparing journal entries; posting to the general ledger; and preparing a worksheet, financial statements, adjusting and closing entries and post closing trial balance.
- Students accurately prepare and organize accounting records and produce financial statements for a small business.

- Students accurately prepare all the state and federal payroll tax forms required by a small business in California.
- Students will accurately complete an accounting cycle using a computerized accounting program.

Courses:	Units
ACCT 102 Basic Accounting	3
ACCT 128A Small Business Accounting-Recordkeeping	1.5
ACCT 128B Small Business Accounting-Payroll	1.5
ACCT 150 Computer Accounting Applications	3
Total Units = 9	

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Tax Preparer*

Student Learning Outcomes

Students who complete the certificate will be able to:

- Students accurately complete an accounting cycle-preparing journal entries; posting to the general ledger; and preparing a worksheet, financial statements, adjusting and closing entries and post closing trial balance.
- Students accurately prepare current Federal and State tax returns.
- Students will know they are a force that changes their community economically.

Courses:	Units
ACCT 102 Basic Accounting	3
ACCT 120 Federal Income Tax	3
ACCT 121 California Income Tax	1

Complete 3 units from:

BUSE 245C Small Business Internship-Acctng	3
BUSE 277C Service Learning- Community**	1-3

Total Units = 10

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

**Student must complete BUSE 277C for three units to meet the requirement for the Tax Preparer certificate.

***Both BUSE 245C or BUSE 277C must have a Tax Preparation subject matter.

****Accounting 120 & 121 taken concurrently have been approved by the California Tax Education Council. Completion of the two classes with a grade of "C" or better, provides the student with 60 hours (45 hours of federal credit and 15 hours of California credit) towards the California tax preparer certificate. San Diego City College provider number is 2006.

Associate in Science Degree: Business Studies

Small Business Accounting Emphasis

The Small Business Accounting associate degree prepares for entry-level positions as bookkeepers, account clerks, accounting technicians, tax aides or accounting trainees.

Courses Required for the Major	Units
Business Studies Core Curriculum	16
Certificate of Performance, Tax Preparer	10

Complete the Following Other Courses Required for the Major:

ACCT 116A Financial Accounting	4
ACCT 116B Managerial Accounting	4
ACCT 128A Small Business Accounting-Recordkeeping	1.5
ACCT 128B Small Business Accounting-Payroll	1.5
ACCT 150 Computer Accounting Applications or	
CBTE 140A Introduction to Microsoft Excel	1-3
BIOL 101 Issues in Environmental Biology	4
BUSE 101 Business Mathematics	3
BUSE 245C Small Business Internship-Accounting	3
COMS 180 Intercultural Communication	3
CBTE 140 Microsoft Excel	2

Less courses already applied in one or more certificates or core (3)

Total Units = 49-52

NOTE: Some courses may be repeated in the certificates and/or core but only need to be taken once.

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of the catalog. Students interested in careers as professional accountants should select the Business Studies San Diego State University Transfer Option. **The associate degree requires a minimum of 60 units.**

Small Business Management

The Small Business Management area prepares individuals for a variety of employment opportunities in business. Coursework includes starting and managing a small business, entry level positions in the financial services industry, and the development and management of community service projects.

Small Business Management

Coursework in starting and managing a small business.

COURSEWORK IN STARTING AND MANAGING A SMALL BUSINESS REQUIREMENTS:
Core
Certificate of Achievement (Some courses may be repeated in the certificates and/or core but only need to be taken once) Management and Team Building Certificate of Performance Starting a Business Certificate of Performance Business Communications Certificate of Performance
Other Requirements Biology 101
Many general education and district requirements are already included in the degree requirement. For additional requirements for an AS degree, see page 73.

Certificate of Performance: Management and Team Building*

This certificate is designed for persons who currently own, operate or work for a small business and want to strengthen business skills.

Student Learning Outcomes

Students who complete the certificate will be able to:

- Students will apply human resource management techniques, marketing for a small business, and knowledge of current legal issues to successfully own or operate a small business.
- Students will develop leadership, decision-making, communication, motivation, and personnel management skills and techniques necessary to own or operate a small business.

- Students develop marketing strategies including product planning, development, pricing, distribution, and promotion necessary to operate and own a small business.
- Students analyze, organize, and compose various types of written and oral business communications.

Courses:	Units
BUSE 155 Managing the Small Business	3
BUSE 119 Business Communications	3
BUSE 150 Human Relations in Business	3
MARK 100 Principles of Marketing	3

Total Units = 12

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Starting a Business*

This certificate is designed for persons planning to start or operate a small business who want a "quick start."

Student Learning Outcomes

Students who complete the certificate will be able to:

- Students accurately prepare and organize accounting records and produce financial statements for a small business.
- Students accurately prepare all the state and federal payroll tax forms required by a small business in California.
- Students analyze, organize, and compose various types of written and oral business communications.
- Students apply human resource management techniques, marketing for a small business, and knowledge of current legal issues to successfully own or operate a small business.
- Students develop a business plan for a small business.

Courses:	Units
ACCT 128A Small Business Accounting-Recordkeeping	1.5
ACCT 128B Small Business Accounting-Payroll	1.5
BUSE 119 Business Communications	3

BUSE 155	Managing the Small Business	3
BUSE 157	Starting a Small Business	3

Total Units = 12

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Business Communications*

This certificate is designed to enhance communication skills for individuals working in a business environment by improving speaking skills, negotiating skills, presentation skills, and multicultural awareness.

Student Learning Outcomes

Students who complete the certificate will be able to:

- Students analyze, organize, and compose various types of written and oral business communications.
- Students develop leadership, decision-making, communication, motivation, and personal management skills and techniques necessary to own or operate a small business.
- Students learn to choose a topic and specific purpose; outlining, listening, organizing a speech; delivery; small group communication; informative and persuasive speaking; speaker credibility; and effective use of language.
- Students learn the relationship between culture and communication emphasizing social psychological variables, verbal and nonverbal language systems, cross-cultural communication breakdowns and conflict resolution.

Courses:	Units
BUSE 119 Business Communications	3
BUSE 150 Human Relations in Business	3
COMS 103 Oral Communication	3
COMS 180 Intercultural Communications	3

Total Units = 12

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Achievement: Business Studies

Small Business Management Emphasis

Coursework in starting and managing a small business. This program is designed for persons planning to start, operate or work in a small business. The focus is on managerial, marketing, financial, legal, communication and practical day-by-day decision-making concerns in small business.

Courses Required for the Major	Units
Certificate of Performance, Management and Teambuilding	12
Certificate of Performance, Starting a Business	12
Certificate of Performance, Business Communications	12
BUSE 101 Business Mathematics	3
BUSE 140 Business Law and the Legal Environment	3
CBTE 180 Microsoft Office	3

Select 6 units from:

BUSE 245A Small Business Internship-Marketing	
BUSE 245B Small Business Internship-Operations	
BUSE 245C Small Business Internship-Accounting	
BUSE 245D Small Business Internship-Buying and Inventory	
BUSE 245E Small Business Internship-Marketing	
BUSE 245F Small Business Internship-Operations	
BUSE 245G Small Business Internship-Accounting	
BUSE 245H Small Business Internship-Buying and Inventory	
	6

Less courses already applied in one or more certificates or core (12)

Total Units = 39

NOTE: Some courses may be repeated in the certificates and/or core but only need to be taken once.

Associate in Science: Business Studies

Small Business Management Emphasis

Coursework in starting and managing a small business.

Courses Required for the Major	Units
BIOL 101 Issues in Environmental Biology	4
BUSE 101 Business Mathematics	3
BUSE 119 Business Communications	3

BUSE 140	Business Law and the Legal Environment	3
BUSE 150	Human Relations in Business	3
BUSE 155	Managing the Small Business	3
CBTE 180	Microsoft Office	3
CISC 181	Principles of Information Systems	4
COMS103	Oral Communication	3
COMS180	Intercultural Communication	3
ECON 120	Principles of Macroeconomics	3
ENGL 101	Reading and Composition	3
MARK 100	Principles of Marketing	3

Complete six through twelve units:

BUSE 245A	Small Business Internship - Marketing	3
BUSE 245B	Small Business Internship - Operations	3
BUSE 245C	Small Business Internship - Accounting	3
BUSE 245D	Small Business Internship - Buying and Inventory	3
BUSE 245E	Small Business Internship - Marketing	1
BUSE 245F	Small Business Internship - Operations	1
BUSE 245G	Small Business Internship - Accounting	1
BUSE 245H	Small Business Internship - Buying and Inventory	1

Complete six through twelve units:

BUSE 158A	Students in Free Enterprise - High School Projects	3
BUSE 277A	Service Learning - High School Projects	1-3
BUSE 158B	Students in Free Enterprise - Elementary and Junior High Projects	3
BUSE 277B	Service Learning - Elementary and Junior High School Projects	1-3
BUSE 158C	Students in Free Enterprise - Community Projects	3
BUSE 277C	Service Learning - Community	1-3
BUSE 158D	Students in Free Enterprise - On-Campus Educational Projects	3
BUSE 277D	Service Learning - on Campus	1-3

Complete the following:

BUSE 090A	Learning Skills	1.5
BUSE 090B	Work Success	1.5
BUSE 090C	Business Internship Seminars	1
BUSE 090D	Workplace Competencies	1.5

Total Units = 58.5-70.5

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of the catalog. Students who plan to transfer to a four-year college

or university should select the Business Studies San Diego State University Transfer option. **The associate degree requires a minimum of 60 units.**

Community Service

Coursework in community service

COURSEWORK IN COMMUNITY SERVICE REQUIREMENTS:
Core
Certificate of Performance (Some courses may be repeated in the certificates and/or core but only need to be taken once) Working Education Students in Free Enterprise Business Presentations
Other Requirements Biology 101 Business 101 Business 150 Business 155 Communication Studies 180 Marketing 100
Many general education and district requirements are already included in the degree requirement. For additional requirements for an AS degree, see page 73.

Certificate of Performance: Working Education*

This certificate is designed for persons who want actual job experience running a small business. Areas of specialization include marketing, operations, accounting, and buying and inventory.

Student Learning Outcomes

Students who complete the certificate will be able to:

- Students develop marketing strategies for an on-campus student run small business. City has two student run businesses-a la cart and the Business Resource Center.
- Students manage the operations and human resource functions of a student owned and operated small business. City has two student run businesses-a la cart and the Business Resource Center.

- Students develop practical accounting processes for owning and operating a small business. City has two student run businesses-a la cart and the Business Resource Center.
- Students purchase and control supplies and merchandise for a Student Business on campus.

Students purchase and control inventory for a small business. City has two student run businesses: a la cart and the Business Resource Center.

Courses: **Units**

Complete six through twelve units from:

BUSE 245A	Small Business Internship-Marketing
BUSE 245B	Small Business Internship-Operations
BUSE 245C	Small Business Internship-Accounting
BUSE 245D	Small Business Internship-Buying and Inventory
BUSE 245E	Small Business Internship-Marketing
BUSE 245F	Small Business Internship-Operations
BUSE 245G	Small Business Internship-Accounting
BUSE 245H	Small Business Internship-Buying and Inventory

6-12

Total Units = 6-12

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Students in Free Enterprise (SIFE)*

This certificate is designed for persons who want actual job experience in teamwork, leadership, and management. Areas of specialization include projects in the community, elementary and junior high, high school, and on-campus educational activities.

Student Learning Outcomes

Students who complete the certificate will be able to:

- Students will win at the regional competition and advance to the national competition.

Courses: **Units**

Complete six through twelve units from:

BUSE 158A	SIFE-High School Projects or
BUSE 277A	Service Learning-High School Projects
BUSE 158B	SIFE-Elementary & Junior High Projects

or

BUSE 277B	Service Learning-Elementary & Junior High School Projects
BUSE 158C	SIFE-Community Projects or
BUSE 277C	Service Learning-Community
BUSE 158D	SIFE-On-Campus Educational Projects
	or
BUSE 277D	Service Learning-on Campus

6-12

Total Units = 6-12

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Business Presentations*

This certificate is designed for persons who want to improve their verbal, written, and computer skills.

Student Learning Outcomes

Students who complete the certificate will be able to:

- Students analyze, organize, and compose various types of written and oral business communications.
- Students learn to choose a topic and specific purpose; outlining, listening, organizing a speech; delivery; small group communication; informative and persuasive speaking; speaker credibility; and effective use of language.
- Students learn how to use Microsoft Office Professional Suite and how to integrate data within and between word processing, spreadsheet, database, and presentations.

Courses: **Units**

BUSE 119	Business Communications	3
CBTE 180	Microsoft Office	3
COMS 103	Oral Communication	3

Total Units = 9

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Associate in Science: Business Studies

Small Business Management

Coursework in community service.

Courses Required for the Major		Units
Certificate of Performance, Working Education		6-12
Certificate of Performance, Students in Free Enterprise		6-12
Certificate of Performance, Business Presentations		9
Complete the Following Other Courses Required for the Major:		
BIOL 101	Issues in Environmental Biology	4
BUSE 101	Business Mathematics	3
BUSE 140	Business Law & the Legal Environment	3
BUSE 150	Human Relations in Business	3
BUSE 155	Managing the Small Business	3
CISC 181	Principles of Information Systems	4
COMS 180	Intercultural Communication	3
ECON 120	Principles of Macroeconomics	3
MARK 100	Principles of Marketing	3
Total Units = 50-62		

NOTE: Some courses may be repeated in the certificates and/or core but only need to be taken once.

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of the catalog. Students who plan to transfer to a four-year college or university should select the Business Studies San Diego State University Transfer option. **The associate degree requires a minimum of 60 units.**

Recommended electives: Business 100, 201.

Small Business Management

Coursework in financial services.

FINANCIAL SERVICES COURSEWORK REQUIREMENTS:
Core
Certificate of Performance (Some courses may be repeated in the certificates and/or core but only need to be taken once)
Job Skills
Small Business Bookkeeper (See page 158)

Other Requirements Biology 101 Business 101 Business 245C Communication Studies 180
Many general education and district requirements are already included in the degree requirement. For additional requirements for an AS degree, see page 73.

Certificate of Performance: Job Skills*

This certificate concentrates on developing and understanding skills necessary to secure and keep a job such as preparing for interviews and writing resumes. Learning techniques for time management and organization are also taught.

Student Learning Outcomes

Students who complete the certificate will be able to:

- CMC students will graduate from Garfield and transfer.

Courses:	Units
Select all BUSE 090 courses (5.5 units) OR 5 units in BUSE 277C (a repeatable course)	
BUSE 090A Learning Skills and	
BUSE 090B Work Success and	
BUSE 090C Business Internship Seminars and	
BUSE 090D Workplace Competencies	
	5.5
or	
BUSE 277C Service Learning - Community	5
Total Units = 5-5.5	

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Retail Management

The Western Association of Food Chains (WAFC) Retail Management program incorporates both educational knowledge and technical skills, and is structured to lead students to competence in several areas. This program provides a strong foundation for students intending to pursue communications, liberal arts, and other areas where general management competencies are important.

Retail Management

Coursework in retail management.

COURSEWORK IN RETAIL MANAGEMENT REQUIREMENTS:
Core
Certificate of Performance (Some courses may be repeated in the certificates and/or core but only need to be taken once) Retail Management Foundation Courses Retail Management Intermediate Courses Retail Management Advanced Courses
Other Requirements Biology 101 Communication Studies 180
Many general education and district requirements are already included in the degree requirement. For additional requirements for an AS degree, see page 73.

Certificate of Performance: Retail Management Foundation Courses*

This Certificate of Performance incorporates the foundation courses for The Western Association of Food Chains (WAFC) Retail Management Certificate of Achievement. Included are written and oral communication skills, basic business math and computer competencies.

Student Learning Outcomes

Students who complete the certificate will be able to:

- Students analyze, organize, and compose various types of written and oral business communications.
- Students learn the mathematics involved in payroll, buying and selling inventory, interest rates and loans, taxes, insurance, depreciation, and other business computations.
- Analyze and solve business problems using computers and software packages including data processing systems, decision support systems, and system analysis.
- Students choose a topic and specific purpose; outlining, listening, organizing a speech; delivery; small group communication; informative and persuasive speaking; speaker credibility; and effective use of language.

Courses:	Units
BUSE 119 Business Communications	3
BUSE 101 Business Mathematics	3
CISC 181 Principles of Information Systems	4
COMS 103 Oral Communication	3
Total Units = 13	

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Retail Management Intermediate Courses*

This Certificate of Performance incorporates the intermediate courses for the Western Association of Food Chains (WAFC) Retail Management Certificate of Achievement. Included are accounting, marketing, and supervision skills.

Student Learning Outcomes

Students who complete the certificate will be able to:

- Students learn to use accounting information and financial statements in making business decisions in the operation of a retail food business.
- Students develop marketing strategies including product planning, development, pricing, distribution, and promotion necessary to operate a retail food business.
- Students learn basic management skills necessary to manage a department in the retail food industry.

Courses:	Units
ACCT 116A Financial Accounting	4
MARK 100 Principles of Marketing	3
BUSE 100 Introduction to Business	3
Total Units = 10	

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Retail Management Advanced Courses*

This Certificate of Performance incorporates the advance courses for the Western Association of

Food Chains (WAFC) Retail Management Certificate of achievement. Included are team building and retailing skills.

Student Learning Outcomes

Students who complete the certificate will be able to:

- Students develop leadership, decision-making, communication, motivation, and personnel management skills and techniques necessary to own or operate a small business.
- Students develop marketing strategies including product planning, development, pricing, distribution, and promotion necessary to operate retail food business.
- Students develop effective interpersonal skills, strategies and practice in oral and written communication. Students also learn to pay particular attention to human perception, interpersonal dynamics, listening, conflict management, and verbal and nonverbal symbol systems.

Courses:	Units
BUSE 150 Human Relations in Business	3
COMS 135 Interpersonal Communication	3
MARK 110 Principles of Retailing	3
Total Units = 9	

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Achievement: Business Studies

Retail Management Emphasis

The Western Association of Food Chains (WAFC) Retail Management Certificate has been developed and agreed upon by a curriculum task force comprised of both college and retail food industry professionals.

Courses Required for the Major	Units
ACCT 116A Financial Accounting	4
BUSE 100 Introduction to Business	3
BUSE 101 Business Mathematics	3
BUSE 119 Business Communications	3
BUSE 150 Human Relations in Business	3
CISC 181 Principles of Information Systems	4
COMS 103 Oral Communication	3

COMS 135 Interpersonal Communication	3
MARK 100 Principles of Marketing	3
MARK 110 Principles of Retailing	3
Total Units = 32	

Associate in Science Degree: Business Studies

Coursework in retail management. The Western Association of Food Chains (WAFC) Retail Management coursework incorporates both educational knowledge and technical skills and is structured to lead students to competence in several areas. This coursework provides a strong foundation for students intending to pursue communications, liberal arts, and other areas where general management competencies are important.

Courses Required for the Major	Units
Business Studies Core Curriculum	16
Certificate of Performance, Retail Management Foundation Courses	13
Certificate of Performance, Retail Management Intermediate Courses	10
Certificate of Performance, Retail Management Advanced Courses	9

Additional course required for Retail Management AS Degree:

COMS 180 Intercultural Communication	3
BIOL 101 Issues in Environmental Biology	4
Less courses already applied in one or more certificates or core	(7)
Total Units = 48	

NOTE: Some courses may be repeated in the certificates and/or core but only need to be taken once.

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of the catalog. Students interested in careers as professional accountants should select the Business Studies San Diego State University Transfer Option. **The associate degree requires a minimum of 60 units.**

Real Estate

Description:

The real estate program is designed for those interested in careers in real estate or for professionals wishing to upgrade their skills. The program offers certificates for Real Estate Salesperson, Real Estate Broker, and Real Estate Appraisal, as well as an Associate in Science Degree in Real Estate. The

Certificate of Completion: Real Estate Salesperson provides students with the coursework required by the California Department of Real Estate (DRE) for qualification to take the real estate salesperson license examination. Completion of the Certificate of Achievement: Real Estate Broker and the Real Estate Associate in Science Degree provide coursework that meets the DRE's educational requirements for real estate broker licensure in California. Completion of the courses for the Certificate of Completion: Real Estate Appraisal fulfill the educational requirements of the Office of Real Estate Appraisers (OREA) for appraisal licensure.

See individual certificates and degrees for additional information.

Goals:

Give students greater choice of electives in the real estate business.

Emphasis:

Emphasis is placed on preparing students to become real estate brokers in California.

Career Options:

Real estate sales and appraisal; Real estate broker.

Certificate of Performance: Real Estate Salesperson*

This certificate is designed for students interested in exploring a career in real estate sales. Real Estate 101, Real Estate 120, and one additional course from the elective list are required to take the Real Estate Salesperson's License Examination. For questions about DRE licensure requirements, contact the DRE at 619-525-4192 or www.dre.ca.gov.

Student Learning Outcomes

Students who complete the certificate will be able to:

- Students analyze the fundamentals of the economics of land ownership and use and the responsibility of broker, owner and purchaser; terminology and definitions and the varied vocational opportunities in the field.
- Students learn the day-to-day operations in a real estate office including listings, valuations, prospecting, selling, financing, exchanges, taxation and specialized brokerage operations.

Courses:		Units
REAL 101	Real Estate Principles	3
REAL 120	Real Estate Practice	3

Select three to four units from the following:

ACCT 102	Basic Accounting	3
ACCT 116A	Financial Accounting	4
BUSE 140	Business Law & the Legal Environment	3
ESCR 101	Escrow Procedures - Beginning	3
ESCR 111	Escrow Procedures - Advanced	3
REAL 105	Legal Aspects of Real Estate I	3
REAL 110	Principles of Real Estate Appraisal I	3
REAL 115	Real Estate Finance I	3
REAL 125	Real Estate Economics	3
REAL 130	Real Property Management	3
REAL 151	Real Estate Computer Applications	3
REAL 166	Common Interest Development	3
BANK 102	Mortgage Brokerage and Banking	4

Total Units = 9-10

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Real Estate Appraisal*

This certificate is designed for students interested in careers in real estate appraisal. All of the courses in this Certificate of Performance have been approved by the Office of Real Estate Appraisers (OREA) as applying toward completion of acceptable education for the following appraisal licenses: Trainee License (completion of 90 hours of acceptable education related to real estate appraisal, which must include 15 hours of instruction on the Uniform Standards of Professional Appraisal Practice (USPAP); Residential License (completion of at least 90 hours of acceptable education relating to real estate appraisal, which must include 15 hours of instruction on USPAP); Certified Residential (completion of at least 120 hours of acceptable education relating to real estate appraisal, which must include 15 hours of instruction on USPAP); Certified General (completion of at least 180 hours of acceptable education relating to real estate appraisal, which must include 15 hours of USPAP). For questions about OREA's licensure requirements, contact the OREA office in Sacramento at (916) 552-9000 or www.orea.ca.gov.

Note: Additional OREA education requirements for appraisal licenses are in effect as of January 1, 2008.

Student Learning Outcomes

Students who complete the certificate will be able to:

- Students analyze the fundamentals of the economics of land ownership and use and the responsibility of broker, owner and purchaser; terminology and definitions and the varied vocational opportunities in the field.
- Students learn real property concepts and characteristics, legal consideration, value influences, real estate finance, types of value, economic principles, real estate markets and analysis and ethics in appraisal practice.
- Students learn the Uniform Standards of Professional Appraisal Practice (USPAP), USPAP rules and standards, a general understanding of The Appraisal Foundation (TAF), the Appraisal Standards Board (ASB), the Appraisal Qualifications Board (AQB), and the Appraisal Subcommittee (ASC).
- Students learn appraisal principles and procedures for complex properties, emphasizing income producing properties; highest and best use market analysis, lease analysis, and depreciation.

Courses:		Units
REAL 101	Real Estate Principles	3
REAL 110	Principles of Real Estate Appraisal I	3
REAL 111	Introduction to Uniform Standards of Professional Appraisal Practice (USPAP)	1
REAL 140	Real Estate Appraisal II	3
Total Units = 10		

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Achievement: Real Estate Broker

The Real Estate Broker Certificate of Achievement meets the educational requirements for the Department of Real Estate (DRE) broker's licence in California. An applicant for the broker licensure examination must have completed eight college level courses in addition to fulfilling the experience requirement of two years full-time real estate sales work in the last five years or the equivalent outlined in the California DRE "Instructions to License Applicants." For questions about DRE licensure requirements contact the DRE at 619-525-4192 or at www.dre.ca.gov.

Student Learning Outcomes

Students who complete the certificate will be able to:

- Students analyze the fundamentals of the economics of land ownership and use and the responsibility of broker, owner and purchaser; terminology and definitions and the varied vocational opportunities in the field.
- Students learn practical application of the law to legal problems arising from real estate transactions, statutory enactment and case law, legal instruments, zoning ordinances, and city and county planning decisions.
- Students learn the Uniform Standards of Professional Appraisal Practice (USPAP), USPAP rules and standards, a general understanding of The Appraisal Foundation (TAF), the Appraisal Standards Board (ASB), the Appraisal Qualifications Board (AQB), and the Appraisal Subcommittee (ASC).
- Students learn types of financing sources; loans and loan processing; government loans, methods of financing residential properties; with an overview of financing business, income, commercial and industrial properties; and the property appraisal and taxation.
- Students learn the day-to-day operations in a real estate office including listings, valuations, prospecting, selling, financing, exchanges, taxation and specialized brokerage operations.
- Students evaluate the trends and factors that affect the value of real estate; the nature and classification of land economics; the development of property, construction and subdivision, economic values and real estate evaluation; real estate cycles and business fluctuations; residential market trends; real property and special purpose property trends.

Courses Required for the Major:		Units
REAL 101	Real Estate Principles	3
REAL 105	Legal Aspects of Real Estate I	3
REAL 110	Principles of Real Estate Appraisal I	3
REAL 115	Real Estate Finance I	3
REAL 120	Real Estate Practice	3
REAL 125	Real Estate Economics	3

Six to seven units to be selected from the following:

ACCT 102	Basic Accounting	3
ACCT 116A	Financial Accounting	4

BANK 102	Mortgage Brokerage and Banking	4
BUSE 140	Business Law and the Legal Environment	3
ESCR 101	Escrow Procedures - Beginning	3
REAL 130	Real Property Management	3
REAL 140	Real Estate Appraisal II	3
REAL 151	Real Estate Computer Applications	3
REAL 166	Common Interest Development	3

Total Units = 24-25

Associate in Science Degree: Real Estate

Courses Required for the Major		Units
BUSE 119	Business Communications or	
ENGL 101	Reading and Composition	3
BUSE 140	Business Law and the Legal Environment	3
CISC 181	Principles of Information Systems	4
ECON 120	Principles of Macroeconomics	3
PHIL 102B	Introduction To Philosophy: Values	3

Required Courses:

REAL 101	Real Estate Principles	3
REAL 105	Legal Aspects of Real Estate I	3
REAL 110	Principles of Real Estate Appraisal I	3
REAL 115	Real Estate Finance I	3
REAL 120	Real Estate Practice	3
REAL 125	Real Estate Economics	3

Six to seven units selected from the following:

ACCT 102	Basic Accounting	3
ACCT 116A	Financial Accounting	4
BANK 102	Mortgage Brokerage and Banking	4
ESCR 101	Escrow Procedures - Beginning	3
REAL 130	Real Property Management	3
REAL 140	Real Estate Appraisal II	3
REAL 151	Real Estate Computer Applications	3
REAL 166	Common Interest Development	3

Total Units = 40-41

Recommended electives: Business 101, Communication Studies 180, Biology 101.

Courses

Accounting (ACCT)

102 Basic Accounting

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 and M40.

This course is a study in the theory and practice of the accounting process. Emphasis is placed on accounting transactions and bookkeeping. Topics include business documents, journals and ledgers, opening, adjusting and closing entries, and payroll. This course is designed for students who want a practical approach to accounting. It can be used as preparation for the Certified Public Accountant (CPA) exam. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

116A Financial Accounting

**4 hours lecture, 4 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 and M40.

This introductory course shows students what financial accounting is, why it is important, and how it is used by investors and creditors to make decisions. It covers the accounting information system, and the recording and reporting of business transactions with a focus on the accounting cycle, the applications of generally accepted accounting principles, the classified financial statements, and statement analysis. This course also includes issues related to asset, liability, and equity valuation; revenue and expense recognition; cash flows; internal controls; and ethics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

116B Managerial Accounting

**4 hours lecture, 4 units
Grade Only**

Prerequisite: Accounting 116A with a grade of "C" or better, or equivalent.

This course is a study of how managers use accounting information in decision-making,

planning, directing operations, and controlling. The course focuses on cost terms and concepts, cost behavior, cost structure, and cost-volume-profit analysis. It examines profit planning, standard costs, operations and capital budgeting, cost control, and accounting for costs in manufacturing organizations. This course is for students who desire to look at accounting from a management perspective. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

120 Federal Income Tax

**3 hours lecture, 3 units
Grade Only**

Advisory: Completion of or concurrent enrollment in Accounting 116A with a grade of "C" or better, or equivalent.

This course introduces the student to tax concepts and tax laws that govern individuals who pay federal income taxes. Emphasis is placed on recognizing the social, economic, and political factors that Congress considers when they create tax laws. This course relates tax codes to the individual and identifies how tax planning skills can determine economic outcomes. Furthermore, it demonstrates and differentiates between tax avoidance and tax evasion. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

121 California Income Tax

**1 hour lecture, 1 unit
Grade Only**

Advisory: Concurrent enrollment in: Accounting 120 This course is a study of California personal income taxation and tax planning. Emphasis is placed on tax concepts and related social economic issues rather than tax return preparation. The course distinguishes between California and Federal Income Tax requirements. This course is intended for all students interested in California income tax. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

128A Small Business Accounting - Recordkeeping

**1.5 hours lecture, 1.5 units
Grade Only**

Advisory: Concurrent enrollment in Accounting 128B. *Limitation on Enrollment:* This course is not open to students with previous credit for Accounting 128. This course is an introduction to basic recordkeeping

required to adequately manage the accounting documentation necessary to run a small business. Emphasis is placed on the practical application of recording, summarizing, and reporting business transactions for internal as well as completing federal, state and local reporting requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

128B Small Business Accounting - Payroll

**1.5 hours lecture, 1.5 units
Grade Only**

Advisory: Concurrent enrollment in Accounting 128A.

Limitation on Enrollment: This course is not open to students with previous credit for Accounting 128. This course is an introduction to basic payroll requirements for a small business operating in California. Emphasis is placed on determining who is an employee and the practical application of preparing payroll, payroll deposits, quarterly and annual payroll reports for both California and the federal government. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

150 Computer Accounting Applications

**3 hours lecture, 3 units
Grade Only**

Advisory: Completion of or concurrent enrollment in Accounting 116A with a grade of "C" or better, or equivalent.

This course illustrates to the student how to use accounting computer programs in a commercial business enterprise. As a basis for instruction, it demonstrates the use of QuickBooks Pro accounting software on a PC. The full accounting cycle and payroll is evaluated within a typical business environment. Business transactions are identified, labeled, recorded, and processed for both service and merchandise businesses. Financial statements are constructed, evaluated, and reviewed for accuracy and completeness. The main objective is to provide the student with a complete guide to creating and maintaining a proper accounting system while using a popular accounting software program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience

(270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Banking (BANK)

102 Mortgage Brokerage and Banking 4 hours lecture, 4 units Grade Only

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5, and M40.

Limitation on Enrollment: This course is not open to students with previous credit for Banking and Finance 201.

This course is an introduction to the mortgage brokerage and banking industry. Students will learn the history, concepts, vocabulary, loan products and product flow of the mortgage banking industry, and the functions of the many players in a loan transaction. Course content will also include information on the state of the economy and how it affects real estate lending and the secondary markets. In addition, the legal and financial impacts of fraud within the industry will be discussed.

Throughout the course, emphasis will be placed on the importance of follow-through, quality customer service, and ethics as they relate to the mortgage brokerage and banking industry. Course content relates specifically to California regulations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

104 Principles of Loan Processing 4 hours lecture, 3 hours lab, 5 units Grade Only

Advisory: Completion of or concurrent enrollment in Banking and Finance 102 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Banking and Finance 202.

This practical, hands-on course teaches the basics of loan processing from application to submission; applicable laws; qualifying and preliminary tax analysis; ways to detect fraud; and how to obtain sufficient documentation to satisfy the underwriters. Additionally, students will learn the importance of setting time priorities, quality customer service, follow-through, and ethics as they relate to the

mortgage brokerage and mortgage banking industry. Course content relates specifically to California regulations. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

106 Loan Underwriting 5 hours lecture, 5 units Grade Only

Advisory: Completion of or concurrent enrollment in Banking and Finance 104 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Banking and Finance 205.

This course introduces students to FHA, VA, conventional, and other loan underwriting; identifies where underwriting fits into the mortgage process; outlines its components, risks, comparative state laws, rules, and regulations; covers appraisal review and analysis of key areas; and emphasizes both quality control and the fundamental importance of ethics in loan underwriting. Course content relates specifically to California regulations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

108 Principles of Loan Closing 3 hours lecture, 3 hours lab, 4 units Grade Only

Advisory: Banking and Finance 106 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Banking and Finance 206.

This course is designed to provide students with an analysis of loan documentation, including investor requirements, and the steps required to smoothly close a loan. Course content also includes escrow and its function; title insurance and its function; the interaction between escrow and title companies; loan guarantees and insurance; lock requirements and conditions; loan shipping; review of loan documents; and the fundamental importance of ethics as it pertains to loan closing. Course content relates specifically to California regulations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Business (BUSE)

90A Learning Skills

**1.5 hours lecture, 1.5 units
Grade Only**

This is a course designed to teach the skills necessary to become a successful learner, both in college and in the years beyond college. Emphasis is placed on time management, organizational skills, and basic thinking, reading and writing techniques. Students will be able to successfully learn, retain and communicate information. This course is intended for the beginning or returning certificate student planning to major in vocational education. (FT) Associate Degree Credit.

90B Work Success

**1.5 hours lecture, 1.5 units
Grade Only**

This is a course designed to teach the skills necessary to become a successful employee. Emphasis is placed on understanding and developing the skills necessary to secure and keep a job. Students will be able to look for employment, prepare for an interview, and model the qualities of a successful employee. This course is intended for the beginning or returning student planning to seek gainful employment. (FT) Associate Degree Credit.

90C Business Internship Seminars

**1 hour lecture, 1 unit
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

The purpose of this course is to introduce students to employment opportunities in the local job market. Each class includes five industry presentations that require students to research the particular business, write a practice resume for that business, and conduct a mock interview for that business. This course is intended for students majoring in the computer technology options of the Business Studies certificates of performance, certificates of achievement, and associate in science degrees. (FT) Associate Degree Credit only and not Transferable.

90D Workplace Competencies

**1.5 hours lecture, 1.5 units
Grade Only**

This course teaches the necessary SCANS (Secretary's Commission on Achieving Necessary Skills) skills for a student to become a successful participant in today's workforce. Emphasis is on time management, organizational skills, and basic thinking, reading, and writing techniques. Students are able to successfully select, learn, retain, analyze, and communicate information. This course is intended for the beginning or returning certificate student planning to major in vocational education. (FT) Associate Degree Credit only and not Transferable.

92 Introduction to Business Communications

**3 hours lecture, 3 units
Grade Only**

Advisory: English 43 with a grade of "C" or better, or equivalent, or Assessment Skill Level W4.

Limitation on Enrollment: This course is not open to students with credit for Business 119 or Office Information Systems 115.

Review of principles and mechanics of English grammar as specifically applied to the field of business. Presents business vocabulary, dictionary usage, spelling, sentence structure, punctuation, and the principles and techniques of business writing. Practice in writing various types of business letters, resumes, memos, and informal business reports is emphasized. Three units of credit at this level may be applied to the associate degree. Associate Degree Credit only and not Transferable

95 Small Business Alphabetic Filing

**.75 hour lecture, 2.25 hours lab, 1.5 units
Grade Only**

This course offers instruction in the association of Records Managers and Administrators (ARMA) alphabetic filing rules and techniques. These rules are widely used in business to create and maintain files. Instruction is activity oriented, including the use of a microcomputer software package to learn basic filing skills. (FT) Associate Degree Credit only and not Transferable.

100 Introduction to Business

**3 hours lecture, 3 units
Grade Only**

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4; or Business 92 with a grade of

“C” or better, or equivalent.

This introductory course for both business and non-business majors provides a broad understanding of the business community. Topics include business functions and terminology, occupational choices, and economic role. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

101 Business Mathematics

**3 hours lecture, 3 units
Grade Only**

Advisory: English 42 and English 43, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R4 and W4.

This course provides a comprehensive study of business mathematics and reviews basic mathematics, such as decimals, fractions, and percentages. Topics include bank services, payroll, the mathematics of buying and selling, interest and loans, taxes, insurance, depreciation, and other business computations. This course is intended for students majoring in business or others interested in a business setting such as managers, supervisors, and work team members. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

113 International Finance

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 or English 49 with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 or W5; or Business 92 with a grade of “C” or better, or equivalent.

This course introduces students to the fundamentals of international finance. Emphasis is placed on an understanding of the international monetary system, balance of payments analysis, foreign exchange markets, global banking, international cash management and budgeting, and international investment management and evaluation. This course is intended for the student planning to prepare for entry-level employment in international banking, brokerage houses, or financial exchanges. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

119 Business Communications

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a

grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; or Business 92 with a grade of “C” or better, or equivalent.

This course introduces the principles of effective business communications. Topics include the development, analysis, organization, and composition of various types of written and oral business communications. Students develop clear, concise, and persuasive letters, memoranda, and reports. This course is intended for students majoring in business and for others working in a business environment. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

140 Business Law and the Legal Environment

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; or Business 92 with a grade of “C” or better, or equivalent.

This course introduces students to the legal system, the laws that govern business in America, and the principles underlying fundamental legal concepts. Topics include judicial and administrative systems, ethics, contracts, torts, bankruptcy, agency, business organizations, security regulations, regulation of property, and protection of intellectual property interest. This course is intended for students majoring in business and for others interested in business law. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

150 Human Relations in Business

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course introduces students to human behavior as it relates to business. Topics include leadership, communication, status, decision making, motivation, and personnel problems. This course is intended for students majoring in business and others interested in a business setting such as managers, supervisors, and work team members. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

155 Managing the Small Business**3 hours lecture, 3 units****Grade Only**

Advisory: English 48 and English 49 and Mathematics 38, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 and M30; Business 101 with a grade of "C" or better, or equivalent. This course is a study of the elements involved in successfully operating a small business. Key issues include human resource management, marketing for small business, and legal issues. This course is intended for the student who plans to major in Business Studies or Business Management. This course is also intended for students from any discipline who are interested in owning or operating a small business. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

157 Starting a Small Business**3 hours lecture, 3 units****Grade Only**

Advisory: English 48 and English 49 and Mathematics 38, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 and M30; Business 101 with a grade of "C" or better, or equivalent. This course is a study of the skills required for writing an effective business plan. Emphasis is placed on creating a business plan that identifies key decisions for the entrepreneur, including, financing, marketing, and determining the business location. This course is designed for students planning to major in Business Studies and/or planning on starting their own business. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

158A Students in Free Enterprise - High School Projects**9 hours lab, 3 units****Grade Only**

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4. In this course students develop and implement projects to help them learn and teach free enterprise to high school students. Projects can include collaboration with high school classes, free enterprise educational projects for high school students, mentoring, and shadowing. Students gain hands-on experience in project planning, development, implementation and evaluation. This course is intended for the student who plans

to major in Entrepreneurial and Community Service. It is also recommended for students from any discipline who are interested in project development, the development of teaching skills, or the enhancement of communication and planning skills. Course segments may be taken in any order. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

158B Students in Free Enterprise - Elementary and Junior High Projects**9 hours lab, 3 units****Grade Only**

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4. In this course students develop and implement projects to help them learn and teach free enterprise to elementary and junior high school students. Projects can include interactive lessons in small business and the free enterprise system and creating curriculum materials to help young children learn about free enterprise. Students gain hands-on experience in project planning, development, implementation and evaluation. This course is intended for the student who plans to major in Entrepreneurial and Community Service. It is also recommended for students from any discipline who are interested in project development, the development of teaching skills, or the enhancement of communication and planning skills. Course segments may be taken in any order. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

158C Students in Free Enterprise - Community Projects**9 hours lab, 3 units****Grade Only**

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4. In this course students develop and implement projects to help them learn and teach free enterprise in the community. Projects can include working with community organizations in projects such as trade shows, presentations, and entrepreneurial ventures designed to increase knowledge of free enterprise. Students gain hands-on experience in project planning, development, implementation and evaluation. This course is intended for the student who plans to major in Entrepreneurial and

Community Service. It is also recommended for students from any discipline who are interested in project development, the development of teaching skills, or the enhancement of communication and planning skills. Course segments may be taken in any order. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

158D Students in Free Enterprise -On-Campus Educational Projects

**9 hours lab, 3 units
Grade Only**

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

In this course students develop and implement projects to help them learn and teach free enterprise on the San Diego City College campus. Projects will include operating the Small Business Resource Center, planning small business workshops, and other projects designed to increase knowledge of free enterprise on campus. Students gain hands-on experience in project planning, development, implementation and evaluation. This course is intended for the student who plans to major in Entrepreneurial and Community Service. It is also recommended for students from any discipline who are interested in project development, the development of teaching skills, or the enhancement of communication and planning skills. Course segments may be taken in any order. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

245A Small Business Internship - Marketing

**9 hours lab, 3 units
Grade Only**

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

Limitation on Enrollment: This course is not open to students with credit for Business 245 and/or 275. Business 245A, B, C, and D combined may be taken a total of four times.

This course provides theory and practical experience in marketing a small business. Students are responsible for the marketing function for the Student Business on campus. Classroom time provides marketing theory and an opportunity to evaluate and enhance skills learned. Through these experiences, students will develop more professional marketing skills for use in operating

a small business. In each segment of this course, students gain experience in a separate business function. This course is intended for the student who plans to major in Small Business Management or Entrepreneurial and Community Service. It is also intended for students from any discipline who are interested in learning the marketing function of small business. Course segments may be taken in any order. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

245B Small Business Internship - Operations

**9 hours lab, 3 units
Grade Only**

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

Limitation on Enrollment: This course is not open to students with credit for Business 245 and/or 275. Business 245A, B, C, and D combined may be taken a total of four times.

This course provides theory and practical experience in the operations and human resource functions of a small business. Students are responsible for operations and human resources of the Student Business on campus. Classroom time provides management theory and an opportunity to evaluate and enhance skills learned. Through these experiences, students will develop more professional management skills for use in operating a small business. In each segment of this course, students gain experience in a separate business function. This course is intended for the student who plans to major in Small Business Management or Entrepreneurial and Community Service. It is also intended for students from any discipline who are interested in learning the operations functions of small business. Course segments may be taken in any order. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

245C Small Business Internship - Accounting

**9 hours lab, 3 units
Grade Only**

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

Limitation on Enrollment: This course is not open to students with credit for Business 245 and/or 275. Business 245A, B, C, and D combined may be taken a total of four times.

This course provides theory and practical experience in accounting for a small business. Students are responsible for accounting for the Student Business on campus. Classroom time provides accounting theory and an opportunity to evaluate and enhance skills learned. Through these experiences, students will develop more professional accounting skills for use in operating a small business. In each segment of this course, students gain experience in a separate business function. This course is intended for the student who plans to major in Small Business Management, Entrepreneurial and Community Service, or Small Business Accounting. It is also intended for students from any discipline who are interested in learning the accounting functions of small business. Course segments may be taken in any order. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

245D Small Business Internship - Buying and Inventory

**9 hours lab, 3 units
Grade Only**

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

Limitation on Enrollment: This course is not open to students with credit for Business 245 and/or 275. Business 245A, B, C, and D combined may be taken a total of four times.

This course provides theory and practical experience in purchasing and inventory control for a small business. Students are responsible for purchasing supplies and inventory for the Student Business on campus. Classroom time provides theory in purchasing and inventory control and an opportunity to evaluate and enhance skills learned. Through these experiences, students will develop more professional skills for use in purchasing for a small business. In each segment of this course, students gain experience in a separate business function. This course is intended for the student who plans to major in Small Business Management or Entrepreneurial and Community Service. It is also intended for students from any discipline who are interested in learning the buying and inventory functions of small business. Segments may be taken in any order. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

245E Small Business Internship - Marketing **3 hours lab, 1 unit Grade Only**

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

This course provides theory and practical experience in marketing a small business. Students are responsible for the marketing function for a Student Business on campus. Classroom time provides marketing theory and an opportunity to evaluate and enhance skills learned. Through these experiences, students will develop more professional marketing skills for use in operating a small business. In each segment of this course, students gain experience in a separate business function. This course is intended for the student who plans to major in Business Studies - Computer Technology option. It is also intended for students from any discipline who are interested in learning the marketing function of a small business in the computer technology area. Course segments may be taken in any order. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

245F Small Business Internship - Operations **3 hours lab, 1 unit Grade Only**

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

This course provides theory and practical experience in the operations and human resource functions of a small business. Students are responsible for operations and human resources of the Student Business on campus. Classroom time provides management theory and an opportunity to evaluate and enhance skills learned. Through these experiences, students will develop more professional management skills for use in operating a small business. In each segment of this course, students gain experience in a separate business function. This course is intended for the student who plans to major in Business Studies - Computer Technology option. It is also intended for students from any discipline who are interested in learning the operations function of a small business in the computer technology area. Course segments may be taken in any order. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

245G Small Business Internship - Accounting
3 hours lab, 1 unit
Grade Only

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

This course provides theory and practical experience in accounting for a small business. Students are responsible for accounting for the Student Business on campus. Classroom time provides accounting theory and an opportunity to evaluate and enhance skills learned. Through these experiences, students will develop more professional accounting skills for use in operating a small business. In each segment of this course, students gain experience in a separate business function. This course is intended for the student who plans to major in Business Studies - Computer Technology option. It is also intended for students from any discipline who are interested in learning the accounting function of a small business in the computer technology area. Course segments may be taken in any order. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

245H Small Business Internship - Buying and Inventory

3 hours lab, 1 unit
Grade Only

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

This course provides theory and practical experience in purchasing and inventory control for a small business. Students are responsible for purchasing supplies and inventory for the Student Business on campus. Classroom time provides theory in purchasing and inventory control and an opportunity to evaluate and enhance skills learned. Through these experiences, students will develop more professional skills for use in purchasing for a small business. In each segment of this course, students gain experience in a separate business function. This course is intended for the student who plans to major in Business Studies - Computer Technology option. It is also intended for students from any discipline who are interested in learning the purchasing function of a small business in the computer technology area. Course segments may be taken in any order. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

290 Independent Study
Hours by Arrangement, 1-4 units
Grade Only

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

For advanced students in business who wish to pursue special problems and projects relating to their particular subject area. The student meets with the instructor at specific intervals and is expected to do primary research, analyze problems and submit reports. This course may be taken four times with different content for a maximum of six units. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Consumer Studies (CONF)

110 Personal Financial Management
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 and M20.

This course explores theories and techniques of managing personal income, with an emphasis on financial goal setting, culminating in the development of a personal financial plan. It includes practical methods of gaining maximum advantages from income through efficient spending, effective use of credit, savings, budgeting, insurance, and investment. Stock portfolios and retirement and estate planning are discussed. This is a required course for a Certificate of Performance in Skills for Success and Certificate of Achievement and/or Associate Degree in Consumer Resource Management. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Economics (ECON)

120 Principles of Macroeconomics

3 hours lecture, 3 units
Grade Only

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent or Assessment Skill Level M50 or higher, or equivalent, or math assessment that verifies Intermediate Algebra competency, or any college level Intermediate Algebra course or higher completed with a grade of "C" or better.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

This course is an introduction to aggregate economic analysis. Topics include market systems, aggregate measures of economic activity, macroeconomic equilibrium, money and financial institutions, monetary and fiscal policy, international economics and economic growth. This course is intended for business majors and all students interested in macroeconomics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

121 Principles of Microeconomics

3 hours lecture, 3 units
Grade Only

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent or Assessment Skill Level M50 or higher, or equivalent, or math assessment that verifies Intermediate Algebra competency, or any college level Intermediate Algebra course or higher completed with a grade of "C" or better.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

This course is an introduction to economic analysis of specific decision-making sectors in the economy (micro analysis). Sectors include households, firms and government. Topics covered include productivity and costs for individual firms, industry types, the labor market, anti-trust issues, income distribution, and environmental externalities. This course is intended for business majors and all students interested in microeconomics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Escrow (ESCR)

101 Escrow Procedures — Beginning

3 hours lecture, 3 units
Grade Only

This course covers methods and techniques of escrow procedure for various types of real estate transactions, including the legal and ethical responsibilities of persons engaged in escrow work. Some of the topics included are types of escrow, preparation of documents, terminology, phraseology, title and escrow procedures, and the method of adjusting taxes, rents, and other charges. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

111 Escrow Procedures — Advanced

3 hours lecture, 3 units
Grade Only

This course covers a study of exchanges, loan escrow, sales of trust deeds and notes, consummation of land contracts and leasehold escrows. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Marketing (MARK)

100 Principles of Marketing

**3 hours lecture, 3 units
Grade Only**

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

This course is an overview of the foundations, principles, processes, and goals of marketing. Topics include ethics and social responsibility, global marketing and world trade, corporate marketing and strategies. Marketing strategies include product planning, development, pricing, distribution, and promotion. This course is intended for students majoring in business or others interested in a business setting such as managers and supervisors. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Real Estate (REAL)

101 Real Estate Principles

**3 hours lecture, 3 units
Grade Only**

This course covers the fundamentals of the economics of land ownership and use and the responsibility of broker, owner and purchaser; terminology and definitions and the varied vocational opportunities in the general field of real estate are also covered. Completion of this course is required prior to taking the exam for the California Real Estate Salesperson's License. This course also applies as an elective toward the State's educational requirements for the broker's examination. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

105 Legal Aspects of Real Estate I

**3 hours lecture, 3 units
Grade Only**

This course is a study of California Real Estate law. Emphasis is placed on the practical application of the law to legal problems arising from real estate transactions, statutory enactment and case law, legal instruments, zoning ordinances, and city and county planning decisions. This course applies toward the State's educational requirements for the broker's examination and as an elective for the salesperson's license. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

110 Principles of Real Estate Appraisal I

**3 hours lecture, 3 units
Grade Only**

This course is a study of basic appraisal principles, market analysis and highest and best use. Emphasis is placed on providing students with an overview of real property concepts and characteristics, legal consideration, value influences, real estate finance, types of value, economic principles, real estate markets and analysis, and ethics in appraisal practice. Course content also includes the tools needed to properly collect and analyze market data including market segmentation and disaggregation, supply side analysis, demand analysis and highest and best use. This course applies toward the new 2008 basic educational requirements of the Office of Real Estate Appraisers for the California Real Estate Appraisal license and is structured to comply with the 2008 curriculum requirements of the Appraisal Qualifications Board. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

111 Introduction to Uniform Standards of Professional Appraisal Practice (USPAP)

**1 hour lecture, 1 unit
Grade Only**

Advisory: Real Estate 110 with a grade of "C" or better, or equivalent.

This course is a practical study of the appraisal profession and its application of the Uniform Standards of Professional Appraisal Practice (USPAP). Course content includes a history of the appraisal industry, USPAP rules and standards, and an overview of The Appraisal Foundation (TAF), the Appraisal Standards Board (ASB), the Appraiser Qualifications Board (AQB) and the Appraisal Subcommittee (ASC). This course satisfies the AQB and the California Office of Real Estate Appraisers

(OREA) 15-hour USPAP requirements as part of the 150 hours of required education for the Appraiser Trainee License. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

115 Real Estate Finance I

**3 hours lecture, 3 units
Grade Only**

This course analyzes the financing of real estate. Topics will include types of financing sources; loans and loan processing; governmental loans, methods of financing residential properties; with an overview of financing business, income, commercial and industrial properties; and property appraisal and taxation. This course applies toward the State's educational requirements for the broker's examination and as an elective for the salesperson's license. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

120 Real Estate Practice

**3 hours lecture, 3 units
Grade Only**

This course examines the principles of real estate practice as they pertain to day-to-day operations in a real estate office. Topics include listings, valuations, prospecting, selling, financing, exchanges, taxation and specialized brokerage operations. Professional and ethical activities are stressed. This course applies toward the State's educational requirements for the broker's examination and as an elective for the salesperson's license. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

125 Real Estate Economics

**3 hours lecture, 3 units
Grade Only**

This course deals with trends and factors that affect the value of real estate; the nature and classification of land economics; the development of property, construction and subdivision, economic values and real estate evaluation; real estate cycles and business fluctuations; residential market trends; real property and special purpose property trends. This course applies toward the State's educational requirements for the broker's examination and as an elective for the salesperson's license. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

130 Real Property Management

**3 hours lecture, 3 units
Grade Only**

This course is a practical approach to the principles and practices of managing income properties, including leasing, tenant relations, collections, and rent schedules; budgets and purchasing; market economics; landlord-tenant law, evictions, prohibited discrimination, property maintenance; taxation; and record keeping, and marketing. This course applies as an elective toward the State's educational requirements for the broker's examination and for the salesperson's license. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

140 Real Estate Appraisal II

**3 hours lecture, 3 units
Grade Only**

This course examines appraisal principles and procedures for complex properties, emphasizing income producing properties. Highest and best use, market analysis, lease analysis, and depreciation estimates are also considered. This course applies as an elective toward the State's educational requirements for the broker's examination and toward the educational requirements for various appraisal licenses issued by the State's Office of Real Estate Appraisers (OREA). (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

151 Real Estate Computer Applications

**3 hours lecture, 3 units
Grade Only**

This is an introductory course covering basic computer hardware, functions, software, and Internet resources available to enhance productivity for Real Estate Professionals. The course introduces students to a myriad of general and commercial software products designed or adapted for use in the Real Estate Industry. Emphasis is placed on Internet tools and resources for the California Real Estate Salesperson and Broker. This course applies toward the State's educational requirements for the California Real Estate Salesperson and Real Estate Broker. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

166 Common Interest Development
3 hours lecture, 3 units
Grade Only

This course is a study of Common Interest Developments (CID) and the management of related Homeowner's Associations (HOA). Emphasis is placed on providing students with up-to-date management procedures and the application of California law where appropriate. This course is designed for students pursuing a career in Real Estate and/or those interested in CIDs. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Supervision (SUPR)

101 Introduction to Supervision
3 hours lecture, 3 units
Grade Only

Advisory: English 48 or English 49 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 or W5; or Business 92 with a grade of "C" or better, or equivalent.

This course introduces students to the fundamentals of management, the functions and concepts of supervision, and the role of the supervisor in the organization. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

115 Management and Organization for Supervisors

3 hours lecture, 3 units
Grade Only

Advisory: English 48 or English 49 or Business 92 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 or W5.

An analysis of the managerial functions of organizing, staffing, directing, planning, controlling, and the principles pertaining to those functions (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

170 Supervisor/Employee Communications
3 hours lecture, 3 units
Grade Only

Advisory: English 48 or English 49 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 or W5; or Business 92 with a grade of "C" or better, or equivalent.

This course is designed to develop communications skills for supervisors, consistent with good human relations principles. The emphasis will be on listening and speaking in a variety of on-the-job situations such as one-to one, small group, and large group communications. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Chemistry

See "Physical and Earth Sciences" on page 387.

Chicano Studies

Award Type	Units
Associate in Arts Degree: Chicano Studies	23*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

The Chicano Studies program provides an interdisciplinary approach to the interaction of the Chicano with other cultures in a bilingual, multicultural setting. It helps to prepare students for transfer to a four-year university major in Mexican American, Ethnic or Intercultural Studies and for other professional fields including the social sciences, humanities, law, law enforcement, border and immigration occupations, international business, social work, public administration and teaching. Chicano Studies courses enhance understanding of one of the country's fastest growing population groups.

Program Emphasis

Chicano Studies courses are taught in English and the curriculum is designed to meet District and baccalaureate general education and multicultural course requirements. The program offers courses in anthropology, bilingual studies, Chicano culture, history of Mexico and the United States, language and literature, psychology and sociology from a Chicano perspective.

Faculty	Office	Telephone
Enrique Davalos	R1-23	619-388-3634
Justin Akers	R1-21	619-388-3181

Career Options

Most careers related to Chicano or Mexican American Studies require education beyond the associate degree. A list of sample careers includes: anthropologist, immigration officer, peace officer, counselor, international business person, historian, health worker, social worker, translator, and travel and tourism advisor.

Student Learning Outcomes

Upon active engagement in course activities and processes the successful student will be able to:

- Attend educational, cultural, or political activities related to the Chicano/a Latino/a community's social issues.
- Express in a written, oral or artistic way what the cultural roots of the Mexican and Mexican-American experience are.
- Express in a written, oral or artistic way some of the major obstacles that the Indigenous cultures of Mexico have faced since having contact with European cultures.
- Express in a written, oral or artistic way some of the contributions that women have made to the development of the Mexican and Mexican-American experience.

Academic Programs

The associate degree in Chicano Studies requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. The associate degree requires a minimum of 60 units.

Associate in Arts Degree: Chicano Studies

Courses Required for the Major:		Units
CHIC 110A	Introduction to Chicano Studies	3
CHIC 110B	Introduction to Chicano Studies	3
CHIC 130	Mexican Literature in Translation or	
CHIC 135	Chicana/o Literature or	
CHIC 138	Literature of La Raza in Latin America Translation	3
CHIC 141A	U.S. History from a Chicano Perspective	3
CHIC 141B	U.S. History from a Chicano Perspective	3
CHIC 210	Chicano Culture	3

Select one of the following courses:

CHIC 203	Introductory Spanish for Spanish Speakers or	
CHIC 204	Intermediate Spanish for Spanish Speakers or	
SPAN 201	Third Course in Spanish or	
SPAN 202	Fourth Course in Spanish	5

Total Units = 23

Recommended electives: Chicano Studies 150, 201, 290, 296.

Transfer Information

Common university majors related to the field of Chicano Studies include: Chicana-Chicano Studies,

Ethnic Studies, Latin American Studies, Mexican-American Studies, Raza Studies.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Chicano Studies (CHIC)

110A Introduction to Chicano Studies

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is an introductory survey of the field of Chicano Studies and the factors that influence the Chicano culture. Emphasis is placed on the historical development of the Chicano people including their Mesoamerican roots, cultural identification, political activities, and their contemporary roles and influence in United States culture, society and economy. This course is designed for students majoring in Chicano Studies and/or Social Sciences and can be used for transfer General Education. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

110B Introduction to Chicano Studies

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is a continuation of Chicano Studies 110A. Emphasis is placed on the historical

development of the Chicano people including their connections to the indigenous people of the Southwestern and Western United States, their historical and contemporary experiences as residents of border of territories and as transnational actors as well as their contemporary roles and influence in United States culture, society and economy. This course is designed for students majoring in Chicano Studies and/or Social Sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

130 Mexican Literature in Translation

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

A survey of Mexican literature in translation, introducing students to authors of the novel, short story poem, essay, and folklore. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

135 Chicana/o Literature

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49 each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5 .

This course is a survey of Chicano and Chicana culture which examines language, literature and oral expression in historical and thematic context. Emphasis is placed on understanding and interpreting the cultural, ethnic, social and political dynamics that inform and influence literary, theoretical, performance and visual texts as they articulate the Chicano/a perspective. This course is designed for Chicano Studies majors and anyone interested in literature. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

138 Literature of La Raza in Latin America in Translation

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

A survey of the novels, short stories, poetry and major Latin American writers, from the end of the Colonial Period to the present. Emphasis will be

given to major contemporary authors reflecting the universality of Mestizo (Raza) masterpieces. This course is for all students with an interest in the study of Latin American literature. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

141A United States History from a Chicano Perspective

**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is a survey of early American history from the Mexican/Chicano perspective. It covers the period of discovery to the period of Reconstruction with emphasis on the evolution, influence, and experience of the Chicano. It includes their contributions to the political, social, economic, and cultural development of the United States. This general education course would be of interest to students studying history, ethnic studies, or other social sciences. This course partially satisfies the American Institutions requirement for the associate degree and for transfer to CSU. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: History (HIST) 109-110, 141-142, 150-151, Black Studies (BLAS) 140A-140B, and/or Chicano Studies (CHIC) 141A-141B combined: maximum credit, one series.

141B United States History from a Chicano Perspective

**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

This is a survey course in American history that covers the period of transition of the southwest from its Spanish-Mexican roots to its American acquisition in 1848. The course traces 19th century developments, slavery in the former Mexican territories, Native Americans, immigration and repatriation and includes constitutional development and government in California. This is a survey course recommended for those students who intend to transfer to a four-year college or university. The complete six-unit sequence, Chicano Studies 141A and 141B, satisfies the graduation and degree requirements in American Institutions and California State Government. (FT) Associate Degree

Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: History (HIST) 109-110, 141-142, 150-151, Black Studies (BLAS) 140A-140B, and/or Chicano Studies (CHIC) 141A-141B combined: maximum credit, one series.

150 History of Mexico

**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This is a survey of Mexican history from the earliest pre-Columbian times to the present. Special emphasis is given to major historical developments from the time of the Spanish Conquest to the Revolution of 1910. In this course special consideration is given to the economic, political, social, and cultural factors which have shaped modern Mexico. This course prepares students for careers dealing with Mexico and/or Mexican culture. This course satisfies an elective requirement for the Associate Degree in Chicano Studies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

170 La Chicana

**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6. This course is the study of the Chicana in American society in historical and sociological perspective. Emphasis is placed on Chicana feminist scholarship and cultural representations, border issues, resistance to patriarchy, and the search for power. This course is designed for all students interested in Chicana and Chicano studies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

190 Chicano Images in Film

**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is a critical approach to cinematic images of Chicanos as depicted in selected films. Focus is placed on stereotypical and negative portrayals during early cinema with an examination of the more realistic and complex portraits of more recent times. Film genres such as early Hollywood features,

documentaries and the emerging “Chicano film” are examined. This course is designed for students interested in film studies with a special focus on the Chicano experience in film. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

201 Pre-Columbian Cultures of MesoAmerica
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is an examination of the archaeological, economic, social, political, cultural, and religious systems of MesoAmerica. This course satisfies an elective requirement for the Associate Degree in Chicano Studies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

203 Introductory Spanish for Spanish Speakers

5 hours lecture, 5 units
Letter Grade or Pass/No Pass Option

Advisory: English 42 and English 43, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R4 and W4.

A survey of Spanish grammar, understanding and speaking Spanish, with special emphasis on reading and writing Spanish. The Spanish of the Southwest will be studied as an effective and legitimate instrument of communication. Students will read community newspapers as well as Chicano and Mexican writers. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course Limitation: Chicano Studies (CHIC) 203, 204 and Spanish (SPAN) 201, 202 combined: maximum credit, one series.

204 Intermediate Spanish for Spanish Speakers

5 hours lecture, 5 units
Letter Grade or Pass/No Pass Option

Advisory: English 42 and English 43, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R4 and W4.

An advanced review of grammar. Conversational and written Spanish emphasized. Spanish and Chicano literary works will be selected to acquaint the student with the historical background, literature, and culture of the Spanish-speaking people. (FT) Associate Degree Credit & transfer to CSU and/or

private colleges and universities. UC Transfer Course Limitation: Chicano Studies (CHIC) 203, 204 and Spanish (SPAN) 201, 202 combined: maximum credit, one series.

210 Chicano Culture

3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is a study of the Indo-Hispano roots of Chicano culture in the United States. Emphasis is placed on the historical development of Chicano popular culture and its expression through music, art, radio, television, newspapers, literature and festivities in urban and rural contexts. This course is designed for students majoring in Chicano Studies and/or Humanities. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

290 Independent Study

Hours by Arrangement, 1-3 units
Letter Grade or Pass/No Pass Option

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

For students with advanced background in Chicano Studies who wish to study special problems or work on specialized projects. This course may be taken four times with different content for a maximum of six units. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Child Development

Award Type	Units
Certificate of Performance:	
Assistant Teacher	10-13
Family Child Care	9
Infant/Toddler Care	9
Residential Care Workers	12
School Age Child Care	12
Certificate of Achievement:	
Associate Teacher	18-19
Teacher	26-29
Master Teacher	35-39
Associate in Science Degree:	
Child Development	26-29*
Site Supervisor	35-38*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

Child Development offers programs for career and transfer students. Certificates of Performance, Certificates of Achievement and Associate Degree programs are available to students interested in a range of child development opportunities and in meeting the requirements for the State of California Child Development Permits and the California State Department of Social Services, Title 22, Community Care Licensing.

Program Emphasis

The Child Development program offers course work, training and supervised practicum experiences to meet state licensing requirements for working in centers, schools, child care homes and service related agencies. The skills and knowledge gained in beginning courses provide the framework and foundation for more specialized courses.

Faculty	Office	Telephone
Susan Fontana	Child Development Center F-Building	619-388-3205
Berta Harris	A-1-D	619-388-3877
Gloria Lyon	Child Development Center F-Building	619-388-3205 619-388-3648
Sue Martin	A-1-C	619-388-3237

Career Options

The San Diego Community College District offers certificates, degrees and transfer options in the field

of Child Development/Early Childhood Education. The Family Child Care Certificate offered at City and Miramar and the Home Day Care Certificate offered at Mesa provides skills and knowledge for child care in family settings. The Infant/Toddler Care Certificate of Performance offers skills for working with children aged birth to three years. The School Age Child Care Certificate of Performance offered at City provides training for working with school age children.

The Assistant Teacher Certificate of Performance prepares an individual to work in public and private child care settings. The Certificate of Achievement options, Associate Teacher, Teacher, and Master Teacher, prepare individuals for higher level instructional and service-oriented positions. The Assistant Teacher, Associate Teacher, Teacher, and Master Teacher certificates meet the requirements for the State of California Child Development Permits. The Child Development Associate in Science Degrees prepare for teacher, master teacher, director, and site supervisory positions.

Student Learning Outcomes

Students who complete the program will be able to:

- Interpret the processes of child growth and development.
- Examine practices that respect and support inclusion.
- Plan and demonstrate curriculum based on developmentally appropriate practices.
- Model ethical practices with children, families, colleagues and communities as stated in the NAEYC Code of Ethical Conduct.

Academic Programs

Certificates of Performance*

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Assistant Teacher*

This certificate prepares students to assist in the instruction of children under the supervision of an Associate Teacher or higher. Child Development courses must be completed with a grade of "C" or better.

Courses:	Units
CHIL 101 Human Growth and Development	3
CHIL 180 Nutrition, Health & Safety for Children	3

Select one course from:

CHIL 111 Curriculum: Music/Motor Skills	
CHIL 121 Creative Art	
CHIL 131 Curriculum: Language/Science	
CHIL 141 The Child, Family and Community	
	3

Select one course from:

CHIL 160 Observing and Understanding Children	
CHIL 161 Observations and Issues in Child Development	
CHIL 270 Work Experience	
CHIL 291, or 291A, or 291B, or 291C, or 291D, Child Development Center Practicum	
	1-4

Total Units = 10-13

Certificate of Performance: Family Child Care*

This certificate prepares students with basic training to care for children in a licensed home/family setting. Child Development courses must be completed with a grade of "C" or better.

Courses:	Units
CHIL 101 Human Growth and Development	3
CHIL 180 Nutrition, Health & Safety for Children	3

Select one course from:

CHIL 111 Curriculum: Music/Motor Skills	
CHIL 121 Creative Art	
CHIL 131 Curriculum: Language/Science	
CHIL 175 Infant-Toddler Growth and Development	
	3

Total Units = 9

Certificate of Performance: Infant/Toddler Care*

This certificate prepares students with basic training to work with children aged birth to three years in licensed home/family care and center programs. Child Development courses must be completed with a grade of "C" or better.

Courses:	Units
CHIL 101 Human Growth and Development	3
CHIL 175 Infant-Toddler Growth and Development	3

CHIL 176 Principles of Infant/Toddler Caregiving	3
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Total Units = 9

Certificate of Performance: Residential Care Workers*

This certificate is designed to meet the State requirements for positions in residential care programs.

Courses	Units
CHIL 101 Human Growth and Development	3
CHIL 141 The Child, Family and Community	3
CHIL 175 Infant-Toddler Growth and Development	3
CHIL 188 Violence in the Lives of Children and Families	3

Total Units = 12

Certificate of Performance: School Age Child Care*

This certificate prepares students for entry level positions as before- and after-school care providers, recreation leaders, and camp counselors. Child Development courses must be completed with a grade of "C" or better.

Courses:	Units
CHIL 101 Human Growth and Development	3
CHIL 152 School Age Program Planning	3

Select two courses from:

CHIL 185 Computer Usage with Young Children	
MATH 210A Concepts of Elementary School Mathematics I	
MUSI 110 Music for Elementary School Teachers	
PHYE 240 Physical Education in the Elementary Schools	
	6

Total Units = 12

For the Certificates of Performance listed above, one or more of the following courses is recommended to gain experience and credits required for higher level permits:

CHIL 160 Observing and Understanding Children	
CHIL 161 Observations and Issues in Child Development	
CHIL 270 Work Experience	
CHIL 291, or 291A, or 291B, or 291C, or 291D, Child Development Center Practicum	

Certificate of Achievement: Child Development

Associate Teacher

This certificate prepares students to provide instruction to children and supervise Assistant Teachers. Child Development courses must be completed with a grade of "C" or better.

Courses Required for the Major:		Units
CHIL 101	Human Growth and Development	3
CHIL 141	The Child, Family and Community	3
CHIL 180	Nutrition, Health & Safety for Children	3

Select two courses from:

CHIL 111	Curriculum: Music/Motor Skills	
CHIL 121	Creative Art	
CHIL 131	Curriculum: Language/Science	3,3

Select three or more units from:

CHIL 160	Observing and Understanding Children	
CHIL 161	Observations and Issues in Child Development	
CHIL 270	Work Experience	
CHIL 291, or 291A, or 291B, or 291C, or 291D,	Child Development Center Practicum	3-4

Total Units = 18-19

Certificate of Achievement: Child Development

Teacher

This certificate prepares students to provide instruction to children and supervise Assistant and Associate Teachers. Child Development courses must be completed with a grade of "C" or better.

Courses Required for the Major:		Units
CHIL 101	Human Growth and Development	3
CHIL 111	Curriculum: Music/Motor Skills	3
CHIL 121	Creative Art	3
CHIL 131	Curriculum: Language/Science	3
CHIL 141	The Child, Family and Community	3
CHIL 180	Nutrition, Health & Safety for Children	3
CHIL 151	Program Planning	3

and concurrent enrollment in:

CHIL 270	Work Experience or	
CHIL 275	Supervised Field Study	2-4

Select one of the following three options:

CHIL 160	Observing & Understanding Children and	
CHIL 161	Observation & Issues in Child Development or	
CHIL 165	Children with Special Needs or	
CHIL 175	Infant-Toddler Growth and Development	3-4

Total Units = 26-29

Certificate of Achievement Child Development

Master Teacher

This certificate prepares students to provide instruction to children and supervised Assistant/ Associate Teachers and Teachers. It further prepares the Master Teacher to coordinate curriculum and staff development. Child Development courses must be completed with a grade of "C" or better.

Courses Required for the Major:		Units
CHIL 101	Human Growth and Development	3
CHIL 111	Curriculum: Music/Motor Skills	3
CHIL 121	Creative Art	3
CHIL 131	Curriculum: Language/Science	3
CHIL 141	The Child, Family and Community	3
CHIL 151	Program Planning	3
CHIL 180	Nutrition, Health & Safety for Children	3

and

Select one of the following three options that is NOT part of your Specialization (see Specializations listed below) to complete the minimum 24 unit core requirement:

CHIL 160	Observing & Understanding Children and	
CHIL 161	Observation & Issues in Child Development or	
CHIL 165	Children with Special Needs or	
CHIL 175	Infant-Toddler Growth and Development	3-4
CHIL 215	Adult Supervision & Mentoring in Early Childhood Settings	3
CHIL 270	Work Experience, or	
CHIL 275	Supervised Field Study (with concurrent enrollment in CHIL 151, Program Planning)	2-4

and

Select one of the following Specializations for a total of six through seven units:

Guiding Young Children

CHIL 160	Observing & Understanding Children
CHIL 161	Observation & Issues in Child Development
CHIL 162	Observing and Guiding Child Behavior

Family Life

CHIL 160	Observing & Understanding Children
CHIL 161	Observation & Issues in Child Development
CHIL 188	Violence in the Lives of Children and Families

Special Needs

CHIL 165	Children with Special Needs
CHIL 166	Special Needs Curriculum

Infant/Toddler

CHIL 175	Infant-Toddler Growth and Development
CHIL 176	Principles of Infant/Toddler Caregiving

School Age

CHIL 152	School-Age Program Planning
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Select one course from:

CHIL 185	Computer Usage with Young Children
MATH 210A	Concepts of Elementary School Mathematics
MUSI 110	Music for the Elementary School Teachers
PHYE 240	Physical Education in the Elementary Schools

6-7

Total Units = 35-39

Associate in Science Degree: Child Development

This degree prepares students to provide instruction to children and supervise Assistant and Associate Teachers. Child Development courses must be completed with a grade of "C" or better. Additional general education and graduation requirements are listed in the Academic Requirements section of this catalog. The Associate Degree requires a minimum of 60 units.

Courses Required for the Major		Units
CHIL 101	Human Growth and Development	3
CHIL 111	Curriculum: Music/Motor Skills	3
CHIL 121	Creative Art	3
CHIL 131	Curriculum: Language/Science	3

CHIL 141	Child, Family and Community	3
CHIL 180	Nutrition, Health & Safety for Children	3
CHIL 151	Program Planning	3

and concurrent enrollment in:

CHIL 270	Work Experience	or
CHIL 275	Supervised Field Study	2-4

Select one of the following three options:

CHIL 160	Observing & Understanding Children	and
CHIL 161	Observation & Issues in Child Development	or
CHIL 165	Children with Special Needs	or
CHIL 175	Infant-Toddler Growth and Development	3-4

Total Units = 26-29

Associate in Science Degree: Child Development

Site Supervisor

This degree prepares students to supervise single site programs, provide instruction to children and coordinate curriculum and staff development. Child Development courses must be completed with a grade of "C" or better. Additional general education and graduation requirements are listed in the Academic Requirements section of this catalog. The Associate Degree requires a minimum of 60 units.

Courses Required for the Major		Units
CHIL 101	Human Growth and Development	3
CHIL 111	Curriculum: Music/Motor Skills	3
CHIL 121	Creative Art	3
CHIL 131	Curriculum: Language/Science	3
CHIL 141	Child, Family and Community	3
CHIL 151	Program Planning	3

and concurrent enrollment in:

CHIL 270	Work Experience,	or
CHIL 275	Supervised Field Study	2-4
CHIL 180	Nutrition, Health & Safety for Children	3
CHIL 202	Administration of Early Childhood Programs	3
CHIL 210	Supervision of Early Childhood Programs	3
CHIL 215	Adult Supervision and Mentoring in Early Childhood Settings	3

Select one of the following three options:

CHIL 160	Observing & Understanding Children	and
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CHIL 161	Observation & Issues in Child Development or	
CHIL 165	Children with Special Needs or	
CHIL 175	Infant-Toddler Growth and Development	
		3-4
Total Units = 35-38		

Recommended electives: (select from courses not already taken): Child Development 152, 160, 161, 162, 165, 166, 175, 176, 185, 188, 202, 210, 215, 270, 275, 290, 291, 291A, 291B, 291C, 291D.

Courses offered by San Diego Community College District that meet experience requirements for Certificates and Degrees:

CHIL 160	Observing & Understanding Children, 2 units (16 days)
CHIL 161	Observation & Issues in Child Development, 2 units (16 days)
CHIL 270	Work Experience, 1 unit (16 days)
CHIL 270	Work Experience, 2 unit (32 days)
CHIL 270	Work Experience, 3 unit (48 days)
CHIL 270	Work Experience, 4 unit (64 days)
CHIL 275	Supervised Field Study, 2 units (32 days)
CHIL 291	Child Development Practicum, 1 unit (16 days)
CHIL 291	Child Development Practicum, 2 unit (32 days)
CHIL 291A	Child Development Practicum, 1 unit (16 days)
CHIL 291B	Child Development Practicum, 1 unit (16 days)
CHIL 291C	Child Development Practicum, 1 unit (16 days)
CHIL 291D	Child Development Practicum, 1 unit (16 days)

Transfer Information

Common university majors related to the field of Child Development include:

Child Development, Family and Consumer Studies and Sciences, Gerontology, Human Development, and Liberal Studies.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may

be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Child Development (CHIL)

101 Human Growth and Development

3 hours lecture, 3 units

Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course examines the interrelationship among the physical, cognitive, and psychosocial growth and development of individuals from conception through adolescence. It emphasizes positive relationships with family members, peers, and other significant individuals. Topics include theories and philosophies of human development and cross-cultural patterns. Students observe children and educational programs. This course is a core requirement for the State of California Child Development Permit and the State of California Community Care Licensing, Title XXII. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Child Development (CHIL) 101 and 103 combined: maximum credit, one course.

111 Curriculum: Music/Motor Skills

3 hours lecture, 3 units

Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is a study of the development and significance of music and perceptual motor activities in child development from infancy through kindergarten. Emphasis is placed on basic teaching techniques and selecting suitable materials and equipment for various age and maturity levels among preschool children. This course is designed for students who have an interest in working with children ages 0 - 5 in settings such as preschools,

daycares etc. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

121 Creative Art

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course introduces the creative process and experience in early childhood education programs. Emphasis is placed on creative development, art curriculum activities, basic teaching skills, guidance techniques, equipment, and materials. Students select appropriate activities for a variety of age and maturity levels based on child development theories and concepts. This course is intended for students majoring in Child Development or others interested in the creative process in early childhood education. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

131 Curriculum: Language/Science

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Child Development 133 or 135.

This course is an introductory study of the function of language, math and science learning in early childhood educational programs. Emphasis is placed on the development of language and science curriculum activities, basic teaching skills, guidance techniques, equipment and materials. Students select appropriate activities for a variety of age groups and maturity levels based on child development theories and concepts. This course may be used for licensing, child development permits, transfer and general interest for working with children. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

133 Language and Literature

**3 hours lecture, 3 units
Grade Only**

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

Limitation on Enrollment: This course is not open to students with previous credit for Child Development 131.

This course introduces the function of language and literature in early childhood educational programs. It emphasizes the development of language and literature curriculum activities, basic teaching skills, guidance techniques, equipment and materials, and opportunities to assist learning among English Language Learners. Students select appropriate activities for a variety of age groups and maturity levels based on child development theories and concepts. This course may be used for licensing, child development permits, transfer, and general interest for working with children. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

135 Curriculum: Science and Math

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Child Development 131.

This course examines the development and significance of science and math concepts for young children. Emphasis is placed on the planning and implementation of developmentally appropriate science and math activities, basic teaching skills, guidance techniques, equipment and materials for various age and maturity levels. This course is designed for all students interested in working with children and may be used for licensing and child development permits. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

141 The Child, Family and Community

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is a study of the dynamics of human development and socialization in a culturally pluralistic society. Emphasis is placed on the influences of contemporary family living and cultural patterns on the child, school-family relationships, and community resources and services that support and strengthen families. This course is a core requirement for California Child Development teacher/director center permits as well as for the State of California Department of Community Care

Title XXII licensing childcare centers requirements. This course is designed for all students interested in child development and multi-cultural and behavioral studies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

151 Program Planning

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Child Development 101; and either Child Development 111 or 121 or 131, each with a grade of "C" or better, or equivalent.

Corequisite: Child Development 270 or 275.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course focuses on planning the preschool learning environment to promote optimal development. It emphasizes curriculum planning, guidance, safety, record keeping, observation techniques, resource units, and daily plans. The course partially fulfills State of California Permit requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

152 School Age Program Planning

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

This course is a practical study of school age program planning. Emphasis is placed on the details of planning a school age child development center, curriculum development, staff training and child guidance, health and safety. This course is designed for students planning to work with school age children in community settings. This course is for child development majors and may be used to partially fulfill State of California Child Development Permit Requirements and Title 21 teaching requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

153 Techniques of Teaching Using the Reggio Emilia Approach

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: Not open to students with previous credit for Child Development 265E.

This course is based on the early childhood philosophy, and teaching techniques adopted by the schools from Reggio Emilia, Italy. Emphasis is placed on the overall principles of the Reggio Emilia philosophy of valuing the capabilities of the child, collaborations between the teachers, family and community, strategies of emergent curriculum, project work and the documentation process. Adaptation strategies for the use of Reggio in traditional preschools and childcare programs are addressed. This course may be used for teachers and administrators as partial fulfillment of Title 22 and Child Development Permit Matrix curriculum requirements. It is also an elective for State of California Child Development Permits; Child Development associate degrees and certificates. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

160 Observing and Understanding Children

**1 hour lecture, 3 hours lab, 2 units
Grade Only**

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

Limitation on Enrollment: Health and Safety. TB clearance within the last year is required.

This course focuses on behavioral patterns and growth processes of young children through observations and supervised participation in the campus Child Development Center. The course emphasizes the principles of observing, interpreting, and guiding children's behavior. Topics include children's developmental, safety, and nutritional needs. The course fulfills the specialization requirements for the State of California Master Teacher Permit when taken with Child Development 161 and 162 or Child Development 161 and 188. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

161 Observations and Issues in Child Development

**1 hour lecture, 3 hours lab, 2 units
Grade Only**

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skills Level R4 and W4.

Limitation on Enrollment: Health and Safety. TB clearance within the last year is required.

This course explores current issues in child development and how these issues influence both

the child and family. The course emphasizes effective communication skills, positive guidance techniques, kindergarten readiness skills, and appropriate classroom activities. It includes supervised participation in the campus Child Development Center, and it fulfills the specialization requirements for the State of California Master Teacher Permit when taken with CHIL 160 and 162 or CHIL 160 and 188. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

162 Observing and Guiding Child Behavior
3 hours lecture, 3 units
Grade Only

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

This course explores various behavior management techniques, interpersonal communication, ideas and suggestions to assist caregivers in guiding children's behavior. Application of developmental, cultural and communication principles in combination with observation of real situations is the mode of study of this course. The focus will be on children from birth through age 10. The course can be used to meet degree and certificate requirements for Child Development and the Master Teacher Permit requirement if taken with Child Development 160 and 161. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

165 Children With Special Needs
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is a survey of education for children with special needs. Emphasis is placed on the types and characteristics of special needs as well as on the methods for integrating children with special needs into inclusive educational settings. Topics include the history of special education legislation, current educational compliance requirements and community resources available to parents, teachers and other professionals. This course is designed for professionals and parents who work with children with special needs. This course partially fulfills the specialization requirement for the State of California Master Teacher Permit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

166 Special Needs Curriculum
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is an in-depth study of curriculum for children with special needs. Emphasis is placed on the concept of full inclusion of children with special needs into school/community settings and on related educational strategies and adaptive equipment. This course is designed for parents, teachers, nurses, social workers, and paraprofessionals employed in schools, day care centers, and child development programs. This course partially meets the specialization requirements for the Master Teacher Permit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

175 Infant-Toddler Growth and Development
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course examines typical and atypical physical, social, emotional, and intellectual growth of the infant and toddler. The selection and maintenance of appropriate play materials and equipment for indoor and outdoor environments is discussed. Appropriate observations and visitations to the community are required. This course meets State of California Title 22 licensing regulations for teachers in infant toddler settings, and is beneficial for parents. This course fulfills the specialization requirement for State of California Master Teacher Permit when taken in addition to Child Development 176. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

176 Principles of Infant/Toddler Caregiving
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49 each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

This course is a study of the principles of infant/toddler care, including all aspects of infant and toddler development. Students learn to plan appropriate indoor and outdoor curriculum and environments. Topics include health, nutrition and safety for the very young as well as licensing

regulations, staff interactions, parent participation and program development. This course is for child development majors and partially fulfills master teacher permit specializations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

180 Nutrition, Health and Safety for Children
3 hours lecture, 3 units
Grade Only

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

This course provides students and child development professionals with a survey of the nutritional, health, and safety needs of children from infant/toddlers through preschool age. Topics may include, but are not limited to, the planning and execution of environments and activities that promote safety, balanced diet, and overall health for children. Students also learn the fundamentals of pediatric first aid and cardiopulmonary resuscitation (CPR). This course also meets the Title XXII, fifteen hour, Health and Safety Training requirement, including signs and symptoms of child abuse. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

185 Computer Usage with Young Children
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course explores principles of computer application in the Child Development field. Emphasis will be on the use of computers as an educational tool. Through the in-depth exploration of computer software applications, students will learn the functions, integration, and flexibility of computer usage with young children. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

188 Violence in the Lives of Children and Families
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49 each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course examines the causes and effects of violence in the lives of children and families. Emphasis is placed on the skills needed for conflict resolution and on the environmental set-ups and curricula that promote peaceful, cooperative and nonviolent play and interactions. Information about the history, current legislation, reporting responsibilities, and identification of abuse is also given. This course is designed for parents, teachers, nurses, and other child care professionals to learn strategies for understanding and responding to the various forms of stress and violence that affect children today. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

202 Administration of Early Childhood Programs
3 hours lecture, 3 units
Grade Only

Prerequisite: Child Development 101 and 141, each with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; Child Development 111 and 121 or 131, with a grade of "C" or better, or equivalent.

This course is an overview of early childhood education program administration. Topics include theoretical perspectives on early childhood education, licensing regulations, funding sources, budgetary considerations, personnel management, curriculum development, and teacher selection. The course meets State of California Title 22 licensing regulations for site supervisors. It also partially fulfills State of California matrix requirements for Program Director and Site Supervisor Permits. This course is designed for anyone seeking a position as a site supervisor or center director. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

210 Supervision of Early Childhood Programs
3 hours lecture, 3 units
Grade Only

Prerequisite: Child Development 141 and 151, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Child Development 201 or 201B.

This course examines early childhood supervisory techniques with emphasis on educational

philosophy, professional growth, in-service staff training, program and staff evaluation, models of parent education and involvement, and supportive services. It partially fulfills the State of California Child Development Permit Matrix requirement for supervisors and directors and also meets the State of California Title 22 licensing regulations for directors. This course is designed for students who intend to go into supervisory positions in early childhood education. It also introduces students to the tools that help them organize and evaluate quality children's programs. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

215 Adult Supervision and Mentoring in Early Childhood Settings

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Child Development 151 with a grade of "C" or better, or equivalent.

This course emphasizes the methods and principles of supervising adults in early childhood settings. Students study effective models for guidance and evaluation of adults, positive communication skills, and the role of the mentor in a teaching environment. It is designed for students who supervise other adults in the preschool classroom while simultaneously providing an appropriate setting for young children. This is a required course for the levels of Master Teacher, Site Supervisor and Program Director for the Child Development permit issued by the Commission on Teacher Credentialing. Associate Degree Credit only and not Transferable.

270 Work Experience

**Hours by Arrangement (One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.), 1-4 units
Grade Only**

A program of on-the-job learning experiences for students employed in a job related to their major or their educational goals. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate Degree Credit & transfer to CSU and/or private colleges and universities

275 Supervised Field Study

**3-9 hours lab, 1-3 units
Grade Only**

Corequisite: Child Development 151.

Advisory: Child Development 160 with a grade of "C" or better, or equivalent.

This directed field study course provides students with an opportunity to apply classroom information in a practical setting with supervision from faculty as well as field-site supervisors. Intended for students who plan to teach or supervise in early childhood settings, this course partially fulfills the State of California requirement for experience. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

280 Environmental Rating Scale

**1 hour lecture, 1 unit
Grade Only**

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

This course provides students with an introduction to the Environmental Rating Scale administration, scoring system, profile, and improvement plan. The course focuses on environmental evaluation and program improvement. Students learn how to evaluate the quality of child care programs and how to increase the quality of care through practical improvements. This course is intended for child development professionals currently working in the field as well as those seeking professional development, child development permits, employment opportunities, or anyone with general interest in working with children. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

290 Independent Study

**Hours by Arrangement, 1-3 units
Grade Only**

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

Investigation of a special area in the field of Child Development. This course may be taken four times with different content for a maximum of six units. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

291 Child Development Lab Practicum
3 - 12 hours lab, 1-4 units
Grade Only

Advisory: English 42 and English 43 each with a grade of "C" or better, or equivalent or Assessment Skill Levels R4 and W4.; Child Development 160 or 161 with a grade of "C" or better, or equivalent.

This course provides supervised practical experience at the campus child development lab to supplement child development courses and related curriculum. Through on-site training, students gain practical knowledge in curriculum development, guidance strategies, observation, and child growth and development. This course is designed for students who plan careers in early childhood education and family support agencies or for parents who seek strategies and techniques for guiding children. The course may be used toward the field experience component for the State of California Child Development Permit. This course may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

291A Child Development Center Practicum
3 hours lab, 1 unit
Grade Only

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

This course provides directed laboratory experience in the campus Child Development Center. It is designed for students who plan careers in early childhood and family support programs and for parents who seek practical experience in guiding and teaching children. Students become familiar with the operating policies and procedures of a preschool program and observe and access the development of children. This course may be used toward the experience component for the State of California Child Development Permit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

291B Child Development Center Practicum
3 hours lab, 1 unit
Grade Only

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

This course provides directed laboratory experience in the campus Child Development Center. It is designed for students who plan careers in early

childhood education and family support programs and for parents who seek practical experience in guiding and teaching children. Students examine appropriate safety, health, and nutritional practices in a preschool setting with an emphasis on implementation with young children. This course may be used toward the experience component for the State of California Child Development Permit and toward the Health and Safety training requirements for Title 22. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

291C Child Development Center Practicum
3 hours lab, 1 unit
Grade Only

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

This course provides directed laboratory experience in the campus Child Development Center for students who plan careers in early childhood and family support programs and for parents who seek practical experience in guiding and teaching children. Students explore teaching practices that enhance children's learning in the classroom and assist in the planning and implementation of developmentally appropriate activities. This course may be used toward the experience component for the State of California Child Development Permit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

291D Child Development Center Practicum
3 hours lab, 1 unit
Grade Only

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

This course provides directed laboratory experience in the campus Child Development Center for students who plan careers in early childhood and family support programs and for parents who seek practical experience in guiding and teaching children. Students examine the role of routines and transitional activities in the organization and structure of an early child development setting. The class emphasizes positive guidance and discipline for young children. This course may be used toward the field experience component for the State of California Child Development Permit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Communications

Radio and Television, Communication Studies and Journalism

<u>Award Type</u>	<u>Units</u>
Certificate of Performance:	
Communication Studies	9
News	9
Performance	9
Radio	9
Video/Film	9
Associate in Science Degree:	
Broadcast News	37*
Management	36*
Multimedia	36*
Radio	37*
Video/Film	36.5*
Associate in Arts Degree:	
Communication Studies	18*
Communication Studies for Transfer	18-21*
*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.	

Communications: Radio and Television

Description

The Radio and Television program encompasses the fields of broadcasting and cablecasting news, radio, television, film, multimedia, and concert productions, along with the expanding area of industrial video applications. The field includes all aspects of creation and production both behind and in front of cameras and microphones on KSDS-FM and the television production facilities through theoretical and practical applications. The Radio and Television Department seeks to prepare the student for transfer to four-year institutions or employment in the field and facilitates training in television production and performance.

Program Emphasis

The Radio and Television program offers five areas of specialization: Radio; Radio and Television News; Video/Film; Management/Sales; and Multimedia. Certain core courses are central to each of these areas. Prospective students are advised that proficiency in English reading and writing skills is necessary for successful participation in the field.

Students pursuing the Radio and Television News specialty should take additional courses in social sciences or political science. Students interested in the Management/Sales specialization are advised to take business courses as electives. The Radio and Television Department offers "hands-on" experience in all areas of the field. Through the use of the San Diego City College radio station, KSDS-FM, 88.3, and related facilities, students may focus on radio, news, management, sales, performance and production. The adjacent television production studio provides state-of-the-art broadcast quality equipment and facilities for training in production and performance.

Faculty	Office	Telephone
Laura Castaneda	C-122-D	619-388-3043
Mike Kaye	C-122-A	619-388-3042

Career Options

Examples of employment options available in entry level radio, television, and film production after successful completion of the associate degree program include: on-air-personality, radio news reporter, radio and television program writer/producer, television operations engineer, news photographer, audio engineer, director and videographer, and studio positions. Careers which require four-year degrees in radio and television include: motion picture writer/producer, radio and television salesperson, manager, news writer/reporter and news producer. Careers in multimedia and industrial/instructional video require an associate and often a four-year degree.

Student Learning Outcomes

Upon successful completion of one of the emphasis in Radio/TV the student should be able to:

- Analyze media's impact on the public.
- Operate audio, video or film equipment.
- Produce audio, video, film or multimedia projects.
- Direct or perform as voice or acting talent.

Academic Programs

The associate degrees in Radio and Television require completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units. STUDENTS MUST COMPLETE THE CORE AND ONE AREA OF SPECIALIZATION.**

Certificate of Performance: Radio*

Courses:	Units
RTVC 105 Media Performance	3
RTVC 130 Radio Programming	3

Select three units from:

RTVC 106 Acting for Radio/Voice-Over	
RTVC 107 Audio Production	
RTVC 115 Radio & Television Management Principles	
RTVC 140 Radio and Television Newswriting	
RTVC 132 Radio Remotes Special Events and	
RTVC 247A, B, C, or D, Radio Broadcasting Practicum	
	3

Total Units = 9

Certificate of Performance: Video/Film*

Courses:	Units
RTVC 124 Electronic Field Production	3

Select six units from:

RTVC 122 Television Production	
RTVC 124 Electronic Field Production	
RTVC 126 Art Direction for Film and Television	
RTVC 128 Lighting For Television & Film	
RTVC 146 The TV News Field Report	
RTVC 167 Motion Picture Production	
	6

Total Units = 9

Certificate of Performance: Performance*

Courses:	Units
RTVC 105 Media Performance	3

Select six units from:

RTVC 106 Acting for Radio/Voice-Over	
RTVC 119 Acting for Film and Television	
RTVC 121 Performance for Television	
	6

Total Units = 9

Certificate of Performance: News*

Courses:	Units
RTVC 140 Radio and Television Newswriting	3

Select six units from:

RTVC 145 Television News Production	
RTVC 146 The TV News Field Report	
RTVC 249A or B or C or D, Television News Workshop	
	6

Total Units = 9

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Associate in Science Degrees: Communications: Radio and Television

Core Courses

Students must complete the Core and one area of specialization. Radio and Television Core Courses Required for the Associate Degree:

Courses Required for the Major:	Units
RTVC 100 Introduction to Radio & Television	3
RTVC 107 Audio Production	3
RTVC 110 Introduction to Scriptwriting	3
RTVC 118 Television Studio Operations	3
RTVC 160 Introduction to Cinema	3

Total Units = 15

Recommended electives: Radio and Television 245, 249A,B,C,D; CBTE 101 or equivalent, or a typing certificate of 35 WPM.

Areas of Specialization Radio

Courses Required for the Major:	Units
Core Courses	15
RTVC 105 Media Performance	3
RTVC 106 Acting for Radio/Voice-Over	3
RTVC 115 Radio & Television Management Principles	3
RTVC 130 Radio Programming	3
RTVC 131 Advanced Radio Performance	1
RTVC 132 Radio Remotes Special Events	2
RTVC 140 Radio and Television Newswriting	3
RTVC 175 Radio & Television Sales	3
RTVC 247A,B,C, or D Radio Broadcasting Practicum	1

Total Units = 37

Video/Film

Courses Required for the Major:		Units
Core Courses		15
RTVC 105	Media Performance	3
RTVC 115	Radio & Television Management Principles	3
RTVC 122	Television Production	3
RTVC 124	Electronic Field Production	3
RTVC 126	Art Direction for Film and Television or	
RTVC 128	Lighting For Television & Film	3
RTVC 123	Advanced Television Production or	
RTVC 146	The TV News Field Report or	
RTVC 119	Acting for Film and Television	3
RTVC 127	Basic Television Production Switcher Operations	0.5
RTVC 167	Motion Picture Production	3
Total Units = 36.5		

Recommended elective: Photography 105.

Broadcast News

Courses Required for the Major:		Units
Core Courses		15
RTVC 105	Media Performance	3
RTVC 121	Performance for Television	3
RTVC 124	Electronic Field Production	3
RTVC 126	Art Direction for Film and Television or	
RTVC 128	Lighting for Television & Film	3
RTVC 140	Radio and Television Newswriting	3
RTVC 145	Television News Production	4
RTVC 146	Television News Field Report	3
Total Units = 37		

Management

Courses Required for the Major:		Units
Core Courses		15
RTVC 105	Media Performance	3
RTVC 115	Radio & Television Management Principles	3
RTVC 122	Television Production	3
RTVC 130	Radio Programming	3
RTVC 132	Radio Remotes & Special Events	2
RTVC 175	Radio & Television Sales	3
RTVC 176	Radio & Television Advertising Copy	1
BUSE 201	Business Organization and Management	3
Total Units = 36		

Multimedia

Courses Required for the Major:		Units
Core Courses		15
RTVC 151	Introduction to Multimedia	3
Select twelve units from the following:		
RTVC 124	Video Production	
RTVC 152	Digital Audio Post Production	
RTVC 153	Non-linear Editing	
RTVC 154	Interactive Game Design	
RTVC 157	Multimedia Production	
		12
Select six units from the following:		
ARTG 125	Digital Media	
PHOT 180	Digital Imaging	
CISC 114	Introduction to Computer Graphics & Web Media	
		6
Total Units = 36		

Transfer Information

Common university majors related to the field of Radio and Television include:

Communication, Film and Electronic Arts, Film and Television, Journalism, Mass Communication, Radio and Television, Television, Film and Media.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Radio and Television (RTVC)

100 Introduction to Radio and Television 3 hours lecture, 3 units Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Telecommunications 100.

A survey of electronic media including radio, television, film and/or multimedia and their impact on culture and society; includes history, economics, technological development, programming, ratings, legal aspects, and social aspects of broadcasting in America, and cross-cultural, international comparisons. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

105 Media Performance 2 hours lecture, 3 hours lab, 3 units Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Telecommunications 105.

This course is an introductory, practical study of broadcast announcing. Emphasis is placed on interpretation of copy and pronunciation. Topics also include the practical use of audio equipment and ad libbing. This course is designed for radio and television majors and anyone seeking employment in the broadcast industry. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

106 Acting for Radio/Voice-Over 2 hours lecture, 3 hours lab, 3 units Grade Only

Advisory: English 48 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5; Radio and Television 105 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Dramatic Arts 106, 265 (Acting for Radio/Voice-Over) or Radio and Television 265 (Acting for Radio/Voice-Over).

This course is a practical study of the voice-over industry. Emphasis is placed on voice-over acting techniques for radio and television commercials, multimedia and other audio and video presentations. Students are expected to read aloud extensively as well as to record their voice for critique and self-evaluation. Topics also include an overview of the voice-over business, marketing, current technology, and professional work and studio etiquette. This course is intended for students majoring in radio and television or drama as well as for anyone interested in the voice-over business. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

107 Audio Production 2 hours lecture, 3 hours lab, 3 units Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Telecommunications 107.

Theory and practice of audio techniques in radio, television, film, and multimedia, including acoustics, audio language and terms, signal flow, use of microphones, use of mixers and related production equipment both analog and digital, and the aesthetic aspects of sound mixing. Students will apply the learned materials to actual audio production. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

110 Introduction to Scriptwriting 2 hours lecture, 3 hours lab, 3 units Grade Only

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6.

Limitation on Enrollment: This course is not open to students with previous credit for Telecommunications 110.

This course is a study of the theory and practice of writing for electronic and film media. Emphasis is placed on the techniques of narrative and documentary writing and scripting. This course is intended for students majoring in Communications and those seeking employment

in the Communications field. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

115 Radio and Television Management Principles

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Advisory: Completion of or concurrent enrollment in: Radio and Television 100 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Telecommunications 115.

This course is a study of radio and television management. Emphasis is placed on current business practices and the relationships between stations, networks and agencies. Topics include radio, television and cable advertising, merchandising, market research, audience measurement and government regulation. This course is designed for students majoring in radio and television and anyone seeking employment in the broadcast industry. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

118 Television Studio Operations

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Advisory: Completion of or concurrent enrollment in: Radio and Television 100 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Telecommunications 120.

This course is a survey of the theory, terminology and operations of a television studio and control room. Emphasis is placed on the role of the director as the leader of television production team. Students gain hands-on experience in directing as well as in the operation of audio, camera, video switcher, lighting, graphics, and video. This course is designed for students interested in majoring in television and/or film and anyone interested in a basic understanding of television studio operations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

119 Acting for Film and Television

**2 hours lecture, 3 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 48 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5; and Dramatic Arts 132 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Drama 119 or Drama 265: Acting for Film and Television or Radio and Television 265: Acting for Film and Television.

This course introduces students to the skills required for on-camera performing techniques as used in the motion picture and television industry. Students participate in the selection, rehearsal, and on-camera performance of material from television and motion picture scripts including drama, sitcoms, soaps, and commercials. Emphasis is placed on cold-reading taped audition skills, improvisational and interview techniques, and the fundamental acting techniques required for camera, scene, and monologue studies. This course provides a comprehensive introduction to students intending to enter a career in the dramatic arts and radio/television. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

121 Performance for Television

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Advisory: Completion of or concurrent enrollment in: Radio and Television 105 with a grade of "C" or better, or equivalent.

This course is a practical study of all phases of television performance. Emphasis is placed on announcing for news, commercials, public service announcements and talk shows. Topics include use of teleprompter, scripts, note cards and ad-libbing. This course is designed for students majoring in radio and television and anyone seeking employment in the broadcast industry. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

122 Television Production

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Radio and Television 118 and 124, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Telecommunications 122A.

This course is an intermediate level study of video and television production. Emphasis is placed on providing students with hands-on experience in studio production practices, including techniques for news and documentary segments. Students plan, write, produce, stage and direct interviews, dramatic pieces, multimedia and other program segments. This course is intended for students majoring in radio and television production and anyone seeking employment in the field. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

123 Advanced Television Production
2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: Radio and Television 122 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Telecommunications 122B.

This course is an advanced level study of video and television production. Emphasis is placed on providing students with hands-on experience in advanced studio production practices, including techniques for news and documentary segments. Students apply advanced techniques to plan, write, stage and direct interviews, dramatic pieces, multimedia and other program segments. This course is intended for advanced level students majoring in radio and television production and anyone seeking employment in the field. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

124 Electronic Field Production
2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: Radio and Television 118 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Telecommunications 124. This course is an introduction to the theory, terminology, and operation of remote electronic video production, including composition and in-camera editing techniques, camera operation, portable lighting, video recorder operation, audio control, and editing. This course includes the aesthetics and fundamentals of scripting, producing, and directing field location, multimedia, and

multi-camera video production. This course is part of the A.S. degree program and can be used for transfer or skills development/enhancement. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

125 Television Specials and Video Production
2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: Radio and Television 122 or 124, and 140, each with a grade of "C" or better, or equivalent. This course offers instruction and practice in the development and production of longer format television specials and video projects. Students enhance their video and production skills, preparing them to compete and bid for local video production projects. This course is designed for communications majors. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

126 Art Direction for Film and Television
2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Advisory: Completion of or concurrent enrollment in: Radio and Television 100 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Telecommunications 126.

This course is a study of the aesthetics and techniques of art direction for film and television. Emphasis is placed on developing the student's ability to control the look of their films through the use of design techniques. This course is designed for students majoring in radio and television and drama as well as anyone interested in the study of film. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

127 Basic TV Production Switcher Operation
1.5 hours lab, .5 unit
Grade Only

Advisory: Radio and Television 100 and 118, each with a grade of "C" or better, or equivalent.

This course offers instruction and practice in advanced operation of the Grass Valley 200 video production switcher for television. The course is intended for students majoring in Television and Film/Video in the Radio and Television Program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

128 Lighting for Television and Film
2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Advisory: Completion of or concurrent enrollment in: Radio and Television 100 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Telecommunications 128.

This course is a study of the theory and practice of lighting for film and television. Emphasis is placed on the essence of various kinds of light and how light works. Students apply lighting techniques to create visual moods for various film and television production projects. This course is designed for students majoring in radio and television and drama as well as anyone interested in the study of film. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

130 Radio Programming
2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: Radio and Television 105 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Telecommunications 130.

This course is an introductory study of radio programming including the programming formula, the "hot" clock, station image, marketing research, sales, the corporate ladder, identifying the format, radio format syndication, demographics, on-air personality, music scheduling and "day parting." The course is designed for students wishing to obtain an associate degree in Communications with an emphasis in Radio or Management and to transfer to a four-year institution or to further professional skills in radio. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

131 Advanced Radio Performance
3 hours lab, 1 unit
Grade Only

Advisory: Radio and Television 130 with a grade of "C" or better, or equivalent, or professional experience.

This course offers practice and critique within the "real radio" environment. The areas of emphasis include practical radio announcing experience on KSDS-FM, advanced radio production (analog and digital), copy writing for broadcast announcements,

and assist in radio station promotions, music library maintenance and office administration. This course is intended for students wishing to major in Radio or to enhance their professional experience in radio broadcasting. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

132 Radio Remotes and Special Events
1 hour lecture, 3 hours lab, 2 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course offers instruction in the theory and practice of concert production, planning, and promotion. Students will handle all aspects of staging live music concerts and simultaneous radio broadcast. Students will write promotional materials and critique concert productions. This course is part of the A.S. degree program and can be used for transfer or skills development/enhancement. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

140 Radio and TV Newsriting
2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Telecommunications 140A.

This course offers instruction and practice in writing and editing news for radio and television. Topics covered include writing from wire copy, newspapers, and documents. This course is intended for students majoring in communications and those seeking employment in broadcasting. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

141 Radio News Production
2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: English 101, Radio and Television 105 and 140, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6.

This course is a hands-on study of the theory and practice of planning, writing and producing radio newscasts. Students select stories and line-up, conduct field interviews, write and edit scripts, and deliver on-air broadcasts for KSDS-FM. This course

is designed for students in the radio program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

145 Television News Production
2 hours lecture, 6 hours lab, 4 units
Grade Only

Advisory: Radio and Television 118 and 140, each with a grade of "C" or better, or equivalent. This course is an intermediate to advanced level study in the practice of television news production. Emphasis is placed on television newsgathering, writing, field camera operation, and studio production. Students produce, direct and deliver a weekly half-hour news program that airs on the county education channel. This course is designed for students majoring in radio and television. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

146 The TV News Field Report
2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; Radio and Television 124 and 140, each with a grade of "C" or better, or equivalent. This course is a practical study of the basic components involved in producing the television news package and documentary. Emphasis is placed on providing students with experience in writing, editing, and assembling the television news package from the standpoint of a real working news reporter, camera operator, editor or producer. This course is designed for students majoring in radio and television. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

151 Introduction to Multimedia
2 hours lecture, 3 hours lab, 3 units
Letter Grade or Pass/No Pass Option

Advisory: Radio and Television 107, 110, and 124, each with a grade of "C" or better, or equivalent; and a working knowledge of both PC and Macintosh operations. This course introduces students to a conceptual foundation in new media technology. Students learn fundamental concepts including production, distribution, access and storage as well as the impact of technology on communication. Students examine, analyze and critique multimedia products and develop concepts for new media. Requires the use of

computers. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

152 Digital Audio Post Production
2 hours lecture, 3 hours lab, 3 units
Grade only

Advisory: Radio and Television 107 with a grade of "C" or better, or equivalent. This is an advanced audio course with emphasis on audio postproduction and synchronization with the visual image for radio, TV, video, multimedia and film using Digital Audio Workstations (DAWs). This course provides the benefit of specialized training to the more advanced production students. Students need computer skills at the level of operating both Mac OS and IBM-based Windows operating systems. This course is part of the A.S. degree program and can be used for transfer or skills development/enhancement for the more advanced multimedia production students. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

153 Nonlinear Editing
2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: Radio and Television 124 and Computer and Information Sciences 121, each with a grade of "C" or better, or equivalent. This is practical study of computer-based, nonlinear digital video and film editing. Emphasis is placed on the aesthetic and technical principles of post-production editing for broadcast, industrial, and multimedia applications. This course is designed for students majoring in radio and television and anyone seeking to enhance employment opportunities in the broadcast, industrial video, multimedia, and post production areas. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

154 Interactive Game Design
2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: Radio and Television 151 or 157 with a grade of "C" or better, or equivalent. An introduction to interactive multimedia game development including game design, development, production and engineering. Emphasis is placed on the critical analysis of the conceptual and technical elements of game design. Students will formulate games by utilizing the process of brainstorming, designing, writing, flowcharting, documentation and assembling multimedia assets. Hands-on

production of graphics, sound, animation, text, and possibly video (if students have completed a video production class) are necessary for the production of student game designs. The operation of the hardware, software, cameras and other equipment are necessary for the production of an interactive game. This course is intended for students who are planning to major in multimedia or students looking to enhance their job skills in the game industry. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

157 Multimedia Production

**2 hours lecture, 3 hours lab, 3 units
Grade only**

Advisory: Radio and Television 151 with a grade of "C" or better, or equivalent.

This course covers the design and production of new media technology. Students analyze the conceptual and technical elements involved in the production of a multimedia project. Students design, write, assemble, and produce multimedia projects for interactive audiences and develop the audio, video, computer graphics, animation, and text necessary for the creation of a multimedia product. The students utilize hardware, software, computers, cameras and other necessary equipment. This course is part of the A.S. degree program and can be used for transfer or skills development/enhancement for the more advanced multimedia students. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

160 Introduction to Cinema

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Telecommunications 160.

This course is an historical, aesthetic, and critical survey of cinema with emphasis on the evolution of techniques now used in the production of feature, documentary, educational television, and industrial film. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

167 Motion Picture Production

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Radio and Television 110 and 160, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Telecommunications 167.

This course is an introduction to basic cinematography for motion pictures and television including: script writing, story boards, composition of shots, editing, sound recording and mixing, animation and special effects. This course is intended for students majoring in radio and television production and anyone interested in film making or seeking employment in the field. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

175 Radio and Television Sales

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; and completion of or concurrent enrollment in Radio and Television 100 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Telecommunications 175.

This course offers a detailed analysis of sales and sales management aspects of radio and television broadcasting and cablecasting, including office organization, research, promotion, traffic, operations, contact procedures, and sales and sales management functions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

176 Radio and TV Advertising Copy

**1 hour lecture, 1 unit
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; and completion of or concurrent enrollment in Radio and Television 100, with a grade of "C" or better, or equivalent.

This course involves the analysis and writing of radio and television commercial copy with practical experience in writing for KSDS and other radio, television, and cable companies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

245 Television Workshop**3-9 hours lab, 1-3 units
Grade Only**

Prerequisite: Radio and Television 122 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Telecommunications 245. This is a television production workshop designed to give students an opportunity to work on individual productions and specials to augment their course work in the department and to prepare them for professional employment in the field. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

247A Radio Broadcasting Practicum**3 hours lab, 1 unit
Grade Only**

Advisory: Radio and Television 132 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Telecommunications 247. This is an advanced radio broadcasting course designed to provide students additional opportunity to apply previously studied theory to radio program production. The emphasis of this class is on the development and production of live music programming for KSDS-FM. This course is part of the A.S. degree program and can be used for transfer or skills development/enhancement. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

247B Radio Broadcasting Practicum**3 hours lab, 1 unit
Grade Only**

Advisory: Radio and Television 105 or 140 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Telecommunications 247. This is an advanced radio broadcasting course designed to provide students additional opportunity to apply previously studied theory to radio program production. The emphasis of this class is on the development and production of radio news programming for KSDS-FM. This course is part of the A.S. degree program and can be used for transfer or skills development/enhancement. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

247C Radio Broadcasting Practicum**3 hours lab, 1 unit
Grade Only**

Advisory: Radio and Television 105 or 140 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Telecommunications 247. This is an advanced radio broadcasting course designed to provide students additional opportunity to apply previously studied theory to radio program production. The emphasis of this class is on the development and production of radio sports programming for KSDS-FM. This course is part of the A.S. degree program and can be used for transfer or skills development/enhancement. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

247D Radio Broadcasting Practicum**3 hours lab, 1 unit
Grade Only**

Advisory: Radio and Television 105 or 140 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Telecommunications 247. This is an advanced radio broadcasting course designed to provide students additional opportunity to apply previously studied theory to radio program production. The emphasis of this class is on the development and production of programming for KSDS-FM. This course is part of the A.S. degree program and can be used for transfer or skills development/enhancement. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**249A Television News Workshop - Producing
2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Radio and Television 145 with a grade of "C" or better, or equivalent.

This advanced course offers instruction and practice in producing television news. Emphasis is placed on the role of the producer in the television news team, especially in the areas of news writing and editing, assignment editing, Cable News Network (CNN) Newsource compiling, story selection, program timing, studio production and program back timing and pacing. This course is designed for students majoring in radio and television as well as anyone interested in gaining additional proficiency

in producing for television. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

249B Television News Workshop - Tape Coordinating

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Radio and Television 249A with a grade of "C" or better, or equivalent.

This advanced course offers instruction and practice in tape coordinating for television news. Emphasis is placed on the role of the tape coordinator in the television news team, especially in the areas of news editing, locating Cable News Network (CNN) feeds, story selection, program timing, and studio production. This course is designed for students majoring in radio and television as well as anyone interested in gaining additional proficiency in tape coordinating for television. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

249C Television News Workshop - Assignment Editing

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Radio and Television 249B with a grade of "C" or better, or equivalent.

This advanced course offers instruction and practice in assignment editing for television news. Emphasis is placed on the role of the assignment editor in the television news team, especially in the areas of assigning reporters and photographers and in monitoring all new local, national and international stories. This course is designed for students majoring in radio and television as well as anyone interested in gaining additional proficiency in assignment editing for television. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

249D Television News Workshop - Reporting

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Radio and Television 249C with a grade of "C" or better, or equivalent.

This advanced course offers instruction and practice in reporting for television news. Emphasis is placed on the role of the reporter in the television news team, especially in the areas of reporting and on-camera presentation. This course is designed for students majoring in radio and television as well as anyone interested in gaining additional proficiency

in assignment reporting for television. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

270 Work Experience

**Hours by Arrangement (One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.), 1-4 units
Grade Only**

Limitation on Enrollment: Must obtain an Add Code from Work Experience Coordinator for enrollment. A program of on-the-job learning experiences for students employed in a job related to their major or their educational goals. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate Degree Credit & transfer to CSU and/or private colleges and universities

290 Independent Study

**Hours by Arrangement, 1-3 units
Grade Only**

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

Theoretical and practical study of a special area in the field of radio and television. This course may be taken four times with different content for a maximum of six units. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Communication Studies

Description

The Communication Studies programs provide students the opportunity to gain effective communication skills which are essential and highly demanded in educational, professional and social settings. Through critical thinking, observation, and performance, students recognize the importance of messages in an interconnected multicultural community. The Associate in Arts or Certificate of Performance in Communication Studies offer students enhancement of self-development and foundational tools for relational success.

Program Emphasis

The Communication Studies program emphasizes proficiency in public speaking, interpersonal communication, intercultural communication, voice and articulation, small group communication, and argumentation.

Faculty	Office	Telephone
Erin Engstrom	R-117	619-388-3183
Tanya Medina	C-225G	619-388-3598
Deanna Shelton	R-118	619-388-3182

Career Options

The career opportunities related to Communication Studies are vast and usually require associate or advanced degrees. Some communication career fields include: advertising and public relations, community service, counseling, education, human resources, journalism, management, marketing, performing arts, politics, and radio/television/film.

Student Learning Outcomes

Upon successful completion of the Communication Studies program the student should be able to:

- Evaluate the speaker's backgrounds, motives and attitudes.
- Analyze the audience's backgrounds, motives and attitudes.
- Design effective communication in order to facilitate understanding and cooperation.
- Develop effective verbal and presentational skills for a variety of communication situations.
- Research, organize, and present a developed viewpoint.

Academic Programs

The Communication Studies Certificate of Performance and the associate degree in Communication Studies require completion of courses listed below.

Certificate of Performance: Communication Studies*

Courses:	Units
COMS 103 Oral Communication	3

Select six units from:

COMS 101 Voice and Articulation	3
COMS 104 Advanced Public Communication	3
COMS 111 Oral Interpretation	3
COMS 135 Interpersonal Communication	3

COMS 160 Argumentation	3
COMS 170 Small Group Communication	3
COMS 180 Intercultural Communication	3

Total Units = 9

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Associate in Arts Degree: Communication Studies

Courses Required for the Major:	Units
COMS 103 Oral Communication	3

Select fifteen units from:

COMS 101 Voice and Articulation	3
COMS 104 Advanced Public Communication	3
COMS 135 Interpersonal Communication	3
COMS 160 Argumentation	3
COMS 170 Small Group Communication	3
COMS 180 Intercultural Communication	3

Total Units = 18

Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Recommended electives: Anthropology 103 and Communication Studies 111.

Transfer Information

Common university majors related to the field of Communication Studies include:

Communication, Communicative Disorders, Graphic Communications, Journalism, Marketing, Public Relations.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Associate in Arts Degree: Communication Studies for Transfer

The Associate in Arts in Communication Studies for Transfer is intended for students who plan to complete a bachelor's degree in Communication Studies or a related major in the California State University (CSU) system. It is accepted by some but not all CSU campuses. Students who complete this degree and transfer to a participating CSU campus will be required to complete no more than 60 units after transfer to earn a bachelor's degree. It may not be appropriate preparation for students transferring to a CSU campus that does not accept the degree. Students who plan to complete this degree should consult a counselor for additional information about participating CSU campuses as well as university admission, degree and transfer requirements.

NOTE: At the time of the 2011-2012 catalog printing, this degree is not accepted by San Diego State University (SDSU). Students intending to transfer to one of these campuses should consult a counselor and visit www.assist.org for guidance on appropriate coursework.

Courses Required for the major	Units
COMS 103 Oral Communication*	3

Select two of the following courses:

COMS 160 Argumentation*	
COMS 135 Interpersonal Communication*	
COMS 170 Small Group Communication	
	6

Select two of the following courses (not selected above) to meet the lower division preparation for the major to your transfer university:

JOUR 202 Introduction to Mass Communication*	
JOUR 210A Newspaper Production (3 unit option only)	
MATH 119 Elementary Statistics* or	
PSYC 258 Behavioral Science Statistics*	
PSYC 101 General Psychology*	
COMS 101 Voice and Articulation	
COMS 104 Advanced Public Communication	
COMS 111 Oral Interpretation	
COMS 135 Interpersonal Communication*	
COMS 160 Argumentation*	
COMS 170 Small Group Communication *	
COMS 180 Intercultural Communication*	
	6-8

If needed to total 18 units, select one of the following courses (not selected above) to meet the lower division preparation for the major to your transfer university:

ANTH 102 Introduction to Physical Anthropology*	
ANTH 103 Introduction to Cultural Anthropology*	
ENGL 101 Reading and Composition* or	
ENGL 105 Composition and Literature* or	
ENGL 205 Critical Thinking*	
ENGL 210 American Literature I*	
ENGL 211 American Literature II*	
ENGL 215 English Literature I: 800-1799*	
ENGL 216 English Literature II: 1800-Present*	
FREN 201 Third Course in French*	
GEOL 100 General Geology*	
GEOL 101 Physical Geology Laboratory*	
GERM 201 Third Course in German*	
HIST 105 Introduction to Western Civilization I*	
HIST 106 Introduction to Western Civilization II*	
JOUR 200 Introduction to Newswriting and Reporting	
JOUR 201 Advanced Newswriting and Reporting	
JOUR 202 Introduction to Mass Communication *	
JOUR 210A Newspaper Production (3 unit option only)	
MATH 119 Elementary Statistics* or	
PSYC 258 Behavioral Science Statistics*	
PHIL 205 Contemporary Philosophy*	
PSYC 101 General Psychology*	
SOCO 101 Principles of Sociology*	
SPAN 201 Third Course in Spanish*	
COMS 101 Voice and Articulation	
COMS 104 Advanced Public Communication	
COMS 111 Oral Interpretation	
COMS 135 Interpersonal Communication*	
COMS 160 Argumentation*	
COMS 170 Small Group Communication *	
COMS 180 Intercultural Communication*	
	3

Total Units = 18-21

*Course also fulfills general education requirements for the CSU GE or IGETC pattern.

General Education: In addition to the courses listed above, students must complete one of the following general education options:

- The IGETC pattern (page 96) is accepted by all CSU campuses and most UC campuses and majors. It is also accepted by some private/independent or out of state universities.

- The CSU GE pattern (page 104) is accepted by all CSU campuses and some private/independent or out of state universities. It is not accepted by the UC system.

It is strongly recommended that students consult with a counselor to determine which general education option is most appropriate for their individual educational goals.

Electives as needed to meet minimum of 60 CSU-transferable units required for the degree.

Courses

Communication Studies (COMS)

99 Voice and Diction for Non-Native Speakers of English

**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R4 and W4 or English for Speakers of Other Languages 40 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Speech Communications 99.

The course provides instruction and practice in American English vocal standards and communication skills. Topics include American English standards of pronunciation, listening comprehension, ear-training techniques, effective use of vocal variables of voice-rate, pitch force and quality, vocabulary building, conversation with correct use of grammar, sentence structures, common American idioms, pronunciation, and reading. This course is intended for non-native speakers of English who want to learn and practice American English vocal standards. (FT) Associate Degree Credit only and not Transferable.

101 Voice and Articulation

**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Speech Communications 101.

This course is designed to improve vocal production and the articulation, enunciation, and pronunciation of words. Emphasis is placed on sound production, voice quality, volume, pitch and expressiveness. This course is intended for communications studies majors and anyone involved in theatre, sales, public services or other professions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

103 Oral Communication

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Speech Communications 103.

This course is an introduction to speechmaking. Emphasis is placed on the skills required to organize and deliver a variety of types of speeches. Students give several speeches with and without visual aids. This course is designed for Communication Studies majors and for anyone interested in honing their speech skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

104 Advanced Public Communication

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Communication Studies 103 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Speech Communications 104.

This course covers theory, practice and critical analysis of public communication, including speeches on subjects of current interest both local and global. It includes an introduction to the relationship between rhetorical theory and criticism and rhetorical practice in public communication. Special emphasis is placed on advanced platform speaking and limited preparation speaking. This course is designed for students majoring in communication studies and students interested in advancing fundamental speech skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

111 Oral Interpretation**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: This course is not open to students with previous credit for Speech Communications 111.

This course is a practical study of the art of oral interpretation. Emphasis is placed on developing a foundation for critical analyses of literature in order to enhance spoken interpretation of prose, poetry, dramatic monologue and duo. This course is designed for communication studies and drama majors as well as anyone interested in improving their oratory skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

135 Interpersonal Communication**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Speech Communications 135.

This course is a study of effective interpersonal skill development and practice in oral and written communication. Emphasis is placed on the personal, situational, and cultural influences of interaction. Topics include human perception, interpersonal dynamics, listening, conflict management, and verbal and non verbal symbol systems. The course is intended for students who communicate in one-on-one situations, including communication, fashion, allied health, public service and business majors. This course is also intended for students who are interested in further development of effective interpersonal skills in work, volunteer, and personal environments. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

160 Argumentation**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Communication Studies 103 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Speech Communications 160.

This course is a study of argumentation. Emphasis is placed on research, analysis of propositions,

testing of evidence, construction of the brief, and preparation for presentation of constructive and refutation cases. This course is designed for communications studies majors and anyone interested in argumentation and debate. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

170 Small Group Communication**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5 and Communication Studies 103 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Speech Communications 170.

This course is a study of the concepts and theories related to group formation and development, and basic group communication dynamics. Students lead and participate in various forms of group discussion. This course is designed for communication studies and business majors as well as for anyone interested in working effectively in small group settings. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

180 Intercultural Communication**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Speech Communications 180.

This course is a study of communication between members of differing cultures. Emphasis is placed on the culture and communication, including social psychological variables, verbal and nonverbal language systems, cross-cultural communication breakdowns and conflict resolution. Students apply the principles of intercultural communication to contemporary cross-cultural and global communication issues. This course is designed for students majoring in communication studies, international business, business, education, social sciences, nursing, mass communications, and all fields of study that require cross-cultural contact and/or awareness of cultural distinctions. (FT)

Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

290 Independent Study

**Hours by Arrangement, 1-3 units
Letter Grade or Pass/No Pass Option**

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

Advanced special work in debate, radio interpretation, public address. This course may be taken four times with different content for a maximum of six units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Courses

Journalism (JOUR)

Faculty	Office	Telephone
Roman Koenig		619-388-3815

200 Introduction to Newswriting and Reporting

**2 hours lecture, 3 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of "C" or better or equivalent.

This course serves as preparation for the major for students preparing to transfer and is also intended to serve as an elective for students interested in learning to write for newspapers and other publications. The course is an introduction to evaluating, gathering, and writing news in accepted journalistic style under newsroom conditions. Topics include the role of the reporter and the legal and ethical issues related to reporting. Students

have writing and reporting experiences, including personal interviews, speech, meeting and other event coverage, deadline writing, and use of AP style. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

201 Advanced Newswriting and Reporting

**2 hours lecture, 3 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Journalism 200 with a grade of "C" or better, or equivalent.

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; English 105 with a grade of "C" or better, or equivalent. This course offers instruction in advanced journalistic practices. Emphasis is placed on feature, magazine and opinion writing, including investigative and multicultural reporting. Topics also include legal and ethical issues related to reporting. Principles learned can apply to print and online journalism. The course serves as preparation for the major for students preparing to transfer, and is also intended to serve as an elective for students interested in learning to write for newspapers and other publications, including the campus newspaper. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

202 Introduction to Mass Communication

**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6.

Limitation on Enrollment: This course is not open to students with previous credit for Radio and Television 200.

This course provides a survey of mass communication and the interrelationships of media with society, including history, structure, and trends. Discussion focuses on analysis of the impact of the media on society and culture as well as on ways that social institutions shape the media. Problems and issues are examined in light of social and cultural constructs, economics, technology, law and ethics, and social issues, including gender and cultural diversity. This course is designed for transfer students in the social sciences, for journalism majors, and any student interested in how society and mass media are interrelated. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

205 Editing for Print Journalism
2 hours lecture, 3 hours lab, 3 units
Letter Grade or Pass/No Pass Option

Prerequisite: Journalism 200 with a grade of "C" or better, or equivalent.

This course offers instruction in editing techniques for news publications. Course content covers publication planning, copy editing, headline writing, use of photos and graphics, layout and design, advertising sales and design, news judgment and editorial leadership. Principles learned apply to print and online journalism. The course serves as preparation in the journalism major for students preparing to transfer. It also serves as an elective for students interested in learning to write for newspapers and other publications, including the campus newspaper. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

206 Online Journalism
2 hours lecture, 3 hours lab, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 101 or English 105, with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; Computer Business Technology 161 with a grade of "C" or better, or equivalent.

Advisory: Completion of or concurrent enrollment in: Radio and Television 151 or 157, with a grade of "C" or better, or equivalent.

This course provides a basic examination of current online news trends and multimedia reporting techniques. The course covers skills necessary to produce basic multimedia reports, audio slide shows, and blogs. The course also provides instruction in ethical, legal and social issues affecting online journalists, as well as an exploration of online audiences. The course is intended for journalism majors or those seeking career development. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

210A Newspaper Production
6-9 hours lab, 2-3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is designed to provide experience in the production and publication of a student newspaper. Emphasis is placed on helping beginning students gain experience in the gathering and writing of news and features. Students at this level learn the basic

principles of reporting, news writing, copy editing, photography, and newspaper design and layout. Assignments focus on routine stories, and may include editorials or features such as profiles. Copy editing is limited to reading for technical errors. This class is designed for students with an interest in print media and provides instruction in the journalistic process on an entry level. Skills developed in this course include research techniques and the evaluation and analysis of information. Students are guided by ongoing advice, criticism, and evaluation from a faculty adviser. Students enrolled in the course for 2 units are expected to participate in the production of the student newspaper for at least 6 hours per week, while students enrolled for 3 units are expected to participate at least 9 hours per week and contribute more extensively to the layout and/or production of the paper. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

210B Newspaper Production 2
6-9 hours lab, 2-3 units
Letter Grade or Pass/No Pass Option

Prerequisite: Journalism 210A with a grade of "C" or better, or equivalent.

This course is designed to provide additional ongoing experience in the production and publication of a student newspaper. Emphasis is placed on helping students progress in the gathering and writing of news and features. This class provides exposure to the journalistic process beyond the entry level and guides students to polish reporting, news writing, editing, design, and photography skills, tackle more complex subjects, and assume more responsibility for the design of their own pages. Students continue to develop research skills and engage in the evaluation and analysis of information and are guided by ongoing advice, criticism and evaluation from a faculty adviser. Students enrolled in the course for 2 units are expected to participate in the production of the student newspaper for at least 6 hours per week, while students enrolled in the course for 3 units are expected to participate at least 9 hours and contribute more extensively to the layout and/or production of the paper. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

210C Newspaper Production 3**6-9 hours lab, 2-3 units****Letter Grade or Pass/No Pass Option**

Prerequisite: Journalism 210B with a grade of "C" or better, or equivalent.

This course is designed to provide additional ongoing experience in the production and publication of a student newspaper. Emphasis is placed on helping students progress to an intermediate level in the gathering and writing of news and features. Students conduct in-depth reporting and write more sophisticated news stories and may also serve as section editors or assist editors with copy editing, assignments, photography, the news budget, and design. Additionally students develop skill in setting newspaper policies, mentoring others, working in teams, and uncovering news stories. Students are guided by ongoing advice, criticism, and evaluation from a faculty adviser. Student enrolled in the course for 2 units are expected to participate in the production of the student newspaper for 6 hours per week, while students enrolled for 3 units are expected to participate at least 9 hours per week, and contribute more extensively to the layout and production of the paper. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

210D Newspaper Production 4**6-9 hours lab, 2-3 units****Letter Grade or Pass/No Pass Option**

Prerequisite: Journalism 210C with a grade of "C" or better, or equivalent.

This course is designed to provide additional ongoing experience in the production and publication of a student newspaper. Emphasis is placed on helping students progress to an advanced level in the gathering and writing of news and features. In addition to reporting and writing, students at this level, assume responsibility for organizing and managing the newsroom, which includes conducting story conferences, developing the news budget, assigning stories, coaching reporters, and editing and designing the paper in its entirety. Students may also make photo assignments and provide coaching for novice photographers. Students are guided by ongoing advice, criticism and evaluation from a faculty adviser. Students enrolled in the course for 2 units are expected to participate in the production of the student newspaper for 6 hours per week, while students enrolled for 3 units are expected to participate at least 9 hours per week and contribute extensively to the layout

and production of the paper. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Computer Business Technology

Award Type	Units
Certificate of Performance:	
Business Presentations	10
Computer Literacy	7
Computer Basics	5
Data Management Basics	8
Desktop Publishing Basics	9
Office Communications	13
Office Software Basics	5
Office Support Basics	11
Presentation Basics	6
Records Management Basics	11
Soft Skills Basics	12
Web Design Basics	8-9
Word Processing Basics	7
Certificate of Achievement:	
Administrative Assistant	27
Administrative Office Management	28
Legal Administrative Assistant	30
Records Information Management	19
Associate in Science Degree:	
Administrative Assistant	30*
Administrative Office Management	30*
Legal Administrative Assistant	32*
Records Information Management	26*
*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.	

Description

Computer Business Technology programs are offered for both transfer and career-oriented students. Certificates of Performance, Certificates of Achievement, and Associate in Science Degrees are available to students interested in upgrading computer skills for college success and/or employment in business office environments.

Career Options:

Career/job opportunities available upon completion of each Computer Business Technology option are described in each curriculum section. Some career options may require education beyond the associate degree or certificate.

Faculty	Office	Telephone
Barbara Riva	A16-D	619-388-3107
Theresa Savarese	A1-H	619-388-3367

Student Learning Outcomes

Students who complete the program will be able to:

- Identify computer operating systems functions; define key features of different software applications; and demonstrate how to use a Web browser, and conduct an Internet search.
- Create office documents utilizing the Microsoft Office Suite programs (i.e. Word, Excel, Access, PowerPoint, Outlook, and Publisher).
- Analyze work environments, labor force, and organizational types and structures.
- Employ critical thinking as a basis for continual learning and problem solving.
- Demonstrate interpersonal skills (soft skills) such as leadership, delegation of authority, accountability, consensus building, communication, conflict resolution, and teambuilding.

Certificate of Performance: Business Presentations*

The Certificate of Performance in Business Presentations is designed to provide students with business communications skills necessary in the modern office. Instruction will be offered in the production of business letters and graphic presentation of an analytical business report using a computer presentation software package; in the production of a slide computer presentation; and in the utilization of current office telecommunications equipment. Preparation for beginning employment is also offered in information processing and communication in clerical or administrative areas.

Courses	Units
**CBTE 95 Keyboarding/Typing Speed Development or	
CBTE 101 Keyboarding for Computers	1
CBTE 120 Beginning Microsoft Word	2
CBTE 127 Introduction to PowerPoint	2
CBTE 200 Office Telecommunications	2
BUSE 119 Business Communications	3
Total Units = 10	

*A Certificate of Performance is a departmental award that does not appear on the student's

transcript. All courses must be completed within the San Diego Community College District.

****Note: Students may take a departmental keyboarding test to waive keyboarding course requirement.**

Certificate of Performance: Computer Literacy*

The Certificate of Performance in Computer Literacy is designed for students needing a basic knowledge of computers for either transfer or employment.

Courses	Units
CBTE 51 Basic Computer and Software Skills	1
**CBTE 95 Keyboarding/Typing Speed Development or	
CBTE 101 Keyboarding for Computers	1
CBTE 114 Introduction to Microsoft Windows	1
CBTE 161 Learning the Internet	1
CBTE 180 Microsoft Office	3
Total Units = 7	

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

****Note: Students may take a departmental keyboarding test to waive keyboarding course requirement.**

Certificate of Performance: Office Communications*

Successful completion of the Certificate of Performance in Office Communications offers preparation for beginning positions as a clerk, receptionist or word processor. Instruction is also provided in basic office skills including ability to use telecommunications equipment required for entry-level employment in a business, professional, educational, or industrial office.

Courses:	Units
**CBTE 95 Keyboarding/Typing Speed Development or	
CBTE 101 Keyboarding for Computers	1
CBTE 120 Beginning Microsoft Word	2
CBTE 161 Learning the Internet	1
CBTE 164 Introduction to Microsoft Outlook	1
CBTE 200 Office Telecommunications	2
CBTE 210 Computers in Business or	

CBTE 211	Office Administration	3
BUSE 119	Business Communications	3
		Total Units = 13

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

****Note: Students may take a departmental keyboarding test to waive keyboarding course requirement.**

Certificate of Performance: Computer Basics*

Courses Required for the Major:		Units
CBTE 101	Keyboarding for Computers or	
CBTE 95	Keyboarding/Typing Speed Development	1
CBTE 51	Basic Computer and Software Skills	1
CBTE 114	Introduction to Microsoft Windows	1
CBTE 120	Beginning Microsoft Word	2
		Total Units = 5

* A Certificate of Performance is a departmental award that does not appear on student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Data Management Basics*

Courses Required for the Major:		Units
CBTE 101	Keyboarding for Computers or	
CBTE 95	Keyboarding/Typing Speed Development	1
CBTE 114	Introduction to Microsoft Windows	1
CBTE 140	Microsoft Excel	2
CBTE 152	Beginning Microsoft Access	2
CBTE 200	Office Telecommunications	2
		Total Units = 8

* A Certificate of Performance is a departmental award that does not appear on student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Desktop Publishing Basics*

Courses Required for the Major:		Units
CBTE 101	Keyboarding for Computers or	
CBTE 95	Keyboarding/Typing Speed Development	1

CBTE 114	Introduction to Microsoft Windows	1
CBTE 120	Beginning Microsoft Word	2
CBTE 122	Intermediate Microsoft Word	3
CBTE 170	Desktop Publishing	2
		Total Units = 9

* A Certificate of Performance is a departmental award that does not appear on student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Office Software Basics*

Courses Required for the Major:		Units
CBTE 101	Keyboarding for Computers or	
CBTE 95	Keyboarding/Typing Speed Development	1
CBTE 114	Introduction to Microsoft Windows	1
CBTE 180	Microsoft Office	3
		Total Units = 5

* A Certificate of Performance is a departmental award that does not appear on student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Office Support Basics*

Courses Required for the Major:		Units
CBTE 101	Keyboarding for Computers or	
CBTE 95	Keyboarding/Typing Speed Development	1
CBTE 114	Introduction to Microsoft Windows	1
CBTE 120	Beginning Microsoft Word	2
CBTE 127	Introduction to PowerPoint	2
CBTE 140	Microsoft Excel	2
CBTE 152	Beginning Microsoft Access	2
CBTE 164	Introduction to Microsoft Outlook	1
		Total Units = 11

* A Certificate of Performance is a departmental award that does not appear on student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Presentation Basics*

Courses Required for the Major:		Units
CBTE 101	Keyboarding for Computers or	
CBTE 95	Keyboarding/Typing Speed Development	1

CBTE 114	Introduction to Microsoft Windows	1
CBTE 120	Beginning Microsoft Word	2
CBTE 127	Introduction to PowerPoint	2
		Total Units = 6

* A Certificate of Performance is a departmental award that does not appear on student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Records Management Basics*

Courses Required for the Major:		Units
CBTE 101	Keyboarding for Computers or	
CBTE 95	Keyboarding/Typing Speed Development	1
CBTE 114	Introduction to Microsoft Windows	1
CBTE 120	Beginning Microsoft Word	2
CBTE 140	Microsoft Excel	2
CBTE 152	Beginning Microsoft Access	2
CBTE 205	Records Management	3
		Total Units = 11

* A Certificate of Performance is a departmental award that does not appear on student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Soft Skills Basics*

Courses Required for the Major:		Units
CBTE 101	Keyboarding for Computers or	
CBTE 95	Keyboarding/Typing Speed Development	1
CBTE 114	Introduction to Microsoft Windows	1
CBTE 164	Introduction to Microsoft Outlook	1
CBTE 205	Records Management	3
CBTE 210	Computers in Business or	
CBTE 211	Office Administration	3
BUSE 119	Business Communications	3
		Total Units = 12

*A Certificate of Performance is a departmental award that does not appear on student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Web Design Basics*

Courses Required for the Major:		Units
CBTE 101	Keyboarding for Computers or	

CBTE 95	Keyboarding/Typing Speed Development	1
CBTE 114	Introduction to Microsoft Windows	1
CBTE 161	Learning the Internet	1
CBTE 165	Webpage Creation with Dreamweaver	3
CBTE 167	Webpage Creation Using Microsoft Expression Web or	3
CBTE 162	Web Page Creation	2
		Total Units = 8-9

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Word Processing Basics*

Courses Required for the Major:		Units
CBTE 101	Keyboarding for Computers or	
CBTE 95	Keyboarding/Typing Speed Development	1
CBTE 114	Introduction to Microsoft Windows	1
CBTE 120	Beginning Microsoft Word	2
CBTE 122	Intermediate Microsoft Word	3
		Total Units = 7

* A Certificate of Performance is a departmental award that does not appear on student's transcript. All courses must be completed within the San Diego Community College District.

Administrative Assistant

Prepares the student for employment in business or civil service as a general office clerk, clerk-typist, file clerk, receptionist, cashier, word processor, machine transcriptionist, or other positions not requiring stenography.

Certificate of Achievement: Computer Business Technology

Administrative Assistant

Courses Required for the Major:		Units
CBTE 95	Keyboarding/Typing Speed Development or	
CBTE 101	Keyboarding for Computers	1
CBTE 114	Introduction to Microsoft Windows	1
CBTE 120	Beginning Microsoft Word	2
CBTE 122	Intermediate Microsoft Word	3
CBTE 127	Introduction to PowerPoint	2
CBTE 140	Microsoft Excel	2

CBTE 152	Beginning Microsoft Access	2
CBTE 170	Desktop Publishing	2
CBTE 205	Records Management	3
CBTE 210	Computers in Business or	
CBTE 211	Office Administration	3
BUSE 101	Business Mathematics	3
BUSE 119	Business Communications	3

Total Units = 27

Associate in Science Degree: Computer Business Technology

Administrative Assistant

Courses Required for the Major: **Units**

CBTE 95	Keyboarding/Typing Speed Development or	
CBTE 101	Keyboarding for Computers	1
CBTE 114	Introduction to Microsoft Windows	1
CBTE 120	Beginning Microsoft Word	2
CBTE 122	Intermediate Microsoft Word	3
CBTE 127	Introduction to PowerPoint	2
CBTE 140	Microsoft Excel	2
CBTE 152	Beginning Microsoft Access	2
CBTE 164	Introduction to Microsoft Outlook	1
CBTE 170	Desktop Publishing	2
CBTE 200	Office Telecommunications	2
CBTE 205	Records Management	3
CBTE 210	Computers in Business or	
CBTE 211	Office Administration	3
BUSE 101	Business Mathematics	3
BUSE 119	Business Communications	3

Total Units = 30

For graduation requirements see **Requirements for the Associate Degree** on page 73.

Electives as needed to meet minimum of 60 units required for the degree.

Recommended Electives: Computer Business Technology 161.

Certificate of Achievement: Computer Business Technology

Administrative Office Management

The Certificate of Achievement in Administrative Office Management is designed to prepare students for employment management and/or supervisory positions in business office environments.

Courses Required for the Major: **Units**

CBTE 95	Keyboarding/Typing Speed Development or	
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CBTE 101	Keyboarding for Computers	1
CBTE 114	Introduction to Microsoft Windows	1
CBTE 161	Learning the Internet	1
CBTE 164	Introduction to Microsoft Outlook	1
CBTE 180	Microsoft Office	3
CBTE 205	Records Management or	
CBTE 210	Computers in Business	3
CBTE 211	Office Administration	3
ACCT 150	Computer Accounting Applications	3
BUSE 101	Business Mathematics	3
BUSE 119	Business Communications	3
BUSE 150	Human Relations in Business	3
BUSE 155	Managing the Small Business	3

Total Units = 28

Associate in Science Degree: Computer Business Technology

Administrative Office Management

The Associate in Science Degree in Administrative Office Management is designed to prepare students for employment management and/or supervisory positions in business office environments.

Courses Required for the Major: **Units**

CBTE 95	Keyboarding/Typing Speed Development or	
CBTE 101	Keyboarding for Computers	1
CBTE 114	Introduction to Microsoft Windows	1
CBTE 161	Learning the Internet	1
CBTE 164	Introduction to Microsoft Outlook	1
CBTE 180	Microsoft Office	3
CBTE 200	Office Telecommunications	2
CBTE 205	Records Management	3
CBTE 210	Computers in Business or	
CBTE 211	Office Administration	3
ACCT 150	Computer Accounting Applications	3
BUSE 101	Business Mathematics	3
BUSE 119	Business Communications	3
BUSE 150	Human Relations in Business	3
BUSE 155	Managing the Small Business	3

Total Units = 30

For graduation requirements see **Requirements for the Associate Degree** on page 73.

Electives as needed to meet minimum of 60 units required for the degree.

Records Information Management

The Records Information Management program prepares students for employment in business or civil service as a records management specialist.

Certificate of Achievement: Computer Business Technology

Records Information Management

Courses Required for the Major:		Units
BUSE 119	Business Communications	3
CBTE 114	Introduction to Microsoft Windows	1
CBTE 152	Beginning Microsoft Access	2
CBTE 180	Microsoft Office	3
CBTE 205	Records Management	3
CBTE 206	Electronic Records Management	3
CBTE 207	Advanced RIM Applications	3
LIBS 101	Information Literacy and Research Skills	1
Total Units = 19		

Recommended Electives: Computer Business Technology 95 or 101.

Associate in Science Degree: Computer Business Technology

Records Information Management

Courses Required for the Major:		Units
BUSE 101	Business Mathematics	3
BUSE 119	Business Communications	3
CBTE 114	Introduction to Microsoft Windows	1
CBTE 152	Beginning Microsoft Access	2
CBTE 164	Introduction to Microsoft Outlook	1
CBTE 180	Microsoft Office	3
CBTE 205	Records Management	3
CBTE 206	Electronic Records Management	3
CBTE 207	Advanced RIM Applications	3
CBTE 210	Computers in Business or	
CBTE 211	Office Administration	3
LIBS 101	Information Literacy and Research Skills	1
Total Units = 26		

For graduation requirements see **Requirements for the Associate Degree** on page 73.

Electives as needed to meet minimum of 60 units required for the degree.

Recommended Electives: Computer Business Technology 95 or 101, 120, 122, 127, 140, 177.

Legal Administrative Assistant

Provides training for specialized secretarial work in law offices, in legal departments of banks, insurance companies, real estate firms, or other business organizations, or civil service.

Certificate of Achievement: Computer Business Technology

Legal Administrative Assistant

Courses Required for the Major:		Units
CBTE 95	Keyboarding/Typing Speed Development or	
CBTE 101	Keyboarding for Computers	1
CBTE 114	Introduction to Microsoft Windows	1
CBTE 120	Beginning Microsoft Word	2
CBTE 122	Intermediate Microsoft Word	3
CBTE 127	Introduction to PowerPoint	2
CBTE 140	Microsoft Excel	2
CBTE 164	Introduction to Microsoft Outlook	1
CBTE 205	Records Management	3
CBTE 210	Computers in Business or	
CBTE 211	Office Administration	3
LEGL 100A	Introduction to Paralegalism	1
LEGL 100B	Legal Procedures	2
BUSE 101	Business Mathematics	3
BUSE 119	Business Communications	3
BUSE 140	Business Law and the Legal Environment	3
Total Units = 30		

Associate in Science Degree: Computer Business Technology

Legal Administrative Assistant

Courses Required for the Major:		Units
CBTE 95	Keyboarding/Typing Speed Development or	
CBTE 101	Keyboarding for Computers	1
CBTE 114	Introduction to Microsoft Windows	1
CBTE 120	Beginning Microsoft Word	2
CBTE 122	Intermediate Microsoft Word	3
CBTE 127	Introduction to PowerPoint	2
CBTE 140	Microsoft Excel	2
CBTE 164	Introduction to Microsoft Outlook	1
CBTE 200	Office Telecommunications	2
CBTE 205	Records Management	3
LEGL 100A	Introduction to Paralegalism	1
LEGL 100B	Legal Procedures	2
BUSE 101	Business Mathematics	3
BUSE 119	Business Communications	3
BUSE 140	Business Law and the Legal Environment	3
CBTE 210	Computers in Business or	
CBTE 211	Office Administration	3
Total Units = 32		

For graduation requirements see **Requirements for the Associate Degree** on page 73.

Electives as needed to meet minimum of 60 units required for the degree:

Recommended Electives: Business 150; Computer Business Technology 161, 170.

Courses

Computer Business Technology (CBTE)

Formerly Office Information Systems (OFCE)

Note: CBTE course numbers differ from the OFCE course numbers. For an accurate cross reference, contact the School of Business and Information Technology at 619-388-3488.

51 Basic Computer and Software Skills .75 hours lecture, .75 hours lab, 1 unit Grade Only

This course is designed to assist students in learning basic computer skills through computer hands on practice. Students learn and apply the basics of the Windows operating systems environment, data organization and management, and word processing software. This course emphasizes how to read a computer-training book and familiarizes the student with computer terminology. Credit for this course may be applied to the associate degree. (FT) Associate Degree Credit only and not Transferable.

95 Keyboarding/Typing Speed Development 3 hours lab, 1 unit Pass/No Pass Only

Advisory: Computer Business Technology 101 with a grade of "C" or better, or equivalent. This course helps students build speed and accuracy in keyboarding/typing skills. Topics include typing speed, accuracy, and techniques. Students perform short intense typing drills and timed writings. This course may be taken four times for credit. Students develop increased typing speed and accuracy with each course repetition. (FT) Associate Degree Credit only and not Transferable.

101 Keyboarding for Computers .75 hour lecture, .75 hour lab, 1 unit Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Office Information Systems 101, 102, or 164.

This course introduces students to basic keyboarding skills and document processing activities. Topics include keyboarding and basic word processing. Students practice keying by touch using word processing software. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

114 Introduction to Microsoft Windows .75 hours lecture, .75 hours lab, 1 unit Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; and Computer Business Technology 101 and 103, each with a grade of "C" or better, or equivalent.

This basic course presents an overview of the features of the Microsoft Windows operating system and the components of managing files and folders in the Windows environment. In this hands-on course, students learn to use and customize the start menu; work with Windows accessory programs; open data files; manage disks, folders and files; create shortcuts; and customize the desktop. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

120 Beginning Microsoft Word 1.5 hours lecture, 1.5 hours lab, 2 units Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; and Computer Business Technology 101 or 103, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Computer Business Technology 120A or 120B.

This course introduces students to the text editing features in Microsoft Word. Topics include insert, delete, find and replace, move and copy, headers and footers, pagination, character and document formatting, spell check, tables, and mail merge

basics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

122 Intermediate Microsoft Word
2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; and Computer Business Technology 101 or 103, and 120, each with a grade of "C" or better, or equivalent.

This course introduces students to intermediate-level text editing features in Microsoft Word. Topics include envelopes and labels, mail merge, sorting, styles, templates, wizards, macros, document notations, tables of contents and indexes, online forms, columns, drawing tools, and Web page basics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

127 Introduction to Power Point
1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; and Computer Business Technology 114 with a grade of "C" or better, or equivalent.

This course provides students with the basic knowledge of how to create, modify, and present Power Point slide shows. Students apply and modify both text and graphics. They use current software to integrate other programs with Power Point. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

140 Microsoft Excel
1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; and Computer Business Technology 101 or 103, and 114, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Computer Business Technology 140A and 140B.

This course covers the fundamentals of Microsoft Excel and is intended for students without any prior experience with this program. Topics include creating and formatting worksheets and charts, managing a workbook, and using productivity features to enter functions and analyze data. (FT)

Associate Degree Credit & transfer to CSU and/or private colleges and universities.

143 Intermediate Microsoft Excel
2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: Completion of or concurrent enrollment in: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; Computer Business Technology 101, 114, and 140 each with a grade of "C" or better, or equivalent.

This course covers intermediate-level functions and projects using Microsoft Excel. Topics include charts, pivot tables, functions, formulas, data validation, autofilters, macros, visual basic for applications, and collaboration with other programs. This course is intended for students majoring in a computer business technology field or anyone interested in expanding knowledge and competency with Microsoft Excel. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

152 Beginning Microsoft Access
1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only

Advisory: Completion of or concurrent enrollment in: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; Computer Business Technology 101 and 114, each with a grade of "C" or better, or equivalent. This course introduces students to the fundamentals of Microsoft Access. Topics include creating, modifying, and sorting database tables; creating queries; creating and enhancing custom forms and reports; modifying the database structure; and importing and exporting data to other programs. This course is intended for students majoring in a computer business technology field or anyone interested in learning the fundamental functions of Microsoft Access. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

161 Learning the Internet
.75 hours lecture, .75 hours lab, 1 unit
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5; Computer Business Technology 103 and 114, each with a grade of "C" or better, or equivalent.

This course introduces students to the Internet. Students receive hands-on practice using a web browser to navigate the World Wide Web and link to Internet resources. Topics include creating and sending e-mail, FTP and file downloading, locating newsgroups and other discussion tools, and conducting business on the Internet. This course is intended for students majoring in a variety of applied computer fields. This course may be repeated three times to update skills as browser technologies change. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

162 Web Page Creation

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5; Computer Business Technology 114 and 161, each with a grade of "C" or better, or equivalent.

This course provides a hands-on approach to planning, designing, and creating Web pages for an Intranet or World Wide Web site. Students learn to use HTML, wizards and templates to create Web pages with hypertext links and video, graphics, and audio enhancements. This course is intended for students majoring in a variety of applied computing fields. This course may be repeated three times to update skills as web page technologies change. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

164 Introduction to Microsoft Outlook

**.75 hours lecture, .75 hours lab, 1 unit
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; and Computer Business Technology 101 and 112, each with a grade of "C" or better, or equivalent.

This course is an introduction to the features of Microsoft Outlook. Students will learn how to message, schedule appointments, organize and manage tasks and contacts lists and customize Outlook. This course or sections of this course may be offered through distance education. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

165 Webpage Creation with Dreamweaver

**2.5 hours lecture, 1.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; Computer Business Technology 101, 114 and 161, each with a grade of "C" or better, or equivalent.

This course is a hands-on study of webpage creation. Students use a HyperText Markup Language (HTML) editor to create Extensible HyperText Markup Language (XHTML) and Cascading Style Sheets (CSS). Web development skills include adding behaviors, using templates and library items, and embedding hypertext links, video, graphic, and multimedia files. This course is designed for students studying web design and professionals updating their skills. This course may be repeated three times to update skills as CSS and Web technologies change. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

167 Webpage Creation Using Microsoft Expression Web

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; Computer Business Technology 101, 114 and 161, each with a grade of "C" or better, or equivalent.

This course teaches students how to create websites using Microsoft Expression Web. Students use a hands-on approach to design, analyze, create, manage, and publish websites on the Internet for personal or business use. Topics include formatting text using Hypertext Markup Language (HTML) and Extensible Hypertext Markup Language (XHTML) and Cascading Style Sheets (CSS). Other topics include images, hyperlinks, templates, tables, forms, and page layout and design. This course is intended for students majoring in Computer Business Technology or others interested in web design. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

170 Desktop Publishing

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment

Skill Level W5 and R5; Computer Business Technology 101 and 114, each with a grade of "C" or better, or equivalent.

Students in this course learn the features of desktop publishing software by designing and creating professional quality publications for business and home. Topics include text and table frames, WordArt, images, graphic accents, and Web page functions.

This course is intended for office support staff, administrative assistants, small business owners, and others who require a basic knowledge of desktop publishing. This course may be repeated three times to update skills as desktop publishing technologies change. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

180 Microsoft Office

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5; Computer Business Technology 101, 114 and 161, each with a grade of "C" or better, or equivalent.

This course covers the Microsoft Office Professional suite, which is an integrated collection of software applications (word processing, spreadsheet, database, and presentations) that share data and work in a similar and consistent manner. This course includes instruction on how to seamlessly integrate data within and between the programs in an efficient manner. This course is intended for students interested in learning a business software suite. This course may be repeated three times to update skills as Microsoft Office Professional Suite technologies change. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

200 Office Telecommunications

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

This course provides students with a fundamental working knowledge of voice, data, and video telecommunications that can be applied in their business and personal lives. The course introduces telecommunications networks, transmitting, receiving, and satellite technologies. Topics include basic communication theory, fundamentals of telephone systems, and components of data communications systems. This course is intended for

students interested in the selection or use of office telecommunications systems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

205 Records Management

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; and Computer Business Technology 101 with a grade of "C" or better, or equivalent.

This course is designed to prepare students for employment in the field of Records and Information Management (RIM). The course covers the fundamentals of Records Management including the principles of indexing and filing; the major filing systems—alphabetical, numerical, subject, and geographic; the role of the records management and the records manager in the information industry; selection of systems, equipment, and supplies; design, control, and maintenance of a records center; and provides experience in using the computer to manage records. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

206 Electronic Records Management

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; Computer Business Technology 205 and 151 or 180, with a grade of "C" or better, or equivalent.

This course is an introduction to electronic records management. Emphasis is placed on the use of electronic media to create and store documents. This course is designed for students pursuing a career in records management and for those interested in managing electronic files. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

207 Advanced RIM Applications

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; and Computer Business Technology 205 and 206, each with a grade of "C" or better, or equivalent.

This course involves students in hands-on applications essential for creating a records management program. Records Information Management (RIM) projects include creating an industry specific file plan, vital records protection plan, disaster recovery program, and the automation of records systems. This course is intended for students who are looking for employment or an associate degree in RIM. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

210 Computers in Business

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with credit for Office Information Systems 192.

This course is designed to prepare students for a computer related career. Computers in Business is an introductory course which covers the latest developments in computer technology, office automation, electronic communication, and the World Wide Web. This course or sections of this course may be offered through distance education. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

211 Office Administration

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5. Computer Business Technology 101, 102, 103 or 120 with a grade of "C" or better, or equivalent. Type by touch or Knowledge of Microsoft Word.

This course is designed to introduce the practical application of current office administration procedures, duties, and human relations. Specific topics include telephone and reception, transcription; mail procedures, data entry (10-key by touch), reference resources, job seeking, human relations, ethical behavior, office etiquette and dress, time management, communication systems, and oral and computer presentations. This course is recommended for the CBTE major to be a "capstone" course and is suggested to be taken at the end of their coursework. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

270 Work Experience

**Hours by Arrangement (One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.), 1-4 units
Grade Only**

A program of on-the-job learning experiences for students employed in a job related to their major or their educational goals. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Computer Information Systems

Computer and Information Sciences, Information, Network and Web Technologies, Microsoft

Award Type	Units
Certificate of Performance:	
Certified Convergent Network Technologist	9.5
Computer Programming	15
Internet Fluency	5
Desktop Support Technician	7
Network Technician	14
Microsoft Certified Technology Specialist	14.5
Certificate of Achievement:	
Computer Information Systems	31
Associate in Science Degree:	
Computer Information Systems	31*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

City College offers transfer and certification programs in the Computer Information Systems (Information Technology) field. These programs include computer literacy; application, web, and database programming; database administration;

and a variety of vendor specific and vendor neutral industry-standard certification training. The roles of the various information system professionals are to design, implement, operate, and maintain a computer information system. This system can be based on a large central mainframe computer serving hundreds of users or a small personal microcomputer on a desk. These professionals also provide services in the networking areas such as systems engineers, systems administrators, and networks specialists.

Program Emphasis

The Information Technology department's goals includes transfer and vocational programs including industry standard certifications. The Information Technology department offers Certificates of Performance, a Certificate of Achievement and an Associate Degree option.

Faculty	Office	Telephone
Larry Forman	A17-F	619-388-3666
Rose La Muraglia	A16-G	619-388-3719
Richard Pelletier	A17-G	619-388-3113

Career Options

Some careers in the Information Technology field require education beyond the associate degree in either Business, Computer Information Systems, Information Technology, Electronics, or Computer and Information Sciences. Careers in the Information Technology field include: computer consultant, help desk technician, instructional lab technician, sales specialist in computer hardware and software, support technician, computer assembler, systems integrator, network administrator, network specialist, systems engineer, systems administrator, database professionals, and web designers. Most careers in the field of Information Decision Systems require education beyond the associate degree. Careers include: applications programmer, computer operator, database administrator, maintenance programmer, programmer/analyst, and systems analyst.

Academic Programs

The programs that follow, Certificates of Performance, Certificate of Achievement and Associate Degree for preparation for transfer, require completion of the courses listed below.

Certificate of Performance Certified Convergent Network Technologist*

The Certified in Convergent in Network Technologies (CCNT) certificate provides students with competency-based training addressing convergence services. This certificate provides students with the required knowledge to perform the following job roles: Telco/Service Providers, Technical Sales Professionals, Network Administrators and Engineers, and Product Managers.

Student Learning Outcomes

Upon successful completion the student will be able to:

- Identify, list and define convergent technologies.
- Apply the principles and practices of convergent technologies to secure the Certified Convergent Network Technologist (CCNT) certification.

Courses:	Units
INWT 090A Convergent Network Technology: Basic Data Communications	2
INWT 090B Convergent Network Technology: Basic Telecommunications	1.5
INWT 090C Convergent Network Technology: Broadband Technologies	2
INWT 090D Convergent Network Technology: Computer Telephony Integration	1
INWT 090E Convergent Network Technology: Local Area Networks (LANs)	2
INWT 090F Convergent Network Technology: Voice Over IP (VoIP) Essentials	1
Total Units = 9.5	

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Computer Programming*

This Certificate of Performance in computer programming requires completion of the courses listed below and is meant to prepare students who are planning on preparing for entry-level positions in computer programming and/or information technology. The Certificate of Performance also offers students the opportunity to learn or enhance computer programming skills.

Student Learning Outcomes

Upon successful completion the student will be able to:

- Explain basic to intermediate programming methodologies and processes.
- Compare and contrast the syntax of Visual Basic, Java, and C++ programming languages.
- Apply object-oriented design and programming to create programs.
- Apply the main phases of dominant software development methodologies to create and troubleshoot business applications.

Courses:		Units
CISC 186	Visual Basic Programming	4
CISC 190	Java Programming	4
CISC 192	C/C++ Programming	4
CISC 210	System Analysis and Design	3
		Total Units = 15

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Internet Fluency*

This Certificate of Performance in Computer Information Systems requires completion of the courses listed below. The certificate is meant to prepare students who are planning for entry-level positions in the field of information technology, as well as for those students who wish to take courses or work in e-commerce.

Student Learning Outcomes

Upon successful completion the student will be able to:

- Explain the features of Web Creation Applications.
- Identify, describe, and apply Web Page creation techniques.
- Compare and contrast the features of various Web Browsers.

Courses:		Units
CBTE 161	Learning the Internet	1
CBTE 162	Web Page Creation	2
CISC 114	Introduction to Computer Graphics & Web Media	2
		Total Units = 5

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Desktop Support Technician***Student Learning Outcomes**

Upon successful completion the student will be able to:

- Recognize, identify, and assess the features of current Desktop Operating Systems.
- Apply customer service principles to the Help Desk and Desktop Support field.
- Diagnose and repair desktop operating systems problems.
- Apply Desktop and Help Desk principles in Desktop Certification exams.

Courses:		Units
INWT 100	Survey of Operating Systems	4
INWT 110	Desktop Support Technician I	3
		Total Units = 7

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Network Technician*

Courses:		Units
INWT 100	Survey of Operating Systems	4
INWT 110	Desktop Support Technician I	3
INWT 120	Network + Training	4
INWT 140	Security + Certification Training	3
		Total Units = 14

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Microsoft Certified Technology Specialist***Student Learning Outcomes**

Upon successful completion the student will be able to:

- Recognize, identify, and assess the features of current Desktop and Network Operating Systems.
- Apply customer service principles to the Help Desk, Desktop Support, and Network Support field.
- Diagnose and repair desktop and network operating systems problems.
- Compare, contrast, and design simple network topologies.
- Identify, review, and evaluate network security threats and the corresponding prevention principles and practices.
- Apply Desktop, Help Desk, Networking, and Security principles in Desktop, Networking, and Network Security Certification exams.

Courses:		Units
INWT 100	Survey of Operating Systems	4
MSFT 130	Configuring Microsoft Windows Client	2.5
MSFT 132	Windows Server Network Infrastructure, Configuring	3
MSFT 137	Windows Server Active Directory, Configuring	2.5
MSFT 160	Microsoft Exchange Server, Configuring	2.5
Total Units = 14.5		

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Student Learning Outcomes

Upon successful completion the student will be able to:

- Recognize, identify, and assess the features of current Desktop and Network Operating Systems.
- Apply customer service principles to the Help Desk, Desktop Support, and Network Support field.
- Diagnose and repair desktop and network operating systems problems.
- Compare, contrast (what will students compare and contrast? Two types of network topologies?), and design simple network topologies.
- Identify, review, and evaluate network security threats and the corresponding prevention principles and practices.

- Apply Desktop, Help Desk, Networking, and Security principles in Desktop, Networking, and Network Security Certification exams.
- Apply Business Communication principles to the Help Desk, Desktop Support, and Network Support field to create technology proposals and presentations.
- Identify and apply current project management principles to technology projects.

Certificate of Achievement: Computer Information Systems

Courses Required for the Major:		Units
ACCT 116A	Financial Accounting	4
ACCT 116B	Managerial Accounting	4
BUSE 119	Business Communications	3
BUSE 140	Business Law & the Legal Environment	3
CISC 181	Principles of Information Systems	4
CISC 186	Visual Basic Programming	4
ECON 120	Principles of Macroeconomics	3
MATH 119	Elementary Statistics	3
CISC Elective(s)*		3
Total Units = 31		

Associate in Science Degree: Computer Information Systems

Courses Required for the Major:		Units
ACCT 116A	Financial Accounting	4
ACCT 116B	Managerial Accounting	4
BUSE 119	Business Communications	3
BUSE 140	Business Law & the Legal Environment	3
CISC 181	Principles of Information Systems	4
CISC 186	Visual Basic Programming	4
ECON 120	Principles of Macroeconomics	3
MATH 119	Elementary Statistics	3
CISC Elective(s)*		3
Total Units = 31		

*Choose a minimum of 3 units in CISC. Students should consult with their counselor prior to choosing electives to ensure electives meet program and/or transfer goals.

Note: Only one Computer and Information Sciences (CISC) course from the above list may be used to satisfy SDCCD general education requirements.

Recommended electives: Computer and Information Sciences 114, 150, 190, 192, 210; Economics 121; Mathematics 116, 121.

Transfer Information**Common university majors related to the field of Computer Information Systems include:**

Bioinformatics, Business Information Systems, Cognitive Science, Computer Science and Engineering, Geographic Information Systems, Graphic Communications, Information Systems.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses**Computer and Information Sciences
(CISC)****114 Introduction to Computer Graphics and Web Media**

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

This course offers a hands-on introduction to the fundamental concepts, current applications and state-of-the art hardware and software in computer graphics and computer visualization technology. Students use professional authoring software to design, develop, debug and document computer presentations for use in business and the world wide web. Hands-on introduction to computer graphics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

121 Introduction to Operating Systems

**.75 hour lecture, .75 hour lab, 1 unit
Grade Only**

This course is an introductory hands-on study of computer operating systems for general users. Emphasis is placed on the commands and utilities necessary for effective use of computer systems. This

course may be offered for Disk Operating System (DOS), Macintosh, Microsoft Windows, OS/2, and Unix. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**128 Introduction to Computer Presentations
.75 hour lecture, .75 hour lab, 1 unit
Grade Only**

This course is an introductory hands-on study of current applications, hardware and software used to prepare effective presentations on desktop computers. Emphasis is placed on planning, designing, developing, presenting, and evaluating slide, overhead, and computer projection presentations using a combination of text and graphics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**130 Introduction to Local Area Networks
.75 hour lecture, .75 hour lab, 1 unit
Grade Only**

This is an introductory study of microcomputer local area and wide area network development, use and administration. Emphasis is placed on presenting students with a breadth of knowledge from wiring to applications and including hardware, software, transmission media, packets, frames, network topology, routing, protocols and layering. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**132 Intermediate Local Area Networking
.75 hour lecture, .75 hour lab, 1 unit
Grade Only**

This course is an introductory study of Internetworking and network applications. Emphasis is placed on presenting students with a breadth of knowledge from wiring to applications and including Internet architecture, protocols, datagrams, routing, the client server model, electronic mail, web document technologies, network management and security. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**150 Introduction to Computer and Information Sciences
3 hours lecture, 3 units
Grade Only**

This course is a survey of computers, computer systems and information sciences. Emphasis is placed on the use of computers in business and technical fields. Topics include computer equipment and programming systems, systems study, design,

development and implementation. This course is intended for all students interested in computers and how to use them. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

152 Introduction to the Linux Operating System

**3 hours lecture, 3 hours lab, 4 units
Pass/No Pass Only**

Limitation on Enrollment: This course is not open to students with credit for Computer and Information Sciences 151.

This introductory course to the Linux Operating systems is for new users to learn the programs and services that made the Linux System so increasingly popular, including: the shell, communicating to other users, manipulating files using the file structure, setting file access permissions, full-screen text editing, and programming simple shell scripts. The Novell SuSE Linux implementation is used in the course, but other versions of Linux are also appropriate. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

161 Software Project Management

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Advisory: Computer and Information Sciences 181 or 182, 186, 187, 190, 192, 193 or Mathematics 107 with a grade of "C" or better, or equivalent.

This course prepares computer science, information technology, information systems, and software engineering students with a thorough introduction to the tools and techniques associated with managing software development projects. This knowledge is required in any substantive software development project. This course assumes adequate understanding of the process of software development. It also requires access to, and the use of, Microsoft Project, a software tool that is part of the Microsoft Office family. This course is of interest to students majoring in the areas cited above, and to professional development students seeking to expand their knowledge and skills in software development management. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

181 Principles of Information Systems

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is an introduction to basic principles and theory relating to problem solving and analysis in business organizations using computers and software packages. Emphasis is placed on computer organization, data processing systems, decision support systems, and systems analysis. Business software is reviewed with an emphasis on spreadsheet systems including hands-on spreadsheet applications. This course is intended for the transfer student planning to major in business, economics, or social science. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

186 Visual Basic Programming

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Advisory: English 49 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5.

This course is an introduction to programming using Visual Basic. The course covers the fundamentals of event oriented programming in a Windows environment. Students learn to use and program a mouse, windows, forms, menus, dialog boxes, icons, buttons, text fields, files, graphics, and other components of a Windows environment in Visual Basic. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

187 Data Structures and Object-Oriented

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

This course introduces students to the topic of data structures and object-oriented software engineering. It covers basic data structures such as collections and linked structures (e.g. stacks, queues, lists, arrays, trees, and hashes) from the perspective of object-oriented implementation. It discusses issues of object-oriented analysis, design, and implementation in popular programming languages such as C++, C#, and Java. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

189A Introduction to Programming I
3 hours lecture, 3 hours lab, 4 units
Grade Only

Advisory: English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent. or Assessment Skill Levels W5 and M40; Computer and Information Sciences 150 or 181, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Computer Information Sciences 190-Java Programming. Using the popular programming language Java, this course introduces students to the process of developing simple software applications to solve typical human problems. This includes language syntax, structure, and semantics as well as the basics of object-oriented software engineering. CISC 189A and B together are a slower-paced version of CISC 190, with more programming practice. CISC 189A is the first of the two-course sequence. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Computer and Information Sciences (CISC) 189A and 189B are equal to 190. No credit for 189A or 189B if taken after 190 (per catalog).

189B Introduction to Programming II
3 hours lecture, 3 hours lab, 4 units
Grade Only

Prerequisite: Computer and Information Sciences 189A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Computer and Information Sciences 190-Java Programming. Using the popular programming language Java, this course continues the process of students learning how to solve business problems by developing useful software applications. This includes more advanced concepts like abstract data structures, graphics, and data persistence. CISC 189A and B together are a slower-paced version of CISC 190, with more programming practice. CISC 189B is the second of the two-course sequence. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course Limitation: Computer and Information Sciences (CISC) 189A and 189B are equal to 190. No credit for 189A or 189B if taken after 190 (per catalog).

190 Java Programming
3 hours lecture, 3 hours lab, 4 units
Grade Only

Advisory: English 49 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5.

This course is an introduction to programming using Java. The course covers the fundamentals of object oriented programming utilizing the Java programming language for general purpose business programs and interactive World Wide Web based Internet programs. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

192 C/C++ Programming
3 hours lecture, 3 hours lab, 4 units
Grade Only

Advisory: English 49 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5; and Computer and Information Sciences 186 with a grade of "C" or better, or equivalent.

This course presents basic programming concepts using the C++ programming language. The organization of standard I/O classes is emphasized. Structured and object oriented programming techniques are presented and used to design and implement a variety of programming problems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

193 Microsoft C# Software Engineering 1
3 hours lecture, 3 hours lab, 4 units
Grade Only

This course applies industry-standard software engineering principles to the study of the object-oriented, general purpose programming language Microsoft C#, a member of the Microsoft Visual Studio.NET software development toolset. Coverage includes the typical topics of an introductory programming course. Extensive hands-on training is included in the laboratory sessions. This course can be offered in-class or online. This course is designed for students pursuing a degree in Computer Science or Information Systems and for vocational/professional students who are updating their programming skills set. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

205 Object Oriented Programming Using C++

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

This course introduces students to Object Oriented Programming (OOP) using the C++ programming language and includes the essential concepts related to OOP including use of classes and objects, inheritance, templates, polymorphism, pointers and references, and I/O streams. Students may apply this course to an Associate Degree or Certificate and may be transferred to CSU and private colleges and universities. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

210 System Analysis and Design

**3 hours lecture, 3 units
Grade Only**

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6. This course is an introductory, experiential study of the phases of the object-oriented software development life cycle (OOSDLC), including: stakeholder and requirements analysis; use cases development; software architecture; project management; user interface considerations; interactive and prototyping methodology; component construction; quality assurance; and configuration management. This course is intended for students seeking advanced knowledge and applications in Computer and Information Sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

220 Fundamentals of Computer Game Programming

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Advisory: Computer and Information Sciences 187 or 190 or 192 or 193, with a grade of "C" or better, or equivalent. This course introduces software programmers to the design and development of simple graphical computer-based games. The course may use Java or C# as the programming language of choice. Emphasis is placed on developing games in a team environment, designing logical games that satisfy player needs, and on ensuring that games are of high quality through use of software engineering best practices and proper testing. This course is for students with some previous software programming

experience. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

290 Independent Study

**Hours by Arrangement, 1-3 units
Grade Only**

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

Typically for advanced students in Computer and Information Sciences who wish to pursue special problems and projects related to the area. The student will meet with the instructor at specific intervals and will be expected to accomplish primary research, problem analysis and report preparation relating to an approved project or course of study. This course may be taken four times with different content for a maximum of six units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Information, Network, and Web Technology (INWT)

81 Microsoft Office: Troubleshooting and Problem Solving

**6 hours lab, 2 units
Grade Only**

Advisory: Computer Business Technology 180 with a grade of "C" or better, or equivalent. This course is designed to cover the major components of the Microsoft Office software and includes coverage of the newly bundled applications such as FrontPage, Publisher, and PhotoDraw. Emphasis is placed on a more detailed understanding of Microsoft Office with its new functions for total Internet integration and collaboration. Content includes problem solving, troubleshooting and advanced solutions to client issues with the software components. (FT) Associate Degree Credit only and not Transferable.

90A Convergent Network Technology: Basic Data Communications

**2 hours lecture, 2 units
Pass/No Pass Only**

Corequisite: Information, Network, and Web Technologies 90B, 90C, 90D, 90E, and 90F.

Limitation on Enrollment: This course is not open to students with previous credit for Computer & Information Sciences 265C, Convergent Network Technology Basic Data Communications.

This course provides students with basic data communications knowledge and skills. The student is introduced to the technology of networking architecture, packet - switching, fiber optics, data modalities for blended solutions. This course follows Computer-Prep Curriculum and is intended to prepare students to take the Computer-Prep Certified in Convergent Network Technologies (CCNT) Basic Data Communications exam. (FT) Associate Degree Credit only and not Transferable.

90B Convergent Network Technology: Basic Telecommunications

**1.5 hours lecture, 1.5 units
Pass/No Pass Only**

Corequisite: Information, Network, and Web Technologies 90A, 90C, 90D, 90E, and 90F.

Limitation on Enrollment: This course is not open to students with previous credit for Computer & Information Sciences 265D, Convergent Network Technology Basic Telecommunications.

This course provides students with basic telecommunications knowledge and skills. The student is introduced to the technology of networks, business communications systems, signaling, Internet telephony and switching. This course follows Computer-Prep Official Curriculum and is intended to prepare students to take the Computer-Prep Certified in Convergent Network Technologies (CCNT) Basic Telecommunications exam. (FT) Associate Degree Credit only and not Transferable.

90C Convergent Network Technology: Broadband Technologies

**2 hours lecture, 2 units
Pass/No Pass Only**

Corequisite: Information, Network, and Web Technologies 90A, 90B, 90D, 90E, and 90F.

Limitation on Enrollment: This course is not open to students with previous credit for Computer & Information Sciences 265E, Convergent Network Technology: Broadband Technologies.

This course provides students with basic broadband technologies knowledge and skills. The student develops an understanding for Convergent Technologies and the need for transmitting more than one type of signal simultaneously by way of divided channel. Emphasis is placed on the exploration of the technology of voice and data integration, frame relay, Synchronous Optical Network (SONET), Asynchronous Transfer Mode (ATM)/cell relay, Switched Multi-megabit Digital Service (SMDS), Broadband Integrated Services Digital Network (BISDN), Digital Subscriber Line (DSL), and Virtual Private Network (VPN). This course follows Computer-Prep Official Curriculum and is intended to prepare students to take the Computer-Prep Certified in Convergent Network Technologies (CCNT) Broadband Technologies exam. (FT) Associate Degree Credit only and not Transferable.

90D Convergent Network Technology: Computer Telephony Integration

**1 hour lecture, 1 unit
Pass/No Pass Only**

Corequisite: Information, Network, and Web Technologies 90A, 90B, 90C, 90E, and 90F.

Limitation on Enrollment: This course is not open to students with previous credit for Computer & Information Sciences 265F, Convergent Network Technologies: Computer Telephony Integration. This course is designed to provide students with instruction in Computer-Telephony Integration (CTI) Essentials that build on Convergent Technologies competencies. The student is introduced to the technology of merging voice, video and data on a single network, and the intersection of telephone, television, cable and Internet networks. This course follows Computer-Prep Official Curriculum and is intended to prepare students to take the Computer-Prep Certified in Convergent Network Technologies (CCNT) Computer-Telephony Integration (CTI) Essentials exam. (FT) Associate Degree Credit only and not Transferable.

90E Convergent Network Technology: Local Area Networks (LANs)

**2 hours lecture, 2 units
Pass/No Pass Only**

Corequisite: Information, Network, and Web Technologies 90A, 90B, 90C, 90D, and 90F.

Limitation on Enrollment: This course is not open to students with previous credit for Computer & Information Sciences 265H, Convergent Network Technology: Local Area Networks (LANs).

This course provides students with basic training in local area networks (LANs). The student develops a critical understanding of the concepts and technology of LAN topologies, information transfer, transmission techniques, media standards, and network management. This course follows Computer-Prep Official Curriculum and is intended to prepare students to take Computer-Prep Certified in Convergent Network Technologies (CCNT) Local Area Networks (LANs) exam. (FT) Associate Degree Credit only and not Transferable.

90F Convergent Network Technology: Voice Over IP (VoIP) Essentials

**1 hour lecture, 1 unit
Pass/No Pass Only**

Corequisite: Information, Network, and Web Technologies 90A, 90B, 90C, 90D, and 90E.

Limitation on Enrollment: This course is not open to students with previous credit for Computer & Information Sciences 265G, Convergent Network Technology: Voice Over IP (VoIP) Essentials. This course is designed to assist students in learning Voice Over IP. This course builds knowledge of Convergent Technologies and focuses on understanding the principles of transmitting voice calls and fax over the Internet. Students analyze VoIP networks, bandwidth compression, the Gateway, packet prioritization, Resource Reservation Protocol (RSVP), H.320 and H.323, and Wide Area Network (WAN) engineering issues. This course follows Computer-Prep Official Curriculum and is intended to prepare students to take the Computer-Prep Certified in Convergent Network Technologies (CCNT) Voice Over IP (VoIP) Essentials exam. (FT) Associate Degree Credit only and not Transferable.

100 Survey of Operating Systems

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

This project-based course is a survey of several operating systems (OS) and provides students with the opportunity to gain hands-on experience in the installation and configuration of desktop operating systems. The students work with one legacy, two current Windows, and a current version of a Linux operating systems. This course is intended for students seeking a degree or career in Information Technology and provides students with concepts and practices which includes the installation and configuration of client systems used in the Help Desk, Systems Administration, and

support technician fields. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

110 Desktop Support Technician I

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Completion of or concurrent enrollment in Information, Network, And Web Technologies 100 with a grade of "C" or better, or equivalent. This course prepares students with the knowledge and skills required to take and pass the first Microsoft Desktop Support Technician exam (Exam 70-271). Students completing this course are prepared for an entry level position in the desktop support industry. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

120 Network + Training

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Advisory: English 48 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5. This is a project-oriented course that provides students with the knowledge and skills to support, maintain, and deploy networking systems and devices. This course follows the official Computing Technology Industry Association (CompTia) curriculum and is intended to prepare students to take the Network + exam and develop the job skills of a network support technician. This course may be taken three times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

140 Security+ Certification Training

**2 hours lecture, 3 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: Computer and Information Sciences 130 or Electronic Systems 229 or Microsoft 050 with a grade of "C" or better, or equivalent. This course provides students with the knowledge and skills needed to plan, implement, and monitor network security policies, procedures, and technologies in any type of network environment. Students learn general security concepts, communications security, infrastructure security, basic principles of cryptography, and operations and organizational security factors affecting network environments. This course prepares students for the Security + exam. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Microsoft (MSFT)

130 Configuring Microsoft Windows Client 1 hour lecture, 4.5 hours lab, 2.5 units Grade Only

Advisory: Information, Network, and Web Technologies 100 with a grade of "C" or better, or equivalent.

This course provides students with the knowledge and skills to install and configure Windows desktops and to configure mobile computers and applications that run on Windows in a network environment. Course content follows the Microsoft Official Academic Course curriculum and is intended to prepare students to take the Microsoft Client component of the Microsoft Certified IT Professional (MCITP) and Microsoft Certified Technology Specialist (MCTS) certification exam. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

132 Windows Server Network Infrastructure, Configuring 1.5 hours lecture, 4.5 hours lab, 3 units Letter Grade or Pass/No Pass Option

Prerequisite: Microsoft 130 with a grade of "C" or better, or equivalent.

This course provides students with the knowledge and skills to configure and troubleshoot a Windows server network infrastructure. Students learn how to configure secure network access, implement fault tolerant storage technologies, secure servers and maintain update compliance. Course content follows the Microsoft Official Academic Course curriculum and is intended to prepare students to take the Microsoft Client component of the Microsoft Certified IT Professional (MCITP) and Microsoft Certified Technology Specialist (MCTS) certification exam. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

137 Windows Server Active Directory, Configuring 1 hour lecture, 4.5 hours lab, 2.5 units Letter Grade or Pass/No Pass Option

Prerequisite: Microsoft 132 with a grade of "C" or better, or equivalent.

This course provides students with the knowledge and skills to configure Active Directory (AD) Domain Services in a distributed environment, implement

group policies, perform back and restore, and monitor and troubleshoot AD related issues. Students also learn to configure identity and access solutions with Windows Server 2008 AD. Course content follows the Microsoft Official Academic Course curriculum and is intended to prepare students to take the Microsoft Server 2008 Active Directory Configuring Exam 70-640 required for the Microsoft Certified Technology Specialist (MCTS) and Microsoft Certified IT Professional (MCITP) certifications, Enterprise Administrator and Server Administrator. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

160 Microsoft Exchange Server, Configuring 1 hour lecture, 4.5 hours lab, 2.5 units Letter Grade or Pass/No Pass Option

Prerequisite: Microsoft 132 with a grade of "C" or better, or equivalent.

This course provides students with the knowledge and skills necessary to install, configure and administer a Microsoft Exchange Server. Emphasis is placed on managing messaging and connection security, message recovery, and monitoring and troubleshooting the Microsoft Exchange Server. Course content follows the Microsoft Official Academic Course curriculum and is intended to prepare students to take the Microsoft Server component of the Microsoft Certified Technology Specialist (MCTS) and the Microsoft Certified IT Professional (MCITP) certification exam (70-236). (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Computer Technical Illustration "Engineering Technology" on page 263.

Construction Trades

Construction Systems, Electrical, Pipefitting,
Plumbing, Sheet Metal

Award Type	Units
Certificate of Achievement:	
Electrical Trade Option	24
Pipefitting Trade Option	21
Plumbing Trade Option	24
Sheet Metal Trade Option	21
Associate in Science Degree:	
Electrical Trade Option	24*
Pipefitting Trade Option	21*
Plumbing Trade Option	24*
Sheet Metal Trade Option	21*

*and courses to meet graduation requirements,
general education and electives as needed to meet
minimum of 60 units required for the degree.

Description

This program is designed for the student who is interested in a construction-related career. The specialized trade options of Electrical, Plumbing, and Sheet Metal are offered parallel to the apprenticeship related instructional programs. Each option provides in-depth information and a working knowledge of tools, materials and techniques used in the industry. These courses are not designed for the handyman, but for the individual pursuing a career in a related field. Program planning should occur with the assistance of a department member. All courses have been designed to be taken sequentially.

Student Learning Outcomes

Through the process of engagement with combined lecture, related curriculum on theory and hands-on lab practice, the student will be able to:

- Demonstrate preparedness for successful transition into the construction trade specialty area with a demonstrated understanding of theory and practice required by the workforce professional.
- Duplicate procedures for trade and industry-specific practices in use of tools, techniques and hands-on skills with related competencies for the construction trade specialty area.
- Identify and use equipment and related components of the construction trade specialty area to meet standards for measurement, calibration and best practices.

- Read, comprehend and apply construction trade specialty area instructions and design standards for outcomes as required by construction specialty practices and regulations.

Certificate of Achievement: Construction Trades

Electrical Trade Option (Non-apprentice)

Courses Required for the Major:	Units
ELEC 160A Introduction to Electrical Construction I	3
ELEC 160B Introduction to Electrical Construction II	3
ELEC 165A Intermediate Electrical Construction I	3
ELEC 165B Intermediate Electrical Construction II	3
ELEC 170A Advanced Electrical Construction I	3
ELEC 170B Advanced Electrical Construction II	3
ELEC 175A Electrical Construction Specialties I	3
ELEC 175B Electrical Construction Specialties II	3
Total Units = 24	

Certificate of Achievement: Construction Trades

Pipefitting Trade Option (Non-apprentice)

Courses Required for the Major:	Units
PLBG 160A Introduction to Plumbing I	3
PLBG 160B Introduction to Plumbing II	3
PLBG 165A Intermediate Plumbing I	3
PLBG 165B Intermediate Plumbing II	3
PLPF 180 Introduction to Pipefitting	3
PLPF 185 Intermediate Pipefitting	3
PLPF 190 Advanced Pipefitting	3
Total Units = 21	

Certificate of Achievement: Construction Trades

Plumbing Trade Option (Non-apprentice)

Courses Required for the Major:	Units
PLBG 160A Introduction to Plumbing I	3
PLBG 160B Introduction to Plumbing II	3
PLBG 165A Intermediate Plumbing I	3
PLBG 165B Intermediate Plumbing II	3
PLBG 170A Advanced Plumbing I	3
PLBG 170B Advanced Plumbing II	3

PLBG 175A	Plumbing Construction Specialties	3
PLBG 175B	Plumbing Code	3

Total Units = 24

Certificate of Achievement: Construction Trades

Sheet Metal Trade Option (Non-apprentice)

Courses Required for the Major:		Units
SHEE 60A	Level I Sheet Metal/HVAC	3
SHEE 60B	Level I Sheet Metal/HVAC	3
SHEE 65A	Level II Sheet Metal/HVAC	3
SHEE 65B	Level II Sheet Metal/HVAC	3
SHEE 70A	Level III Sheet Metal/HVAC	3
SHEE 70B	Level III Sheet Metal/HVAC	3
SHEE 75A	Level IV Sheet Metal/HVAC	3

Total Units = 21

Associate in Science Degree: Construction Trades

Electrical Trade Option (Non-apprentice)

Courses Required for the Major:		Units
ELEC 160A	Introduction to Electrical Construction I	3
ELEC 160B	Introduction to Electrical Construction II	3
ELEC 165A	Intermediate Electrical Construction I	3
ELEC 165B	Intermediate Electrical Construction II	3
ELEC 170A	Advanced Electrical Construction I	3
ELEC 170B	Advanced Electrical Construction II	3
ELEC 175A	Electrical Construction Specialties I	3
ELEC 175B	Electrical Construction Specialties II	3

Total Units = 24

Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Associate in Science Degree: Construction Trades

Pipefitting Trade Option (Non-apprentice)

Courses Required for the Major:		Units
PLBG 160A	Introduction to Plumbing I	3

PLBG 160B	Introduction to Plumbing II	3
PLBG 165A	Intermediate Plumbing I	3
PLBG 165B	Intermediate Plumbing II	3
PLPF 180	Introduction to Pipefitting	3
PLPF 185	Intermediate Pipefitting	3
PLPF 190	Advanced Pipefitting	3

Total Units = 21

Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Associate in Science Degree: Construction Trades

Plumbing Trade Option (Non-apprentice)

Courses Required for the Major:		Units
PLBG 160A	Introduction to Plumbing I	3
PLBG 160B	Introduction to Plumbing II	3
PLBG 165A	Intermediate Plumbing I	3
PLBG 165B	Intermediate Plumbing II	3
PLBG 170A	Advanced Plumbing I	3
PLBG 170B	Advanced Plumbing II	3
PLBG 175A	Plumbing Construction Specialties	3
PLBG 175B	Plumbing Code	3

Total Units = 24

Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Associate in Science Degree: Construction Trades

Sheet Metal Trade Option (Non-apprentice)

Courses Required for the Major:		Units
SHEE 60A	Level I Sheet Metal/HVAC	3
SHEE 60B	Level I Sheet Metal/HVAC	3
SHEE 65A	Level II Sheet Metal/HVAC	3
SHEE 65B	Level II Sheet Metal/HVAC	3
SHEE 70A	Level III Sheet Metal/HVAC	3
SHEE 70B	Level III Sheet Metal/HVAC	3
SHEE 75A	Level IV Sheet Metal/HVAC	3

Total Units = 21

Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Courses

Construction Systems (CONS)

60A Construction Systems-Introduction to HVAC I

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 and M40.

Limitation on Enrollment: This course is not open to students with previous credit for Heating, Ventilation, Air Conditioning Apprenticeship (HVAC) 301.

In this course, trade mathematics and drawings, the tools of the trade, blueprint terminology and basic rigging equipment and procedures as applicable to HVAC are covered. This course is designed to give the construction HVAC student an understanding of copper and plastic piping practices. (FT) Associate Degree Credit only and not Transferable.

60B Construction Systems-Introduction to HVAC II

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Construction Systems 60A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Heating, Ventilation, Air Conditioning Apprenticeship (HVAC) 302.

This course introduces the construction HVAC trainee to the basic concepts and environmental concerns related to heating, ventilation and air conditioning, including: soldering, brazing, ferrous metal piping practices, basic electricity, heating and cooling. This course also describes the HVAC program and the career opportunities available in the HVAC trade. (FT) Associate Degree Credit only and not Transferable.

61A Construction Systems-Intermediate HVAC I

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Construction Systems 60B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Heating, Ventilation, Air Conditioning Apprenticeship (HVAC) 303.

This course instructs the HVAC trainee in the properties of air, and covers chimneys, flues and vents. Students are introduced to basic mechanical procedures commonly performed in HVAC service work, such as the operation, installation and servicing of electric furnaces. This course also introduces the student to alternating current and electronic components and circuits used in HVAC systems. (FT) Associate Degree Credit only and not Transferable.

61B Construction Systems-Intermediate HVAC II

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Construction Systems 61A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Heating, Ventilation, Air Conditioning Apprenticeship (HVAC) 304.

This course instructs the HVAC trainee in HVAC controls and metering devices and introduces the trainee to control circuit analysis. This course also covers compressors and heat pumps and instructs the student in leak detection, evacuation, recovery and charging service procedures used to troubleshoot, repair and/ or maintain proper operation of the mechanical refrigeration system. (FT) Associate Degree Credit only and not Transferable.

62A Construction Systems-Advanced HVAC I 2 hours lecture, 3 hours lab, 3 units Grade Only

Prerequisite: Construction Systems 61B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Heating, Ventilation, Air Conditioning Apprenticeship (HVAC) 305.

This course instructs the HVAC trainee in preventive maintenance and provides an introduction to troubleshooting applying to all types of HVAC equipment. This course also covers troubleshooting electronic controls, gas heating, electric heating and oil heating. (FT) Associate Degree Credit only and not Transferable.

62B Construction Systems-Advanced HVAC II 2 hours lecture, 3 hours lab, 3 units Grade Only

Prerequisite: Construction Systems 62A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Heating, Ventilation, Air Conditioning Apprenticeship (HVAC) 306. This course instructs the HVAC trainee in troubleshooting cooling, accessories, heat pumps and commercial heating and cooling systems. This course also covers water and air balance, steam systems and customer relations. (FT) Associate Degree Credit only and not Transferable.

63A Construction Systems-HVAC Specialties I
2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Construction Systems 62B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Heating, Ventilation, Air Conditioning Apprenticeship (HVAC) 307. This course covers advanced blueprint reading and specifications as they relate to HVAC, indoor air quality and energy conservation equipment commonly used in HVAC systems. This course also covers energy management systems and the methods of water treatment and water treatment equipment used with HVAC systems. (FT) Associate Degree Credit only and not Transferable.

63B Construction Systems-HVAC Specialties II
2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Construction Systems 63A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Heating, Ventilation, Air Conditioning Apprenticeship (HVAC) 308. This course covers commercial heating and cooling systems, maintenance of these systems and system start-up and shut down. This course also covers commercial and industrial refrigeration systems, equipment, refrigerated warehouses, walk-in coolers display cases, etc. (FT) Associate Degree Credit only and not Transferable.

70A Construction Systems-Introduction to Low Voltage Building Systems I
2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40.

Limitation on Enrollment: This course is not open to students with previous credit for Construction Electronic Systems Technician 301A.

This course provides the Construction Systems - Low Voltage Building Systems student with instruction in general construction site safety, measurements and formulas, use of hand and power tools, interpretation of blueprints, basic rigging techniques and methods used to move equipment and materials. Associate Degree Credit only and not Transferable.

70B Construction Systems-Introduction to Low Voltage Building Systems II
2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Construction Systems 70A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Construction Electronic Systems Technician 301B.

This course provides the Construction Systems - Low Voltage Building Systems student with instruction in industry standards, and building codes, residential and commercial construction methods, basic electrical theory, electrical meters, OSHA safety standards, and ladders and rigging. (FT) Associate Degree Credit only and not Transferable.

71A Construction Systems-Intermediate Low Voltage Building Systems I
2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Construction Systems 70B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Construction Electronic Systems Technician 302A.

This course provides the Construction Systems - Low Voltage Building Systems student with instruction in mathematics related to the trade, electronic theory, electronic measurement tools and techniques, AC and DC electrical systems and grounding, and blueprint reading related to the trade. (FT) Associate Degree Credit only and not Transferable.

71B Construction Systems-Intermediate Low Voltage Building Systems II
2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Construction Systems 71A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Construction Electronic Systems Technician 302B.

This course provides the Construction Systems - Low Voltage Building Systems student with instruction in types of cabling, switches and relays, terminating conductors, low-voltage codes and standards, and computer cabling applications. (FT) Associate Degree Credit only and not Transferable.

72A Construction Systems-Advanced Low Voltage Building Systems I

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Construction Systems 71B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Construction Electronic Systems Technician 303A.

This course provides the Construction Systems - Low Voltage Building Systems student with instruction in wire and cable selection, advanced buses and networks, fiber optic installation, cable and satellite television systems, and wireless communications. (FT) Associate Degree Credit only and not Transferable.

72B Construction Systems-Advanced Low Voltage Building Systems II

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Construction Systems 72A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Construction Electronic Systems Technician 303B.

This course provides the Construction Systems - Low Voltage Building Systems student with instruction in site survey, job planning and documentation, maintenance and repair, supervision, and fire and security alarm systems. (FT) Associate Degree Credit only and not Transferable.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Courses

Electrical (ELEC)

160A Introduction to Electrical Construction I 2 hours lecture, 3 hours lab, 3 units Grade Only

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 and M40.

Limitation on Enrollment: This course is not open to students with previous credit for Electrical 60A or 301A.

This course provides the electrical worker with instruction in general construction site safety, measurements and formulas, use of hand and power tools, interpretation of blueprints, basic rigging techniques and methods used to move equipment and materials. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

160B Introduction to Electrical Construction II

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Electricity 60A, 160A or 301A, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Electricity 60B or 301B.

This course provides the electrical student with instruction in basic principles of electrical safety and hazard procedures, including working with toxics and vapors. Students are also provided with instruction in techniques used to hand bend conduits and install anchors and supports. Additional instruction included an introduction to basic electrical theory and test equipment, the use of National Electric Code (NEC) boxes, fittings and conductors, and the interpretation of related electrical blueprints and commercial/industrial/residential symbols, diagrams and schematics used for wiring. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

165A Intermediate Electrical Construction I
2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Electricity 60B, 160B or 301B, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Electricity 65A or 302A.

This course is an intermediate study of electrical techniques. Topics include the principles of alternating currents, the characteristics of circuits, transformers, motor theory applications, grounding purposes and methods, National Electrical Code (NEC) requirements for conduit bending, types of bends, specifications for boxes and fittings, and location considerations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

165B Intermediate Electrical Construction II
2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Electricity 65A, 165A or 302A, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Electricity 65B or 302B.

This course covers the installation of connections for conductor termination and splices; use of cable pulling instruments and National Electrical Manufacturers Association (NEMA) and National Electrical Code (NEC) standards for cable tray; installation of electrical service and related components and equipment; use of material take-off methods and troubleshooting techniques; identification of ratings for current breakers and fuses and regulations for sizing use, and installation of relay switches, conductors and overrides; electrical lighting principles, types and applications. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

170A Advanced Electrical Construction I
2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Electrical 165B (formerly Electrical 65B) or 302B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Building Construction Technology 212 or Electrical 303A or 70A.

This course is an advanced study of electrical techniques. Topics include branch load calculations for circuits and varied electrical appliances, electrical conductors, devices used for overprotection of loads, currents, circuits and fuses, fill requirements for boxes/raceways, principles of wiring devices, switches and receptacles, requirements for distribution equipment, settings for voltage, switch gear, circuits and components, distribution system transformers, National Electrical Code (NEC) requirements, and troubleshooting. This course is designed for students in the Electrical program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

170B Advanced Electrical Construction II
2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Electrical 170A (formerly Electrical 70A) or 303A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Building Construction Technology 213 or Electrical 303B or 70B.

This course provides the electrical worker with instruction in basic lighting and National Electrical Code (NEC) requirements for indoor and outdoor lighting. Topics include introductory motor basics, including calculations, transformers, instruments for testing, wiring, protection, maintenance, and troubleshooting for various types of motors and motor controls. This course also covers an introduction to heating, ventilation, and air conditioning (HVAC) systems and refrigeration theory, including compressors, operating systems and system maintenance equipment, and safety requirements. The principles of combustion, hazardous materials, their reactions in varied locations, and the use of safety equipment is also included in this course. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

175A Electrical Construction Specialties I
2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Electrical 170B (formerly Electrical 70B) or 303B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Building Construction Technology 222 or Electrical 304A or 75A.

This course provides the electrical worker with instruction in calculations for wiring commercial and residential dwellings and National Electrical Code (NEC) requirements for lighting and specialty fixtures. Topics include the standby emergency electrical systems and system applications, disconnect switches, feeder and branch circuits for direct current (DC) systems, theory and operating principles for solid-state devices, operational amplifier circuits, transformers and components of fire alarm and security systems, and installation methods for smoke and heat detectors. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

175B Electrical Construction Specialties II 2 hours lecture, 3 hours lab, 3 units Grade Only

Prerequisite: Electrical 175A (formerly Electrical 75A) or 304A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Building Construction Technology 223 or Electrical 304B or 75B.

This course is designed to provide the electrical worker with advanced instruction in controls for motors, starters, relays, switches and transformers as well as in the installation and connection of gas burner controls and commercial and industrial Heating Ventilation and Air Conditioning (HVAC) control systems. Topics also include National Electrical Code (NEC) and Occupational Safety and Health Administration (OSHA) requirements for connecting and grounding varied welding machines, installation and protection of heat-tracing and freeze protection equipment, principles and maintenance of motors, and selection of materials and tools required for high voltage termination/splices according to manufacturer's specifications. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

270 Electrical Work Experience Hours by Arrangement (One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.), 1-4 units Grade Only

Advisory: Completion of English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

The Electrical Work Experience program is designed to provide an opportunity to extend occupational learning through employment and coordinate the

on-the-job training and the classroom instruction. The goals and learning objectives will be designed by the student cooperatively with the employer and Work Experience instructor/coordinator. (FT) Associate Degree Credit only and not Transferable.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Pipefitting (PLPF)

180 Introduction To Pipefitting 2 hours lecture, 3 hours lab, 3 units Grade Only

Prerequisite: Plumbing (PLBG) 165B or 320, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Pipefitting (PLPF) 80 or 325.

This course is designed to give the Pipefitting student an introduction to blueprint drawings and detail sheets, piping systems, standards and specifications. The course content includes advanced blueprint reading and trade math as well as motorized equipment and aboveground pipe installation. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

185 Intermediate Pipefitting 2 hours lecture, 3 hours lab, 3 units Grade Only

Prerequisite: Pipefitting (PLPF) 180 or 325, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Pipefitting (PLPF) 85 or 330.

This course is designed to give the Pipefitting student instruction in pipe hangers and supports, identifying and installing valves, field routing and vessel trim and spring can supports. Emphasis is placed on planning work activities and performing non-destructive examination testing. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

190 Advanced Pipefitting

2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Pipefitting (PLPF) 185 or 330, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Pipefitting (PLPF) 90 or 335.

This course is designed to give the Pipefitting student instruction in advanced pipe fabrication, aligning pipe to rotating equipment, steam traps, in-line specialties, special piping, hot taps and maintaining valves. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

270 Pipefitting Work Experience

Hours by Arrangement (One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.), 1-4 units
Grade Only

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

The Pipefitting Work Experience program is designed to provide an opportunity to extend occupational learning through employment and coordinate the on-the-job training and the classroom instruction. The goals and learning objectives will be designed by the student cooperatively with the employer and work experience instructor/coordinator. (FT) Associate Degree Credit only and not Transferable.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Plumbing (PLBG)

160A Introduction To Plumbing I

2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: English 48 and English 49 and Mathematics 38, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 and M30.

Limitation on Enrollment: This course is not open

to students with previous credit for Plumbing (Construction Trades) 60A, 105 or 305.

This course is designed to give the plumbing student introductory information regarding OSHA (Occupational Safety & Health Administration) standards of safety and precautions for working on the construction site; a review of math as it relates to plumbing, hand and power tool usage, basic plumbing blueprint reading, welding and basic rigging. This course is designed for students planning a career in the plumbing trade. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

160B Introduction To Plumbing II

2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Plumbing (Construction Trades) 160A or 305, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Plumbing (Construction Trades) 60B, 110 or 310.

This course is designed to give the plumbing student an introduction to reading and interpreting the International Association of Plumbing & Mechanical Officials (IAPMO) uniform plumbing codes and residential plumbing drawings, identifying various types of pipe and the procedures for working with the pipe. This course also includes identification of various plumbing lines and their components. This course is designed for students planning a career in the plumbing trade. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

165A Intermediate Plumbing I

2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Plumbing (Construction Trades) 160B or 310, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Plumbing (Construction Trades) 65A, 115 or 315.

This course is designed to provide the intermediate plumbing student the knowledge of introductory plumbing math, the identification of various commercial drawings, the installation of DWV (Drain, Waste & Vent) piping components and systems for commercial properties utilizing local and National Plumbing Codes. This course is designed for students planning a career in the plumbing trade. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

165B Intermediate Plumbing II **2 hours lecture, 3 hours lab, 3 units** **Grade Only**

Prerequisite: Plumbing (Construction Trades) 165A or 315, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Plumbing (Construction Trades) 65B or 120 or 320.

This course is designed to give the intermediate plumbing student the ability to perform testing of water supply piping and systems, installation of the components of a water supply system, and the ability to read and interpret commercial plumbing drawings for project requirements according to local and national codes. The application of advanced trade math concepts is further developed. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

170A Advanced Plumbing I **2 hours lecture, 3 hours lab, 3 units** **Grade Only**

Prerequisite: Plumbing (Construction Trades) 165B or 320, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Plumbing (Construction Trades) 70A, 125 or 325.

This course is designed to provide the advanced plumbing student with the ability to perform applications of advanced math for plumbers and methods of handling waste. This course also provides information relating to water softening measures, methods of locating buried lines, the installation and maintenance of waste pressure booster systems, and the prevention of backflow. This course is designed for students planning a career in the plumbing trade. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

170B Advanced Plumbing II **2 hours lecture, 3 hours lab, 3 units** **Grade Only**

Prerequisite: Plumbing (Construction Trades) 175B or 340, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Plumbing (Construction Trades) 70B, 130 or 330.

This course is designed to provide the advanced plumbing student with the ability to organize job tasks, clean and disinfect potable water systems, thaw frozen pipes, install main to meter water services and solar systems. This course also covers the ability to rough-in fixtures for residential,

commercial and handicapped settings and install natural gas and storm drainage systems. This course is designed for students planning a career in the plumbing trade. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

175A Plumbing Construction Specialties **2 hours lecture, 3 hours lab, 3 units** **Grade Only**

Prerequisite: Plumbing (Construction Trades) 170B or 330, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Plumbing (Construction Trades) 75A, 135 or 335.

This course is designed to introduce the plumbing student to specialty topics such as swimming pool installation, medical gas systems, mobile home and mobile home park plumbing systems, and private water waste and treatment systems. This course is designed for students planning a career in the plumbing trade. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

175B Plumbing Code **2 hours lecture, 3 hours lab, 3 units** **Grade Only**

Prerequisite: Plumbing (Construction Trades) 170A or 325, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Plumbing (Construction Trades) 75B or 340.

This course is designed to prepare the advanced plumbing student to apply plumbing codes to correctly design and build plumbing systems. Primary topics include coverage of codes pertaining to plumbing fixtures and fittings, water heaters and fuel piping, drainage, waste and vent systems, sewage and reclaimed water systems, sizing and standards, shielded metal arc welding and alternate plumbing systems. This course is designed for students planning a career in the plumbing trade. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

270 Plumbing Work Experience **Hours by Arrangement (One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.), 1-4 units** **Grade Only**

This course consists of a program of on-the-job learning experiences for plumbing students

employed in related plumbing fields. Students may repeat this course up to three additional times for a total of 16 units. During summer sessions, one other course must be taken concurrently. Associate Degree Credit only and not Transferable.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Sheet Metal (SHEE)

60A Level I Sheet Metal/HVAC

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 38, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 and M30.

Limitation on Enrollment: This course is not open to students with previous credit for Sheet Metal 105 or 301A.

This course is an introduction the Sheet Metal and Heating, Ventilation and Air Conditioning (HVAC) trades. Topics include the tools of the trade, safety practices, trade mathematics, blueprints and drawings, and basic rigging. This course is designed for students planning a career in the Sheet Metal and HVAC fields. (FT) Associate Degree Credit only and not Transferable.

60B Level I Sheet Metal/HVAC

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Sheet Metal 60A or 301A, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Sheet Metal 110 or 301B.

This course is a continuation of Sheet Metal and Heating, Ventilation and Air Conditioning (HVAC) trades at the introductory level. Topics include intermediate math, duct and air distribution theory and installation, welding concepts, insulation, and electricity related to the HVAC trade. This course is designed for students planning a career in the Sheet Metal and HVAC fields. (FT) Associate Degree Credit only and not Transferable.

65A Level II Sheet Metal/HVAC

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Sheet Metal 60B or 301B, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Sheet Metal 115 or 302A.

This course is an intermediate level introduction to the concepts of cooling and sheet metal layout. Topics include layout and line development, mathematics and measurements used in the trade, bend allowances and triangulation. This course is designed for students planning a career in the Sheet Metal and Heating, Ventilation and Air Conditioning (HVAC) fields. (FT) Associate Degree Credit only and not Transferable.

65B Level II Sheet Metal/HVAC

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Sheet Metal 65A or 302A, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Sheet Metal 120 or 302B.

This course is an intermediate study of heating and metering for the Sheet Metal and Heating, Ventilation and Air Conditioning (HVAC) trades. Topics include basic electronics, metering devices, compressors, heat pumps, and leak detection, evacuation, recovery and charging. This course is designed for students planning a career in the Sheet Metal/HVAC fields. (FT) Associate Degree Credit only and not Transferable.

70A Level III Sheet Metal/HVAC

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Sheet Metal 65B with a grade of "C" or better, or equivalent or Sheet Metal 302B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Sheet Metal 125 or 304A.

This course is an intermediate level study of blueprints and specifications for Heating, Ventilation and Air Conditioning (HVAC) duct work. Topics include Sheet Metal and Air Conditioning Contractors of North America (SMACNA) Manuals, duct and fabrication standards, gutters and downspouts, roof flashing, and principles of air flow. This course is designed for students majoring in the

sheet metal and HVAC fields. (FT) Associate Degree Credit only and not Transferable.

70B Level III Sheet Metal/HVAC

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Sheet Metal 70A or 304A, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Sheet Metal 130 or 304B.

This course is an advanced study of blueprint reading and system design for the sheet metal and Heating, Ventilation and Air Conditioning (HVAC) trades. Topics include indoor air quality, types of duct systems, and field measuring and fitting. This course is designed for students majoring in the sheet metal and HVAC trades. (FT) Associate Degree Credit only and not Transferable.

75A Level IV Sheet Metal/HVAC

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Sheet Metal 70B or 304B, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Sheet Metal 135 or 305A.

This course covers advanced Heating, Ventilation and Air Conditioning (HVAC) and Sheet Metal applications. Topics include system start-up and shut-down, commercial and industrial refrigeration systems, hydronic heating and cooling systems, and how to design fume and exhaust systems per Occupational Safety and Health Administration (OSHA) and American Conference of Governmental Industrial Hygienists (ACGIH) standards. This course is designed for students planning a career in the Sheet Metal and HVAC fields. (FT) Associate Degree Credit only and not Transferable.

75B Level IV Sheet Metal/HVAC

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Sheet Metal 75A or 305A, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Sheet Metal 305B. This course covers advanced Heating, Ventilation and Air Conditioning (HVAC) troubleshooting and Sheet Metal roofing. Topics include troubleshooting and repair of gas and electric heating systems, cooling systems, heat pumps, and electronic controls, as

well as system balancing. Sheet Metal topics include metal roof system applications and installation. This course is designed for students planning a career in the Sheet Metal and HVAC fields. (FT) Associate Degree Credit only and not Transferable.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Cosmetology

Award Type	Units
Certificate of Performance:	
Teacher Training Program	12
Certificate of Achievement:	
Cosmetology	42.5
Esthetician	18
Associate in Science Degree:	
Cosmetology	49.5*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

The Cosmetology program is designed to provide entry level skills to students interested in a career in the cosmetology and esthetician professions. California State law requires that persons enrolling in Cosmetology courses must be at least sixteen years of age. Students in the Cosmetology program are required to comply with and maintain standards of dress and grooming. Excessive absences may result in exclusion from the program. All prospective students are required to attend an orientation program.

Orientation

Orientation is mandatory prior to registration. Contact Cosmetology Department for schedule of days and times. It is highly recommended that a student complete the placement exams in order to meet the reading and writing advisories. Students should bring a copy of placement test scores to orientation.

Program Enrollment

Program add codes are required for continuing students for spring, summer and fall semesters. Course work from other Cosmetology programs will not clear City College course work. New students can start mid semester every fall, spring, summer. Program vacancies are filled by students from a waiting list. Students are required to purchase all textbooks, uniforms, practical kits, tools and small manually handled equipment.

Program Hours

Cosmetology courses are offered during the day and evening.

Full-Time Program:

The schedule of lecture and lab hours varies per semester.

NOTE: A nine-week summer session is offered.

State Board Verification

Students with previous course hours in Cosmetology from another community college program must provide written State Board documentation. These courses cannot be used for the major. The California State Board of Barbering and Cosmetology requires 1600 hours of instruction for Cosmetology or 600 hours of instruction for Esthetics, both careers require a passing score on the State Board examination to become licensed and eligible for employment. Students participate in practical and theoretical training under the supervision of a State-licensed and community-college-credentialed instructor at all times while enrolled in the program.

Program Emphasis

Students are expected to learn fundamental practices and procedures of cosmetology or esthetician services. This includes laboratory instruction in client cosmetology or esthetician services. Instructional opportunities provide the student with salon site visitation, guest speakers, exposure to the cosmetology industry, small business concepts and current changes in the field of cosmetology which lead to career opportunities and advancement. Students are provided with opportunities to develop skills in sales, community and client relations, care of skin, hair and nails, as well as salon management. A grade of "C" or better must be maintained in order to advance in the course sequence.

Faculty	Office	Telephone
Constance Calhoun	V-223	619-388-3284
Patricia Grooms-Jones	V-223	619-388-3296
Kim Shafer	V-223	619-388-3283
Sylvia Leon	V-223	619-388-3660
Sudabeh Phillips	V-223	619-388-3613

Career Options

Some careers in cosmetology require education beyond the associate degree. Examples of careers in cosmetology include: salon owner/manager, cosmetologist (salon services), platform stylist (demonstrates products and techniques for manufacturer), competition stylist, cosmetology instructor, technical writer for trade magazine, seminar/demonstration speaker and education specialist (for a manufacturer).

Examples of careers as an esthetician include: Salon or Spa Esthetician, Spa Esthetic Consultant, cosmetic consultant, makeup artist for theatre, film and/or television, medical esthetic assistant, manufacturer representative for skin care, cosmetics or esthetic equipment.

Student Learning Outcomes

Upon successful completion of the Cosmetology program the student will be able to:

- Apply cosmetology concepts, procedures and practices to successfully pass the State Board Examination.
- Practice safety, health, and sanitation procedures as set forth by the California Bureau of Cosmetology.
- Utilize professional practice terminology and techniques as required by the California Bureau of Cosmetology examination.
- Perform all practical applications required for the state board examination/state licensure.
- Explain basic cosmetology concepts, terms and definitions.
- Compare and contrast cosmetology procedures and practices.
- Apply cosmetology products and procedures in providing services to clients.

Academic Programs

The associate degrees in Cosmetology require completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. The associate degree requires a minimum of 60 units.

Certificate of Performance: Teacher Training Program*

After completing three or more years of work experience as a cosmetologist and passing the California State Board exam in Cosmetology, students may continue their education while concurrently working in a salon or industry by enrolling in the following courses to earn a specialized certificate in the Cosmetology Teacher Training Program.

Courses:	Units
COSM 091A Cosmetology Teacher Training Program I	6
COSM 091B Cosmetology Teacher Training Program II	6
Total Units = 12	

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Achievement: Cosmetology

Courses Required for the Major:	Units
COSM 50L Fundamentals of Cosmetology or	
COSM 50LA, 50LB Fundamentals of Cosmetology I & II	6
COSM 50 Rules, Regulations, and Physiology	2.5
COSM 60L Intermediate Cosmetology Lab I or	
COSM 60LA, 60LB, Intermediate Cosmetology Lab IA & IB	6
COSM 60 Facials, Hairstyling & Haircutting	2.5
COSM 70L Intermediate Cosmetology Lab II or	
COSM 70LA, 70LB, Intermediate Cosmetology Lab IIA IIB	6
COSM 70 Chemistry and Chemical Services	2.5
COSM 80L Advanced Cosmetology Lab IA or	
COSM 80LA, 80LB, Advanced Lab IA & IB	6
COSM 81 Basic Business Practices	2.5
COSM 90L Advanced Cosmetology Lab II or	
COSM 90LA, 90LB, Advanced Lab IIA & IIB	6
COSM 95 State Board Review	2.5
Total Units = 42.5	

Certificate of Achievement: Esthetician

Courses Required for the Major:	Units
COSM 55 Introductory Esthetician	2.5
COSM 55L Introductory Esthetician Lab	6.5
COSM 65 Advanced Esthetician	2.5
COSM 65L Advanced Esthetician Lab	6.5
Total Units = 18	

Recommended electives: Cosmetology 93.

Associate in Science Degree: Cosmetology

Courses Required for the Major:	Units
Certificate of Achievement, Cosmetology	42.5
BUSE 100 Introduction to Business	3
CHEM 100 Fundamentals of Chemistry	3
CHEM 100L Fundamentals of Chemistry Lab	1
Total Units = 49.5	

Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Recommended electives: Cosmetology 92, 290.

Courses

Cosmetology (COSM)

50L Fundamentals of Cosmetology 18 hours lab, 6 units Grade Only

Corequisite: Completion of or concurrent enrollment in Cosmetology 50 with a grade of "C" or better, or equivalent.

Advisory: Completion of or concurrent enrollment in English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 110, 110A and 110B or 50LA and 50LB.

This course is an introduction to the basic fundamentals of Cosmetology. Course content includes basic procedures of draping, shampooing, conditioning, haircutting, wet hairstyling,

manicuring, pedicuring, facials, make-up, and removing unwanted hair. This course is intended to prepare students for the California State Bureau of Barbering and Cosmetology licensure. (FT) Associate Degree Credit only and not Transferable.

50LA Fundamentals of Cosmetology I

**9 hours lab, 3 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in Cosmetology 50 with a grade of "C" or better, or equivalent.

Advisory: Completion of or concurrent enrollment in English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 110, 110A or 50L.

This course is an introduction to the basic fundamentals of Cosmetology. Course content includes basic procedures of draping, shampooing, conditioning, haircutting, wet hairstyling, manicuring, pedicuring, facials, make-up, and removing unwanted hair. This course is intended to prepare students for 50LB and the California State Bureau of Barbering and Cosmetology licensure. (FT) Associate Degree Credit only and not Transferable.

50LB Fundamentals of Cosmetology II

**9 hours lab, 3 units
Grade Only**

Prerequisite: Cosmetology 50LA with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Cosmetology 50 or 60 with a grade of "C" or better, or equivalent.

Advisory: Completion of or concurrent enrollment in English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 110 or 110B or 50L.

This course is a continuation of Cosmetology 50LA, an introduction to the basic fundamentals of Cosmetology, at a more advanced level. Course content includes basic procedures of draping, shampooing, conditioning, haircutting, wet hairstyling, manicuring, pedicuring, facials, make-up, and removing unwanted hair. This course is intended to prepare students for 60LA and the California State

Bureau of Barbering and Cosmetology licensure exam. Associate Degree Credit only and not Transferable.

50 Rules, Regulations, and Physiology

**2.5 hours lecture, 2.5 units
Grade Only**

Corequisite: Cosmetology 50L; or Cosmetology 50LA and 50LB; or Cosmetology 60L; or Cosmetology 60LA and 60LB.

Advisory: Completion of or concurrent enrollment in English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with credit for Cosmetology 111, 111A or 111B.

This is an introduction to the basic principles of anatomy and physiology, including bone structure, circulation, muscle and nerve components of the body as well as hair structure. This course incorporates bacteriology, sanitation, sterilization and cosmetology rules and regulations as required for licensure in the State of California. Emphasis is placed on consumer protection and health of the community as related to cosmetology services. (FT) Associate Degree Credit only and not Transferable.

55 Introductory Esthetician

**2.5 hours lecture, 2.5 units
Grade Only**

Corequisite: Cosmetology 55L.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is an introduction to the theoretical knowledge required to enter the field of esthetics as a licensed esthetician. Emphasis is placed on the basic sciences of physiology, chemistry and electricity as they apply to skin science, skin care and professional esthetics. Topics also include career and licensure planning and the fundamentals of the salon business, skin care products and esthetic services. This course is designed for students planning a career as a licensed, professional esthetician. (FT) Associate Degree Credit only and not Transferable.

55L Introductory Esthetician Lab
19.5 hours lab, 6.5 units
Grade Only

Corequisite: Cosmetology 55.

This laboratory course is an introduction to the practical knowledge, skills and techniques required to enter the field of esthetics as a licensed esthetician. Students apply the basic principles of physiology, chemistry, electricity and skin science to practice in client consultations, skin analyses, product assessments, facial treatments and other basic professional esthetic services. Students also prepare basic resumes, business plans and marketing materials. This course is designed for students planning a career as a licensed, professional esthetician. (FT) Associate Degree Credit only and not Transferable.

60L Intermediate Cosmetology Lab I
18 hours lab, 6 units
Grade Only

Prerequisite: Cosmetology 50L; or Cosmetology 50LA and 50LB with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Cosmetology 50, 60 or 70 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 120, 120A and 120B or 60LA and 60LB. Must obtain an Add Code from the instructor for enrollment.

This course provides for the supervised application of the basic fundamentals of Cosmetology. Course content includes basic procedures of hair coloring, permanent waving, soft curl permanent waving, chemical straightening, and thermal pressing and curling. A review of Cosmetology 50L is included to develop skill level and subject matter mastery of the following subjects: state board set, manicuring, pedicuring, artificial nails, facials, make up, removing unwanted hair, sanitation safety and client protection. The main focus of this course is intended to prepare students for 70L, 70LA, and 70LB and the California State Bureau of Barbering and Cosmetology examination. This course also prepares students for client services. (FT) Associate Degree Credit only and not Transferable.

60LA Intermediate Cosmetology Lab IA
9 hours lab, 3 units
Grade Only

Prerequisite: Cosmetology 50L; or Cosmetology 50LA and 50LB with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Cosmetology 50, 60, or 70 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 120 or 120A or 60L.

This course is designed to cover the first half of Cosmetology 60L. Course content includes basic procedures of hair coloring, permanent waving, soft curl permanent waving, chemical straightening, and thermal pressing and curling. A review of Cosmetology 50L is included to develop skill level and subject matter mastery of the following subjects: state board set, manicuring, pedicuring, artificial nails, facials, make up, removing unwanted hair, sanitation safety and client protection. This course together with Cosmetology 60LB is intended to prepare students for 70L or 70LA and 70LB and the California State Bureau of Barbering and Cosmetology examination. This course also prepares students for client services. (FT) Associate Degree Credit only and not Transferable.

60LB Intermediate Cosmetology Lab IB
9 hours lab, 3 units
Grade Only

Prerequisite: Cosmetology 60LA or Cosmetology 50L with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Cosmetology 50, 60, or 70 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 120 or 120B or 60L.

This course is a continuation of Cosmetology 60LA. It covers the second half of Cosmetology 60L. Course content includes basic procedures of hair coloring, permanent waving, soft curl permanent waving, chemical straightening, and thermal pressing and curling. A review of Cosmetology 50L is included to develop skill level and subject matter mastery of the following subjects: state board set, manicuring, pedicuring, artificial nails, facials, make up, removing unwanted hair, sanitation safety and client protection. This course together with Cosmetology 60LA is intended to prepare students for 70L or 70LA and 70LB and the California State Bureau of Barbering and Cosmetology examination. This course also prepares students for client services. (FT) Associate Degree Credit only and not Transferable.

60 Facials, Hairstyling and Haircutting

2.5 hours lecture, 2.5 units
Grade Only

Prerequisite: Cosmetology 50 with a grade of "C" or better, or equivalent.

Corequisite: Cosmetology 50L; or Cosmetology 50LA and 50LB; or Cosmetology 60L; or Cosmetology 60LA and 60LB; or Cosmetology 70L; or Cosmetology 70LA and 70LB.

Advisory: Completion of or concurrent enrollment in English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with credit for Cosmetology 122. This course is an introduction to concepts related to facials, hairstyling and haircutting. Included in this course are basic principles of histology for the skin including diseases and disorders. Advanced facial treatments, massage and skin analysis for a diverse clientele are incorporated as well as advanced make-up techniques that include application, analysis, and corrective procedures. Basic principles of design used for haircutting, fingerwaving, wet hairstyling, blow drying, marcel and electric curling iron, pressing, artificial hair care and artificial hair styling are introduced. This course incorporates communication skills as related to client services and professionalism intended to support students in their employment goals. This course is intended to prepare students for Cosmetology 70 and 80 and the California State Bureau of Barbering and Cosmetology Exam. (FT) Associate Degree Credit only and not Transferable.

65 Advanced Esthetician

2.5 hours lecture, 2.5 units
Grade Only

Prerequisite: Cosmetology 55 and 55L, each with a grade of "C" or better, or equivalent.

Corequisite: Cosmetology 65L.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is an advanced study of the theoretical knowledge required to enter the field of esthetics as a licensed esthetician. Emphasis is placed on an in-depth examination of the body and its systems as they relate to skin health, advanced esthetic techniques and devices, spa and alternative therapies, and medical esthetics. Topics include analyses of skin care products, botanicals and aromatherapy, Ayurveda theory and treatments,

and business and marketing skills required in the salon and spa industry. This course is designed for students planning a career as a licensed, professional esthetician. (FT) Associate Degree Credit only and not Transferable.

65L Advanced Esthetician Lab

19.5 hours lab, 6.5 units
Grade Only

Prerequisite: Cosmetology 55 and 55L, each with a grade of "C" or better, or equivalent.

Corequisite: Cosmetology 65.

This laboratory course is an advanced study of the practical knowledge, skills, tools and techniques required to enter the field of esthetics as a licensed esthetician. Students apply in-depth knowledge of the body and its systems as they relate to skin health to practice in advanced esthetic techniques and devices, spa and alternative therapies, and medical esthetics. Topics include practice with skin care products, botanicals and aromatherapy, Ayurveda theory and treatments, and business and marketing skills required in the salon and spa industry. This course is designed for students planning a career as a licensed, professional esthetician. (FT) Associate Degree Credit only and not Transferable.

70 Chemistry and Chemical Services

2.5 hours lecture, 2.5 units
Grade Only

Corequisite: Completion of or concurrent enrollment in Cosmetology 060L; or Cosmetology 60LA and 60LB; or Cosmetology 070L; or Cosmetology 70LA and 70LB; or Cosmetology 080L; or Cosmetology 80LA and 80LB; or Cosmetology 090L; or Cosmetology 90LA and 90LB with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 131. Must obtain an Add Code from the instructor for enrollment.

This eight-week course is an introduction to the techniques used for hair coloring, permanent waving, relaxing and soft perming. An understanding of chemistry and formulation methods is included for all techniques. In addition, an advanced understanding of the relationship between all types of hair textures and basic chemical types and professional products is taught. Emphasis is placed on the development of consultation skills as related to client services and professionalism. This course is intended to prepare the student for the California State Bureau of Barbering and

Cosmetology examination. (FT) Associate Degree Credit only and not Transferable.

70L Intermediate Cosmetology Lab II
18 hours lab, 6 units
Grade Only

Prerequisite: Cosmetology 60L; or Cosmetology 60LA and 60LB with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Cosmetology 60, 70, or 81 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 130, 130A, 130B, 70LA, or 70LB. Must obtain an Add Code from the instructor for enrollment.

This course is an introduction to the basic laboratory fundamentals of chemicals and hair design. Course content includes basic procedures of hair coloring, permanent waving, soft curl permanent waving, chemical straightening, and thermal pressing and curling. A review of the topics from Cosmetology 60L is included to maintain subject matter mastery and to prepare students for client services. Emphasis is placed on preparing students for 80L, 80LA, and 80LB and the California State Bureau of Barbering and Cosmetology examination. (FT) Associate Degree Credit only and not Transferable.

70LA Intermediate Cosmetology Lab IIA
9 hours lab, 3 units
Grade Only

Prerequisite: Cosmetology 60L; or Cosmetology 60LA and 60LB, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Cosmetology 60, 70, or 81 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 130 or 130A or 70L.

This course is an introduction to the basic laboratory fundamentals of chemicals and hair design and covers the first half of COSM 70L. Course content includes basic procedures of hair coloring, permanent waving, soft curl permanent waving, chemical straightening, and thermal pressing and curling. A review of the topics from COSM 60L is included to maintain subject matter mastery and to prepare students for client services. Emphasis is placed on preparing students for 80L or 80LA and 80LB and the California State Bureau of Barbering and Cosmetology examination. (FT) Associate Degree Credit only and not Transferable.

70LB Intermediate Cosmetology Lab IIB
9 hours lab, 3 units
Grade Only

Prerequisite: Cosmetology 70LA and Cosmetology 60L; or Cosmetology 60LA and 60LB, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Cosmetology 60, 70, or 81 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 130 or 130B or 70L.

This course is a continuation of Cosmetology 70LA and covers the second half of Cosmetology 70L. The course provides an intermediate-level introduction to the basic laboratory fundamentals of chemicals and hair design. Course content includes basic procedures of hair coloring, permanent waving, soft curl permanent waving, chemical straightening, and thermal pressing and curling. A review of the topics from Cosmetology 60L is included to maintain subject matter mastery and to prepare students for client services. Emphasis is placed on preparing students for 80L or 80LA and 80LB and the California State Bureau of Barbering and Cosmetology examination. (FT) Associate Degree Credit only and not Transferable.

80L Advanced Cosmetology Lab I
18 hours lab, 6 units
Grade Only

Prerequisite: Cosmetology 70L; or Cosmetology 70LA and 70LB with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Cosmetology 60, 70, or 81 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 140, 140A, 140B, 80LA, or 80LB. Must obtain an Add Code from the instructor for enrollment.

This course is an introduction to senior level techniques related to client services in Cosmetology. Course content includes advanced procedures for hair coloring, permanent waving, soft curl permanent waving, chemical straightening, thermal pressing and curling as well as advanced level facials, manicuring, haircutting, and wet hairstyling. This course is intended to prepare the student for 90L, 90LA, and 90LB, the California State Bureau of Barbering and Cosmetology examination as well as to introduce students to marketing strategies and

to support their efforts in meeting professional and employment goals. (FT) Associate Degree Credit only and not Transferable.

80LA Advanced Cosmetology Lab IA

**9 hours lab, 3 units
Grade Only**

Prerequisite: Cosmetology 70L; or Cosmetology 70LA and 70LB, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Cosmetology 60 or 70 or 81, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 140 or 140A or 80L.

This course is an introduction to senior level techniques related to client services in Cosmetology and covers the first half of Cosmetology 80L. Course content includes advanced procedures for hair coloring, permanent waving, soft curl permanent waving, chemical straightening, thermal pressing and curling as well as advanced level facials, manicuring, haircutting, and wet hairstyling. This course together with Cosmetology 80LB is intended to prepare the student for 90L or 90LA and 90LB, the California State Bureau of Barbering and Cosmetology examination as well as to introduce students to marketing strategies and to support their efforts in meeting professional and employment goals. (FT) Associate Degree Credit and not Transferable.

80LB Advanced Lab IB

**9 hours lab, 3 units
Grade Only**

Prerequisite: Cosmetology 80LA and Cosmetology 70L; or Cosmetology 70LA and 70LB, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Cosmetology 60 or 70 or 81 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 140 or 140B or 80L.

This course is a continuation of Cosmetology 80LA and covers the second half of Cosmetology 80L. It provides increased senior level techniques related to client services in Cosmetology. Course content includes advanced procedures for hair coloring, permanent waving, soft curl permanent waving, chemical straightening, thermal pressing and curling as well as advanced level facials, manicuring,

haircutting, and wet hairstyling. This course together with Cosmetology 80LA is intended to prepare the student for 90L or 90LA and 90LB, the California State Bureau of Barbering and Cosmetology examination as well as to introduce students to marketing strategies and to support their efforts in meeting professional and employment goals. (FT) Associate Degree Credit only and not Transferable.

81 Basic Business Practices

**2.5 hours lecture, 2.5 units
Grade Only**

Prerequisite: Cosmetology 50, 60, and 70, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Cosmetology 50L; or Cosmetology 50LA and 50LB; or Cosmetology 60L; or Cosmetology 60LA and 60LB; or Cosmetology 70L; or Cosmetology 70LA and 70LB; or Cosmetology 80L; or Cosmetology 80LA and 80LB; or Cosmetology 90L; or Cosmetology 90LA and 90LB with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 151. This eight-week course is an introduction to basic business practices as related to the Cosmetology industry. Emphasis is placed on bookkeeping, business law and taxation, insurance, salesmanship, resume writing, interview techniques, business plan writing, and marketing. In addition, this course incorporates interpersonal relationships as they relate to client services and professionalism in the salon. (FT) Associate Degree Credit only and not Transferable.

90L Advanced Cosmetology Lab II

**18 hours lab, 6 units
Grade Only**

Prerequisite: Cosmetology 80L; or Cosmetology 80LA and 80LB with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Cosmetology 60, 70, or 81 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 150, 150A, 150B, 90LA, or 90LB. Must obtain an Add Code from the instructor for enrollment.

This course focuses on perfecting competence in advanced techniques related to client services in Cosmetology. Course content includes advanced procedures for hair coloring, permanent waving, soft curl permanent waving, chemical straightening, and thermal pressing and curling. Emphasis is placed on assignments that focus on advanced techniques for

facials, manicures, haircuts and wet hairstyling. A mock board examination and practical drills prepare students for the California State Bureau of Barbering and Cosmetology exam. These proficiencies support students in their efforts to meet their professional and employment goals. (FT) Associate Degree Credit only and not Transferable.

90LA Advanced Lab IIA

**9 hours lab, 3 units
Grade Only**

Prerequisite: Cosmetology 80L; or Cosmetology 80LA and 80LB, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Cosmetology 60, 70, or 81 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 150 or 150A or 90L.

This course covers the first half of Cosmetology 90L and focuses on perfecting competence in advanced techniques related to client services in Cosmetology. Course content includes advanced procedures for hair coloring, permanent waving, soft curl permanent waving, chemical straightening, and thermal pressing and curling. Emphasis is placed on assignments that focus on advanced techniques for facials, manicures, haircuts and wet hairstyling. A mock board examination and practical drills prepare students for the California State Bureau of Barbering and Cosmetology exam. These proficiencies support students in their efforts to meet their professional and employment goals. (FT) Associate Degree Credit only and not Transferable.

90LB Advanced Lab IIB

**9 hours lab, 3 units
Grade Only**

Prerequisite: Cosmetology 90LA; or Cosmetology 80L; or Cosmetology 80LA and 80LB, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Cosmetology 60, 70, or 81 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 150 or 150B or 90L.

This course is a continuation of Cosmetology 90LA and covers the second half of Cosmetology 90L. It provides an increased focus on perfecting competence in advanced techniques related to client services in Cosmetology. Course content

includes more advanced procedures for hair coloring, permanent waving, soft curl permanent waving, chemical straightening, and thermal pressing and curling. Emphasis is placed on assignments that focus on advanced techniques for facials, manicures, haircuts and wet hairstyling. A mock board examination and practical drills prepare students for the California State Bureau of Barbering and Cosmetology exam. These proficiencies support students in their efforts to meet their professional and employment goals. (FT) Associate Degree Credit only and not Transferable.

91A Cosmetology Teacher Training Program I **3 hours lecture, 10 hours lab, 6 units Grade Only**

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 152A and Student must have a valid California Cosmetology License and a minimum of one year of full time salon/industry experience. Trainee must provide proof of valid cosmetology license.

This course is offered for the experienced/licensed cosmetologist to become a qualified cosmetology instructor. Training for the course will consist of practical and theoretical principles of effective teaching methods which include lesson planning, oral presentations, evaluations, test construction, and procedures to ensure environmental health and safety. Emphasis is focused on preparation for California Bureau of Barbering and Cosmetology Instructor Licensure and prospective employment in private and public Cosmetology Schools. (FT) Associate Degree Credit only and not Transferable.

91B Cosmetology Teacher Training Program II

**3 hours lecture, 10 hours lab, 6 units
Grade Only**

Prerequisite: Cosmetology 91A with a grade of "C" or better, or equivalent.

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

Limitation on Enrollment: This course is not open to students with credit for Cosmetology 152B. A valid California Cosmetology License and a minimum of one year of full time salon/industry experience. Phase II of the Cosmetology Teacher Training program will provide the trainee with an opportunity to acquire additional skills, expand career options,

workplace skill competencies, subject mastery skills and California State Board examination strategies necessary for acquiring their State Cosmetology Instructor's license. A total of 300 hours of lecture/demonstration and laboratory training to include technical and practical aspects of cosmetology science. This course is offered as a non-degree/credit for a specialized certificate. Associate Degree Credit only and not Transferable.

92 Extended Laboratory Practice
6-18 hours lab per week
(9 week course), 1-3 unit
Pass/No Pass Only

Prerequisite: Cosmetology 60 and Cosmetology 60L, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Must obtain an Add Code from the instructor for enrollment.

This course is continued laboratory practice for advanced cosmetology students who need to complete 1600 hours mandated for examination and for licensure by the California State Board of Cosmetology. Emphasis is placed on client services (including chemical and non-chemical services) and an understanding of all types of hair texture. This course teaches communication skills as related to client services and professionalism and is intended to support students in their employment goals. This course, in combination with Cosmetology 220, may be taken three times for credit. Associate Degree Credit only and not Transferable.

93 Esthetician Extended Laboratory Practice
3 hours lab, 1 unit
Grade Only

Prerequisite: Cosmetology 65 and 65L, each with a grade of "C" or better, or equivalent.

This course is continued laboratory practice for advanced esthetician students who need to complete the number or hours mandated for examination and licensure by the California State Board of Cosmetology. Emphasis is placed on client services and advanced salon and spa treatments. Topics include communication skills, professionalism and support in student employment goals. (FT) Associate Degree Credit only and not Transferable.

95 State Board Review
2.5 lecture, 2.5 units
Grade Only

Prerequisite: Cosmetology 81 with a grade of "C" or better, or equivalent.

Corequisite: Cosmetology 90L.

Limitation on Enrollment: Must obtain an Add Code from the instructor for enrollment.

This course is designed to review information related to and required for successful completion of the State of California Licensure Examination for Cosmetology. (FT) Associate Degree Credit only and not Transferable.

290 Independent Study in Cosmetology
Hours by Arrangement, 1-3 units
Grade Only

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

This course is designed to deal with current problems and topics of special interest in cosmetology. This course may be taken four times with different content for a maximum of six units. Associate Degree Credit only and not Transferable.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Disability Support Programs and Services

Description

Disability Support Programs and Services (DSPS) provides services and courses to support students with disabilities in the achievement of their academic and vocational goals. The instructional component promotes equal participation in mainstream academic programs through preparatory and skill maintenance courses, and offers courses for personal growth.

Faculty	Office	Telephone
Pamela Finkel	A-115	619-388-3513
Christina Gibbs	A-115	619-388-3513
Program Manager:		
Debra Wright-Howard	A-115	619-388-3513

Career Options

Consult a DSPS counselor.

Academic Programs

The DSPS program is not an academic program designed to prepare professionals in the field of special education or rehabilitation. DSPS courses are designed for the student with a disability. Students consult with a DSPS counselor to develop the Student Education Plan and identify courses appropriate to support the academic or vocational goal. While several courses are recommended for students with any disability, some curricula focus on special skills particular to one disability, i.e., visual impairment or learning disability.

Distinctive Features

The DSPS program integrates adaptive computer technology in the classroom, coordinating instruction and access devices with the Computer Business Technology and Computer Information Sciences departments and the Independent Learning Center. Learning Disability course offerings include strategy programs in sentence, paragraph writing and mathematics based on university research.

Note: DSPS courses are also listed in the Physical Education and Computer Information Sciences sections of the catalog. Additional courses are offered at Mesa and Miramar College campuses. Consult the appropriate semester class schedule.

Courses**Disability Support Programs and Services (DSPS)**

Courses listed under DSPS have been designed for students with disabilities. DSPS courses are also listed under Physical Education (PHYE) and Computer and Information Sciences (CISC). Additional DSPS classes are offered at Mesa and Miramar campuses. See appropriate catalog.

20 Introduction to Accessible Computers

**1 hour lecture, 1 unit
Pass/No Pass Only**

This course introduces students with disabilities to accessible computer programs and equipment. The course provides an overview of software and hardware resources that allow disabled students

to compete in educational and business settings. Not Applicable to Associate Degree, Occupational/Vocational basic skills.

21 Accessible Computing Lab

**1.5 - 6 hours lab, .5-2 units
Pass/No Pass**

Limitation on Enrollment: This course is not open to students with previous credit for Disability Support Programs and Services 76.

This course is for students who benefit from adaptive computer access. The course modules teach students how to use the necessary adaptive hardware or software needed to access the computer. Training in all modules is individualized. This course may be repeated three times with new hardware or software. (FT) Not applicable to the Associate Degree.

27 Career Planning for Students with Disabilities

**2 hours lecture, 2 units
Pass/No Pass**

This course is designed to assist students with disabilities in acquiring an understanding of the world of work. Emphasis is placed on developing and pursuing goals for employment and on identifying community, state and national assistance resources. Throughout the course, students evaluate their individual career goals, analyze their job skills, research the job market and construct an effective resume and cover letter for prospective employers. Course material also emphasizes preparing students to meet the psychological, social and cognitive demands of employment. (FT) Not applicable to the Associate Degree.

34 College Success Skills

**1 hour lecture, 1 unit
Pass/No Pass Only**

Limitation on Enrollment: This course is not open to students with credit for Disability Support Programs and Services (DSPS) 29.

This course is designed to assist students with disabilities to achieve their educational goals by providing them with an orientation to the college campus, policies, procedures and support services such as financial aid, tutoring, counseling, computer labs, and career and transfer information. Emphasis is placed on time management, mental and physical health, study skills, self-advocacy, accommodations, and interpersonal relationships as they relate to individual disabilities and college success. Throughout the course, students clarify goals,

develop an education plan and identify the courses, services and programs that will lead to their success. Credit for this course does not apply to the associate degree.

38 Math Strategies for the Learning Disabled
3 hours lecture, 3 units
Pass/No Pass

Limitation on Enrollment: Must obtain an Add Code from the instructor for enrollment. Disability Support Programs and Services 38 and 73 may be repeated three times for combined maximum credit. This course is designed for students with verified disabilities related to math. It is taught as a lecture class that can be taken independently or in conjunction with Basic Math or Pre-Algebra. This class utilizes a strategies oriented approach for developing competency with fundamental mathematical operations and pre-algebra concepts. This course may be taken four times with different content for credit. (FT) Not applicable to the Associate Degree.

40 Individual Assessment and Educational Planning
.5 hours lecture, .5 unit
Pass/No Pass Only

Limitation on Enrollment: This course is not open to students with previous credit for Disabled Students Programs and Services 50. This course teaches students about their individual learning aptitude as compared to measured academic achievement. Students use standardized achievement and aptitude assessment instruments in accordance with the California Community College Learning Disabilities Eligibility Model to create a learning profile related to community college academic demands. Other topics include individual cognitive processing strengths and weaknesses, compensatory learning strategies, study skills, and disability management. This course is intended for students who believe they may have a learning disability or those interested in exploring issues related to learning aptitudes. (FT) Not applicable to the Associate Degree.
 Learning Disabled

43 Advanced Applied Study Strategies
1.5 - 3 hours lab, .5-1 unit
Pass/No Pass

Limitation on Enrollment: Must obtain an Add Code from the instructor for enrollment. Disability Support

Programs and Services 43 and 83 may be repeated three times for combined maximum credit. This course is intended primarily for students needing advanced academic disability related support in addition to the campus wide academic support services currently available. The focus of this class is to provide individualized study assistance for students in mainstream degree applicable college classes. Emphasis is placed on the application of study strategies to a specific course. Both study strategies and assistive technology are utilized to meet the demands of a mainstream course content. Computer assisted instruction is used to review related basic skills instruction and to support research skill development. This course may be taken four times with different content for a maximum of four units. Not applicable to the Associate Degree.

49 Writing Structured Paragraphs
2 hours lecture, 2 units
Pass/No Pass Only

This course is designed for students who demonstrate difficulty with written language. It is intended to prepare students who have a writing related disability to more successfully meet the minimum college requirements for multi-paragraph essay writing. This course is unique for the highly structured and sequential strategies applied to essay writing. Additionally, the course emphasizes the application of assistive computer technology for facilitating organizational pre-writing strategies, document checking, and written language fluency. Credit for the course does not apply to the associate degree.

Drama

See "Visual and Performing Arts" on page 422

Courses

Education (EDUC)

100 Tutor Training
.5 hour lecture, 1.5 hours lab, 1 unit
Pass/No Pass Only

Advisory: English 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 and M20.

Limitation on Enrollment: Student must have completed a minimum of 12 units of college credit with an accumulated grade point average of 3.0 or better in subject area he/she will tutor.

This course prepares college-level students for tutoring adult/college students. Student trainees learn about tutoring methods as well as how to use appropriate written and mediated instructional materials. The course includes supervised tutoring practice. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

150 Advanced Tutor Training

**.5 hours lecture, 1.5 hours lab, 1 unit
Pass/No Pass Only**

Advisory: Education 100 and Computer Business Technology 120 each with a grade of "C" or better, or equivalent.

The course is designed to prepare college level persons for tutoring adult/college students in an online environment. Online tutoring methods, use of appropriate written and mediated instructional materials and equipment, and supervised practice tutoring are included in this course. Online tutoring techniques and methodology are emphasized. Laboratory hours are by arrangement with the tutorial center coordinators. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

200 Teaching as a Profession

**2 hours lecture, 2 units
Grade Only**

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6. This course is a study of the foundations and issues related to effective instruction in reading, writing, science and mathematics. Emphasis is placed on both curriculum and pedagogy. Students also explore current educational career options. This course is designed for students considering teaching as a profession as well as for paraprofessionals and tutors. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

203 Service Learning for Prospective Teachers

**1 hour lecture, 1 unit
Letter Grade or Pass/No Pass Option**

Limitation on Enrollment: Health and Safety. Student must meet safety and health clearance standards for public school volunteer experience placement.

This course is designed for students considering teaching as a profession, and for prospective tutors. The purpose of this class is to provide early, supervised experience to pre-service teachers in the form of service learning. The lectures provide for orientation, review, reflection and problem solving; in addition, a minimum of 30 hours of volunteer service work is required. Experiential learning activities include observing and/or tutoring at various educational levels. Through this service learning, students are made aware of skills needed in the teaching profession. Additionally, they are mentored in the application of classroom management techniques and routine teaching skills required in the public schools. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

270 Teaching as a Profession-Work Experience

**Hours by Arrangement (One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.), 1-4 units
Grade Only**

Prerequisite: Education 200 with a grade of "C" or better, or equivalent, and approval of Work Experience Coordinator.

This course is directed work study designed to provide the pre-service teacher with an opportunity to apply classroom theory in a public school setting with an assigned Work Experience supervisor. It is the purpose of this course to provide early supervised experience to pre-service teachers in order that they may begin to develop fluency with fundamental skills of literacy development, individual and small group tutoring, classroom management, and other routine teaching skills required in public schools. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Electricity

"Engineering Technology" on page 263

Electronics

"Engineering Technology" on page 263

Engineering

Award Type	Units
Certificate of Achievement:	
Drafting Option	19
Associate in Science Degree:	
Engineering	36*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

The engineering curriculum is heavily based on mathematics and physical sciences. Students benefit by having access to state-of-the-art CAD/CAM facilities as well as to a high technology center that is at the cutting edge of new technologies, thereby enhancing career choices and rewards. This pre-engineering preparation provides an excellent foundation for transfer to a four-year university as an engineering major.

Program Emphasis

University schools of engineering have similar science and mathematics requirements but may differ in preparation for various engineering options. Courses offered in the San Diego City College Engineering program meet basic requirements for lower division preparation for California universities. Some universities may also require engineering courses as preparation for specific engineering majors. The Engineering program is designed to prepare students for transfer to California State University and University of California institutions.

Faculty	Office	Telephone
David Fierro	A-107E	619-388-3731
Fred Julian	A-107D	619-388-3720
Farnaz Khoromi	A-107C	619-388-3527
Robert Pruitt	A-107E	(619)388-3875

Career Options

Most careers in engineering require education beyond the associate degree. A list of career options available to persons with baccalaureate engineering preparation include: aerospace, agricultural,

architectural, biomedical, chemical, civil, computer, electrical, environmental, industrial, mechanical and nuclear engineering.

Academic Programs

The associate degree in engineering requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Student Learning Outcomes

Upon successful completion, the student will be able to:

- Demonstrate skill in engineering drawing.
- Demonstrate proficiency in at least one three-dimensional engineering design software.
- Prepare reports using software tools.

Certificate of Achievement: Engineering

Drafting Option

Courses Required for the Major		Units
ENGE 108	Dimensioning and Tolerancing	3
ENGE 111	Introduction to Computer Aided Design	3
ENGE 151	Engineering Drawing	2
ENGE 152	Engineering Design	3
MATH 96	Intermediate Algebra with Geometry	5
ENGL 101	Reading and Composition	3
Total Units = 19		

Student Learning Outcomes

Students who complete the program will be able to:

- Demonstrate proficiency in analytical problem solving skills.
- Describe the engineering field from a general perspective.

Associate in Science Degree: Engineering

Courses Required for the Major		Units
CHEM 200	General Chemistry I	3
CHEM 200L	General Chemistry I Laboratory	2
MATH 150	Calculus Analytic Geometry I	5
MATH 151	Calculus Analytic Geometry II	4
MATH 252	Calculus Analytic Geometry III	4
MATH 255	Differential Equations	3
PHYS 195	Mechanics	5

PHYS 196	Electricity and Magnetism	5
PHYS 197	Waves, Optics, and Modern Physics	5

Total Units = 36

Recommended electives: Engineering 198, 200, 210, 240, 250, 260, 270, 290.

Transfer Information

Common university majors related to the field of Engineering include:

Agricultural Engineering, Architectural Engineering, Aviation and Aerospace Engineering, Bioengineering and Technology, Chemical Engineering, Civil Engineering, Computer Engineering, Computer Science and Engineering, Construction Management, Electrical Engineering, Engineering, Engineering Physics, Engineering Technology, Environmental Engineering, Industrial Engineering and Technology, Manufacturing Engineering, Materials Science and Engineering, Mechanical Engineering, Nuclear Engineering, Structural Engineering.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Engineering (ENGE)

50A Robotics Team Project Development I

1 hour lecture, 1.5 hours lab, 1.5 units
Pass/No Pass

Limitation on Enrollment: This course is not open to students with previous credit for Engineering 265A: Building Educational Bridges through Robotics Competitions.

This introductory course addresses the knowledge, skills and activities needed to organize, promote and

manage the design phase of a robotics competition team. Team building and collaborative learning are stressed. State-of-the-art computer software, employing pedagogically developed graphical command boxes, is used to develop effective, easy to use and understand programs to control the robots. This course is intended for students with an interest in robotics who need to gain experience as members of an engineering design team. This course may be taken 3 times with new technology, and new projects. (FT) Associate Degree Credit only and not Transferable.

50B Robotics Team Project Development II

1 hour lecture, 1.5 hours lab, 1.5 units
Pass/No Pass

Limitation on Enrollment: This course is not open to students with previous credit for Engineering 265A: Building Educational Bridges through Robotics Competitions.

This introductory course addresses the knowledge, skills and activities needed to organize, promote and manage the construction phase of a robotics competition team. Team building and collaborative learning are stressed. State-of-the-art computer software, employing pedagogically developed graphical command boxes, is used to develop effective, easy to use and understand programs to control the robots. This course is intended for students with an interest in robotics who need to gain experience as members of an engineering team constructing a new design. This course may be taken 3 times with new technology, and new projects. (FT) Associate Degree Credit only and not Transferable.

50C Building Educational Bridges Through Robotics Competitions Testing and Competing

1 hour lecture, 1.5 hours lab, 1.5 units
Pass/No Pass

Limitation on Enrollment: This course is not open to students with previous credit for Engineering 265A: Building Educational Bridges through Robotics Competitions.

This introductory course addresses the knowledge, skills and activities needed to organize, promote, and manage the testing and competition phases of a robotics competition team. Team efficiency and collaborative learning are stressed. State-of-the-art computer software, employing pedagogically developed graphical command boxes, is used to develop effective, easy to use and understand programs to control the robots. This course is

intended for students with an interest in robotics who need to gain experience as members of an engineering team testing and deploying a new design. This course may be taken 3 times with new technology, and new projects. (FT) Associate Degree Credit only and not Transferable.

101 Introduction to Engineering
1.5 hours lecture, 1.5 units
Letter Grade or Pass/No Pass Option

Limitation on Enrollment: This course is not open to students with previous credit for Engineering 265B: Introduction to Engineering.

This course is an introduction to engineering in the work environment, including familiarization with the different occupations of engineering. Emphasis is placed on engineering requirements, analysis, design, implementation and testing of actual engineering problems. Students learn the proper use of engineering tools including computers, statistics and computer simulations. This course is designed to help students decide whether to embark on an engineering or technical career. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

108 Dimensioning and Tolerancing
3 hours lecture, 3 units
Grade Only

Limitation on Enrollment: This course is not open to students with previous credit for Manufacturing Technology 108 or Manufacturing Engineering 105. This course is an introductory study of dimensioning and tolerancing. The course content emphasizes symbology, datum reference, tolerances of location and of form and runout, and includes a complete orientation to American National Standard Institute Standard Y14.5. This course is designed for the transfer student planning to major in engineering or disciplines included in the physical sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

111 Introduction to Computer-Aided Design
2 hours lecture, 3 hours lab, 3 units
Grade Only

Limitation on Enrollment: This course is not open to students with credit for Drafting 111.

This course is an introductory study of computer-aided design, engineering, and manufacturing. Emphasis is placed on providing the student with a hands-on overview of microcomputer systems and executable features of interactive software

programs that are used in industry. This course is designed for the transfer student planning to major in engineering or disciplines included in the physical sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

116 Computational Methods in Engineering
2 hours lecture, 3 hours lab, 3 units
Grade Only

Corequisite: Completion of or concurrent enrollment in: Mathematics 151 with a grade of "C" or better, or equivalent.

This course introduces students to computational methods and their applications to computer-based problem solving for engineers. Students formulate and solve engineering problems through modeling and the application of numerical methods, then evaluate and rationalize the results using computational engineering software. Topics include functions and arrays, data and file management, and standard library packages and software. This course is designed for students majoring in engineering. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

151 Engineering Drawing
6 hours lab, 2 units
Letter Grade or Pass/No Pass Option

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50.

Advisory: English 48 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5.

This course is a study of engineering design with an emphasis on developing drawing skills and techniques for engineers. Course content includes elementary orthographic and pictorial drawing, sections and dimensioning, instrument and freehand drawing as an aid to visualization and design, and computer-aided design (CAD). This course is designed for the transfer student planning to major in engineering or disciplines included in the physical sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

152 Engineering Design
2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Engineering 151 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with Drafting 120.

This course is a study of engineering design with an emphasis on the presentation and interpretation of engineering drawings. Course content includes tolerance studies, gear and computer-aided manufacturing (CAM) design, as well as fit and function studies relating to manufacturing processes with computer-aided drawing (CAD) as they influence design decisions. This course is designed for the transfer student planning to major in engineering or disciplines included in the physical sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

198 Computer Applications in Engineering
2 hours lecture, 3 hours lab, 3 units
Grade Only

This course is a presentation of computer applications in Engineering through specific software and hardware currently utilized by practicing engineers. This course is designed for the transfer student planning to major in engineering or disciplines included in the physical sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

200 Statics
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Prerequisite: Physics 195 with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Mathematics 151 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Engineering Technology 150. This course is a study of the applications of the principles of mechanics to rigid bodies in equilibrium. Course content emphasizes areas of friction, centroids, center of gravity, analysis of structures, moments of inertia and methods of virtual work. This course is designed for the transfer student planning to major in engineering or disciplines included in the physical sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

210 Properties of Materials
3 hours lecture, 3 units
Grade Only

Prerequisite: Physics 195 with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Chemistry 200 and 200L, each with a grade of "C" or better, or equivalent.

This course is a study of the chemical, physical and mechanical properties of engineering materials including metals, ceramics, polymers and composites. Emphasis is placed on function and structure as they relate to specific design considerations. This course is designed for the transfer student planning to major in engineering or disciplines included in the physical sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

240 Digital Systems
3 hours lecture, 3 units
Grade Only

Advisory: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50.

Limitation on Enrollment: This course is not open to students with credit for Physical Science 265: Digital Systems.

This course is an introduction to modeling, analysis, and design of digital systems, primarily at the Logic Design Level. Students apply the basic theory of switching networks, use Boolean algebra to analyze and synthesize switching networks, design logic gate networks, use simplification schemes to minimize part count and cost while providing optimum performance, and design and analyze sequential and combinational circuits using flip-flops and logic gate networks. This course is designed for the transfer student planning to major in engineering or disciplines included in the physical sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

250 Dynamics
3 hours lecture, 3 units
Grade Only

Prerequisite: Engineering 200 with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Mathematics 252.

Limitation on Enrollment: This course is not open to students with credit for Engineering Technology 250. This course is a study of the fundamental principles of bodies in motion with an emphasis on kinematics and kinetics of particles and rigid bodies, moving reference frames, work-energy, linear and angular momentum relationships and their application

to engineering problems. Vector notation is used throughout the course. This course is designed for the transfer student planning to major in engineering or disciplines included in the physical sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

260 Electric Circuits

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Physics 196 and Mathematics 151, each with a grade of "C" or better, or equivalent.

This course is an introduction to network analysis, basic network theorems, mesh and nodal analysis with independent and controlled sources. Course content emphasizes steady state and transient responses of networks, complex frequency transformation; A.C. circuit analysis, power, reactive apparent power, and power factor as well as balanced three-phase electric power systems. This course is designed for the transfer student planning to major in engineering or disciplines included in the physical sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Engineering Technology Mecomtronics

"Engineering Technology" on page 263

Engineering Technology

Air Conditioning, Computer Technical Illustration, Electricity, Electromechanical Engineering Technology, Electronics, Engineering Technology, Machine Technology, Manufacturing Engineering Technology, Mecontronics, Military Electronic Technology, Pre-Engineering

Award Type	Units
Certificate of Performance:	
Basic Refrigeration and Control Systems	11
Air Conditioning & Solar Energy	16
C.N.C. Operator	16
C.N.C. Technology	12
Computer Technical Illustration	6
Electrical Recertification Preparation	9
Electronics Technician Level I	14
Electromechanical Technology	15
Advanced Electromechanical Technology	12
Mechanical Design	13
Advanced Mechanical Design	10
Introduction to Manufacturing	7-8.5
Manufacturing Fundamentals	13-14.5
Advanced Manufacturing	11
Lean Six Sigma	9
Pre-Engineering Technology	13-14
Certificate of Achievement:	
Advanced Air Conditioning and Direct Digital Control	33
Air Conditioning, Heating, and Advanced Refrigeration	31
Heating, Air Conditioning and Solar Energy	31
Heating, Ventilation and Air Conditioning Systems Design	31
Stationary Facilities Engineering and General Maintenance Technician	32
Computer Technical Illustration	22
Electricity	20
Lineman	30
Electrical Control Systems Option	25
Electronics	27
Electronic Communication Systems Option	39
Electronic Microprocessor/Microcontroller Design Option	38.5
C.N.C. Technology	20
Computer Aided Manufacturing Technology	32
Electronics Manufacturing	30-31.5
Fabrication Manufacturing	32-33.5

Award Type	Units
Associate in Science Degree:	
Air Conditioning, Refrigeration and Environmental Control Technology	36*
Computer Technical Illustration	26*
Engineering Emphasis	34*
Electricity	20*
Lineman	30*
Electronic Communication Systems Option	46*
Electronic Microprocessor/Microcontroller Design Option	38.5*
Computer Aided Manufacturing Technology	32*
Manufacturing Engineering Technology Option: Electronics	47-50.5*
Manufacturing Engineering Technology Option: Fabrication	49-52.5*
Military Electronics Technology	19.5*
*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.	

Pre-Engineering Technology

Description

The Certificate of Performance in Pre-Engineering Technology prepares students for entry level positions in engineering and technology areas. Courses in this certificate provide basic skills in math, technical writing, science for technical applications and drafting used in most engineering and technology related fields. These foundation courses will prepare students for the more academically rigorous engineering technology programs.

Faculty	Office	Telephone
David Fierro	A-107E	619-388-3731
Farnaz Khoromi	A-107C	619-388-3527
Fred Julian	A-107D	619-388-3720
Robert Pruitt	A-107E	619-388-3875

Career Options

Entry level engineering drafting and design; Entry level technical writing; Entry level technician.

Academic Programs

The Pre-Engineering Technology Certificate of Performance requires completion of the courses listed below.

Certificate of Performance: Pre-Engineering Technology*

Courses:	Units
ENGN 110 Science for Technical Applications	4
MATH 096 Intermediate Algebra and Geometry	5
TEHW 101 Introduction to Technical Writing	3

And select one course from:

ENGE 111 Introduction to Computer-Aided Design or	
ENGE 151 Engineering Drawing or	
TECI 101 Basic Technical Illustration	
	2-3

Total Units = 14-15

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Courses

Engineering Technology (ENGN)

110 Science for Technical Applications 3 hours lecture, 3 hours lab, 4 units Grade Only

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 and M40.

This science course presents basic vocabulary, concepts and scientific techniques that are used to analyze and understand technical applications. Students are introduced to the language and tools of chemistry and physics. Students learn to interpret atomic structure, use the periodic table, classify and identify properties of common compounds, analyze chemical bonding and reactions, and relate technical applications to chemical properties. Students also learn to determine the effect of force on linear motion, analyze various physical phenomena, and analyze various forms of energy. This course is intended for beginning students who are enrolling in an engineering technology major. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Engineering Technology (ENGN) 110, Chemistry (CHEM) 100 and Physics (PHYS) 100 combined: maximum credit, one course.

120 Principles of Engineering Technology 2 hours lecture, 3 hours lab, 3 units Grade Only

This course is an introduction to the field of engineering technology. Emphasis is placed on providing students with a balance of theoretical and practical engineering principles through hands-on projects related to design, thermodynamics, hydraulics, electrical circuits, and materials. This class is designed for students interested in the pursuing an academic or vocational career in engineering technology or electronics, including, but not limited to advanced-level high school students. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

122 Digital Electronics 2 hours lecture, 3 hours lab, 3 units Grade Only

This course is a project-based study of digital electronics for the field of engineering technology. Emphasis is placed on the application of digital electronics to product development for current and future market trends. Topics include Ohm's and Kirchhoff's laws as they apply to circuit analysis, capacitance, digital versus analog waveforms, digital circuit design, flip-flops, spec sheet analysis, and microprocessor programming. This class is designed for students interested in the pursuing an academic or vocational career in engineering or electronics, including, but not limited to advanced-level high school students. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

124 Engineering Design and Development 2 hours lecture, 3 hours lab, 3 units Grade Only

This course is a hands-on, project-based study of the field of Engineering Design. Emphasis is placed on providing students with practical knowledge related to the field, including the fundamentals of design, portfolio development, sketching, modeling, dimensioning, presentation, production and marketing. This class is designed for advanced-level high school students interested in engineering or engineering technology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

126 Engineering Computer Integrated Technology

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

This course is a hands-on, project-based study of the integration of computers in the field of Engineering. Emphasis is placed on providing students with working knowledge of Computer Modeling, Computer Numerical Control (CNC), Computer-aided Manufacturing (CAM) software, robotics and automation, and Computer Integrated Manufacturing (CIM). This class is designed for advanced-level high school students interested in pursuing an academic or vocational career in engineering or engineering technology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

128 Electronics for Technology

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50; Engineering Technology 110 with a grade of "C" or better, or equivalent.

Electronics for Technology introduces electronics to non-electronics majors. It's a fast-paced course and progresses through basic electronics to devices and then to digital electronics. Some attention is given to industries and businesses currently using electronics. The course is designed for students with non-electronics majors to gain fundamental electronics knowledge and experience. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

130 Introduction to Engineering Design

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

This course is an introductory study of Engineering Design. Emphasis is placed on providing students with an overall perspective on the design process as well as on the details of product development, including computer-aided design (CAD). Topics include the history of design, current career opportunities, portfolio development, geometric relationships, modeling, dimensioning, production and marketing. This class is designed for students interested in the pursuing an academic or vocational career in engineering technology or electronics, including, but not limited to advanced-level high

school students. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

200 Applied Mechanics

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Mecomtronics 120A with a grade of "C" or better, or equivalent; Physics 195 with a grade of "C" or better, or equivalent.

Advisory: Mathematics 182 with a grade of "C" or better, or equivalent; Mathematics 150 with a grade of "C" or better, or equivalent.

This course is a study of fundamental principles of bodies at rest and in motion. The course content emphasizes areas of friction, centroids, center of gravity, analysis of structures, moments of inertia and methods of virtual work. In addition, emphasis is also placed on kinematics and kinetics of particles and rigid bodies, moving reference frames, work-energy, linear and angular momentum relationships and their application to engineering problems. This course is intended for students enrolled in Engineering Technology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

220 Component Design

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Engineering 110 or 151, with a grade of "C" or better, or equivalent.

This course emphasizes the application of mechanical design for component devices. The lecture material for this course is enhanced by a laboratory experience in design techniques including the creation of drawings using CAD (Computer Aided Design), computer solutions of design problems, component sizing and dimension determinations, mechanisms and design solution of mechanical component problems. This course is intended for students majoring in Engineering Technology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

225 Product Development

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Engineering 152 with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in: Engineering 200 and Technical Writing 101, each with a grade of "C" or better, or equivalent.

This is a Capstone course intended for students enrolled in their last semester of an Engineering Technology major. Students combine skills from prior coursework and from this course to take a design from conception to full production (or a portion thereof) using such elements such as Gantt planning, Electronic and Mechanical analysis as necessary. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

275 Engineering Technology Industrial Internship

**1 hour lecture, 9 hours lab, 4 units
Grade Only**

Prerequisite: Manufacturing Engineering Technology 101, 105 and 115, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Manufacturing Engineering Technology 110 and 230, each with a grade of "C" or better, or equivalent. This is an industrial internship course for multiple programs under Engineering Technology field. Students apply technical knowledge learned in previous courses in the program to design and conduct experiments; analyze and interpret data; design manufacturing systems, processes and components; and identify, formulate and solve technical problems. Throughout the internship, students have opportunities to acquire new knowledge and sharpen their problem solving, communication and team work skills. The internship experience also helps students with personal growth, professional development and awareness of the impact of engineering solutions on the industry and society. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Air Conditioning, Refrigeration, and Environmental Control Technology

Description

The Air Conditioning, Refrigeration, and Environmental Control Technology (AIRE) Program offers a comprehensive study of heating, ventilation, air conditioning and refrigeration (HVACR). The AIRE Program course of study includes the technology of controlled environments for homes, buildings and conditioned spaces, with topics ranging from residential refrigeration to commercial air conditioning and industrial freezing systems.

Particular focus is directed toward energy efficiency and integration with Green Technology, including alternative energy systems.

Program Goals

The AIRE Program offers a series of complementary certificates that may be used for job placement and advancement in the field. When combined with the appropriate general education and graduation requirements, an AIRE Program certificate leads to an Associate in Science degree that may be used for advanced job placement and as preparation for a four-year engineering or air conditioning and refrigeration technology program.

Faculty	Office	Telephone
Thomas Davies	A-107D	619-388-3425
David Fierro	A-107E	619-388-3731

Career Options

The AIRE Program trains students in traditional career options that include air conditioning and/or refrigeration contractor, service manager, dispatcher, HVAC or refrigeration service technician, manufacturer service representative, sales engineer, service engineer, facilities or plant operations engineer, HVACR consultant, and control systems designer/commissioner. The AIRE Program also prepares students to enter into Green careers that include solar energy technician or contractor, solar system design engineer and HVAC and solar integration specialist.

Student Learning Outcomes

Students who complete the program will be able to:
Size and design an HVACR system for a structure or commercial application.

- Correctly diagnose and repair HVACR equipment using a minimum of replacement parts.
- Articulate the effects of deficient or excessive sub-cooling, superheat, air flow or water flow through an HVACR system.
- Utilize knowledge of the Refrigeration Cycle to charge a typical AC system.
- Trace power and control voltages in the diagnosis of HVACR equipment.

Academic Programs

The certificates of performance and achievement and associate degree require completion of the courses listed below.

Certificate of Performance: Air Conditioning and Solar Energy*

Description

With a California and U.S. emphasis on energy efficiency and sustainability, there is a need for well trained mechanical technicians with knowledge and skill in the integration of conventional Heating - Ventilation - Air Conditioning & Refrigeration (HVACR) and solar energy technology. This certificate of performance provides a comprehensive study of basic HVACR, solar thermal and photovoltaic systems.

Courses:		Units
AIRE 100	Basic Refrigeration Theory	4
AIRE 103	Basic Refrigeration Lab	2
AIRE 124	Control Systems Theory	3
AIRE 125	Control Systems Lab	2
AIRE 160	Solar Energy Utilization Theory	3
AIRE 161	Solar Energy Utilization Lab	2
Total Units = 16		

Note: Recommend AIRE 100, AIRE 103, AIRE 124 and AIRE 125 be taken prior to enrolling in AIRE 160 and AIRE 161.

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Basic Refrigeration and Control Systems*

Description

With a California and U.S. emphasis on energy efficiency and sustainability, there is a need for well trained mechanical technicians. This Certificate of performance prepares students with knowledge and skill in the installation, maintenance and repair of residential and light-commercial Heating - Ventilation - Air Conditioning & Refrigeration (HVACR) systems.

Courses:		Units
AIRE 100	Basic Refrigeration Theory	4
AIRE 103	Basic Refrigeration Lab	2
AIRE 124	Control Systems Theory	3
AIRE 125	Control Systems Lab	2
Total Units = 11		

*A Certificate of Performance is a departmental award that does not appear on the student's

transcript. All courses must be completed within the San Diego Community College District.

Certificate of Achievement: Air Conditioning, Refrigeration, and Environmental Control Technology

Advanced Air Conditioning and Direct Digital Control

Advanced Air Conditioning and Direct Digital Control focuses on precise, automated control of air conditioning and lighting systems with the goal of providing optimum comfort at minimal operational cost.

Courses Required for the Major:		Units
AIRE 100	Basic Refrigeration Theory	4
AIRE 103	Basic Refrigeration Lab	2
AIRE 112	Comfort Heating Systems Theory	4
AIRE 113	Comfort Heating Systems Lab	2
AIRE 124	Control Systems Theory	3
AIRE 125	Control Systems Lab	2
AIRE 126	Fluid Flow Dynamics	3
AIRE 127	Fluid Flow Dynamics Lab	2
AIRE 138	HVAC/Refrigeration System Design	3
AIRE 139	HVAC/Refrigeration System Design Lab	2
AIRE 144	Direct Digital Controls Theory	4
AIRE 145	Direct Digital Controls Lab	2
Total Units = 33		

Recommended Electives: Air Conditioning, Refrigeration, and Environmental Control Technology 132 and 133.

Certificate of Achievement: Air Conditioning, Refrigeration, and Environmental Control Technology

Air Conditioning, Heating, and Advanced Refrigeration

Description

The Air Conditioning, Heating and Advanced Refrigeration certificate focuses on advanced, complex, high efficiency HVACR systems and their components.

Courses Required for the Major:		Units
AIRE 100	Basic Refrigeration Theory	4
AIRE 103	Basic Refrigeration Lab	2

AIRE 112	Comfort Heating Systems Theory	4
AIRE 113	Comfort Heating Systems Lab	2
AIRE 122	Construction Drawings & Estimating	3
AIRE 123	Construction Drawings & Estimating Lab	1
AIRE 124	Control Systems Theory	3
AIRE 125	Control Systems Lab	2
AIRE 126	Fluid Flow Dynamics	3
AIRE 127	Fluid Flow Dynamics Lab	2
AIRE 132	Advanced Refrigeration Theory	3
AIRE 133	Advanced Refrigeration Lab	2

Total Units = 31

Certificate of Achievement: Air Conditioning, Refrigeration, and Environmental Control Technology

Heating, Air Conditioning and Solar Energy

The Certificate of Achievement in Heating, Air Conditioning and Solar Energy focuses on the design and integration of conventional HVAC systems with solar energy sources for sustainable residential and commercial environments.

Courses Required for the Major:		Units
AIRE 100	Basic Refrigeration Theory	4
AIRE 103	Basic Refrigeration Lab	2
AIRE 124	Control Systems Theory	3
AIRE 125	Control Systems Lab	2
AIRE 112	Comfort Heating Systems Theory	4
AIRE 113	Comfort Heating Systems Lab	2
AIRE 122	Construction Drawings & Estimating	3
AIRE 123	Construction Drawings & Estimating Lab	1
AIRE 126	Fluid Flow Dynamics	3
AIRE 127	Fluid Flow Dynamics Lab	2
AIRE 160	Solar Energy Utilization Theory	3
AIRE 161	Solar Energy Utilization Lab	2

Total Units = 31

Recommended Electives: Air Conditioning, Refrigeration, and Environmental Control Technology 138 and 139, 144 and 145.

Certificate of Achievement: Air Conditioning, Refrigeration, and Environmental Control Technology

Heating, Ventilation, and Air Conditioning Systems Design

Description

The Certificate of Achievement in Heating, Ventilation, and Air Conditioning Systems Design focuses on the integration of HVAC components and equipment into the design of optimally functional and energy efficient building air conditioning systems.

Courses Required for the Major:		Units
AIRE 100	Basic Refrigeration Theory	4
AIRE 103	Basic Refrigeration Lab	2
AIRE 112	Comfort Heating Systems Theory	4
AIRE 113	Comfort Heating Systems Lab	2
AIRE 122	Construction Drawings & Estimating	3
AIRE 123	Construction Drawings & Estimating Lab	1
AIRE 124	Control Systems Theory	3
AIRE 125	Control Systems Lab	2
AIRE 126	Fluid Flow Dynamics	3
AIRE 127	Fluid Flow Dynamics Lab	2
AIRE 138	HVAC/Refrigeration Systems Design	3
AIRE 139	HVAC/Refrigeration Systems Design Lab	2

Total Units = 31

Recommended Electives: Air Conditioning, Refrigeration, and Environmental Control Technology 132 and 133, 144 and 145.

Semester Sequence:

First:	AIRE 144	4
Second:	AIRE 145	2
Third:	AIRE 132	3
Fourth:	AIRE 133	2

Certificate of Achievement: Air Conditioning, Refrigeration, and Environmental Control Technology

Stationary Facilities Engineering and General Maintenance Technician

Description

The Certificate of Achievement in Stationary Facilities Engineering and General Maintenance Technician is

a practical study of large commercial, high efficiency HVACR systems and central plant operations and maintenance.

Courses Required for the Major:		Units
AIRE 100	Basic Refrigeration Theory	4
AIRE 103	Basic Refrigeration Lab	2
AIRE 112	Comfort Heating Systems Theory	4
AIRE 113	Comfort Heating Systems Lab	2
AIRE 122	Construction Drawings and Estimating	3
AIRE 123	Construction Drawings and Estimating Lab	1
AIRE 124	Control Systems Theory	3
AIRE 125	Control Systems Lab	2
AIRE 126	Fluid Flow Dynamics	3
AIRE 127	Fluid Flow Dynamics Lab	2
BLDC 260	Building Codes and Zoning	3
BUSE 150	Human Relations in Business	3
Total Units = 32		

Recommended Electives: Air Conditioning, Refrigeration and Environmental Control Technology 132 and 133, 144 and 145, 138 and 139.

Associate in Science Degree: Air Conditioning, Refrigeration, and Environmental Control Technology

Description

The Air Conditioning, Refrigeration and Environmental Control Technology AS degree focuses on the study of complex, high efficiency HVACR, advanced controls and alternative energy systems.

Courses Required for the Major:		Units
AIRE 100	Basic Refrigeration Theory	4
AIRE 103	Basic Refrigeration Lab	2
AIRE 112	Comfort Heating Systems Theory	4
AIRE 113	Comfort Heating Systems Lab	2
AIRE 122	Construction Drawings & Estimating	3
AIRE 123	Construction Drawings & Estimating Lab	1
AIRE 124	Control Systems Theory	3
AIRE 125	Control Systems Lab	2
AIRE 126	Fluid Flow Dynamics	3
AIRE 127	Fluid Flow Dynamics Lab	2
AIRE 132	Advanced Refrigeration Theory	3
AIRE 133	Advanced Refrigeration Lab	2
AIRE 138	HVAC/Refrigeration System Design	3

AIRE 139	HVAC/Refrigeration System Design Lab	2
Total Units = 36		

Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Recommended electives: Air Conditioning, Refrigeration and Environmental Control Technology 270, 290, 144 and 145, 160 and 161, Computer Business Technology 180.

Courses

Air Conditioning, Refrigeration, and Environmental Control Technology (AIRE)

100 Basic Refrigeration Theory

**4 hours lecture, 4 units
Grade Only**

Corequisite: Air Conditioning, Refrigeration, and Environmental Control Technology 103.
This course is a study of elementary thermodynamics as applied to heating, air conditioning and refrigeration (HVACR) systems, including molecular theory of temperature, pressure and heat. Emphasis is placed on the vapor-compression refrigeration cycle, HVACR system components, their thermal performance and applications. Discussions include historical to modern systems, with emphasis placed on new energy-saving technologies and methods being employed in this dynamic industry. This course is intended for students pursuing certificates or an associate degree in Air Conditioning, Refrigeration and Environmental Control Technology. (FT)
Associate Degree Credit & transfer to CSU and/or private colleges and universities.

103 Basic Refrigeration Lab

**6 hours lab, 2 units
Grade Only**

Corequisite: Air Conditioning, Refrigeration, and Environmental Control Technology 100.
This course is a hands-on, project-oriented study of the tools, materials, methods and equipment used in Heating, Ventilation, Air Conditioning and Refrigeration (HVACR). Emphasis is placed on projects related to heat transfer and the refrigeration

cycle, system evacuation, charging, recovery and leak testing as they apply to normal HVACR industry activities. This course is intended for students pursuing certificates or an associate degree in Air Conditioning, Refrigeration and Environmental Control Technology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

112 Comfort Heating Systems Theory
4 hours lecture, 4 units
Grade Only

Corequisite: Air Conditioning, Refrigeration, and Environmental Control Technology 113 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Air Conditioning, Refrigeration, and Environmental Control Technology 134.

This course engages in the study, identification, and understanding of the safe operation of comfort heating equipment and systems. Instruction includes the use of combustion analyzers to evaluate the combustion process of various fuels, their heat output, analysis of bi-products, equipment capacity and combustion efficiency. The course includes discussions on equipment design, installation and maintenance in common types of comfort heating systems, including forced-air fuel-fired furnaces, boilers, heatpumps and airhandlers, hydronic heating and integrated conventional and alternative energy systems. This course is intended for students pursuing certificates or an associate degree in Air Conditioning, Refrigeration and Environmental Control Technology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

113 Comfort Heating Systems Lab
6 hours lab, 2 units
Grade Only

Corequisite: Air Conditioning, Refrigeration, and Environmental Control Technology 112 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Air Conditioning, Refrigeration, and Environmental Control Technology 135.

This course involves a series of demonstrations and lab projects to provide identification, knowledge and understanding of the safe operation of comfort heating equipment and systems. Readings from combustion analyzers are used to evaluate

the combustion process of various fuels, their heat output, analysis of bi-products, equipment capacity and combustion efficiency. The course includes design, maintenance training and practice on common types of comfort heating systems, including forced-air gas-fired and oil-fired furnaces, boilers, furnaces, heatpump fancoils, hydronic heating and integrated conventional and alternative energy systems. This course is intended for students pursuing certificates or an associate degree in Air Conditioning, Refrigeration and Environmental Control Technology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

122 Construction Drawings and Estimating
3 hours lecture, 3 units
Grade Only

Corequisite: Air Conditioning, Refrigeration, And Environmental Control Technology 123 with a grade of "C" or better, or equivalent.

Advisory: Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30. This course is a study of the generation, reading and interpretation of construction drawings from initial concepts to actual building construction. Emphasis is placed on how the Heating, Ventilation and Air Conditioning (HVAC) systems are integrated into the structure by architects, engineers and ultimately the construction contractors and subcontractors. Course content includes architectural, mechanical, electrical and plumbing drawings, and also covers job planning, sources and use of pricing guidelines, municipal, county, state and federal codes, energy codes and standards, specifications and computer software programs used in the development of construction drawings and used for construction estimating. This course is intended for students pursuing certificates or an associate degree in Air Conditioning, Refrigeration and Environmental Control Technology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

123 Construction Drawings and Estimating Lab
3 hours lab, 1 unit
Grade Only

Corequisite: Air Conditioning, Refrigeration, And Environmental Control Technology 122 with a grade of "C" or better, or equivalent.

Advisory: Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

This laboratory course provides practice in the reading of construction drawings and plans for structures and building components. Students use pricing guides for Heating, Ventilating and Air Conditioning (HVAC), computer-aided drafting software, engineering and architectural scales, and elementary sketching and drawing techniques to complete laboratory projects. This course is intended for students pursuing certificates or an associate degree in Air Conditioning, Refrigeration and Environmental Control Technology. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

124 Control Systems Theory

**3 hours lecture, 3 units
Grade Only**

Corequisite: Air Conditioning, Refrigeration, and Environmental Control Technology 125.

Advisory: Completion of or concurrent enrollment in: Air Conditioning, Refrigeration, and Environmental Control Technology 100 and 103, each with a grade of "C" or better, or equivalent.

This course is a study of electricity and electrical controls for Heating, Ventilation and Air Conditioning and refrigeration (HVACR). Subjects include Ohm's Law and Kirchoff's Law for direct current (DC) and alternating current (AC) circuits, series and parallel power and control circuits, electrical schematic and wiring diagrams, and motor theory. Emphasis is placed on the operational theory and application of components commonly encountered in modern HVACR systems, electrical control and circuits, compressor, pump and fan circuits. This course is intended for students pursuing certificates or an associate degree in Air Conditioning, Refrigeration and Environmental Control Technology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

125 Control Systems Lab

**6 hours lab, 2 units
Grade Only**

Corequisite: Air Conditioning, Refrigeration, and Environmental Control Technology 124.

Advisory: Completion of or concurrent enrollment in: Air Conditioning, Refrigeration, and Environmental Control Technology 100 and 103, each with a grade of "C" or better, or equivalent.

This course utilizes a series of laboratory projects that provide hands-on student training with test and measuring tools, benchtop trainers and actual heating, ventilation, air conditioning and

refrigeration (HVACR) systems. Projects include use of digital-volt-ohm-meters (DVOM), in-circuit and clamp-on ammeters, meggers, etc. in analyzing HVACR power and control circuits. Logical troubleshooting and diagnosis methods are demonstrated and utilized with computer simulation software and in the laboratory projects. This course is intended for students pursuing certificates or an associate degree in Air Conditioning, Refrigeration and Environmental Control Technology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

126 Fluid Flow Dynamics

**3 hours lecture, 3 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in Air Conditioning, Refrigeration, and Environment Control Technology 127 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Environmental Control Technology 126.

Fundamental laws governing air flow in ducting systems; fans, system curves, fan curves, common methods of air distribution; friction losses in ducts; use of system calculators; laws of hydronics; pipe sizing, pump sizing; pressure losses in hydronic systems; air psychometries; water treatment and air filtration fundamentals. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

127 Fluid Flow Dynamics Lab

**6 hours lab, 2 units
Grade Only**

Corequisite: Air Conditioning, Refrigeration, and Environment Control Technology 126.

Limitation on Enrollment: This course is not open to students with credit for Environmental Control Technology 127.

This laboratory course provides practice in fluid measuring methods and instrumentation. Emphasis is placed on working with instruments such as pitot tube devices and velometers to illustrate the interaction of fluid systems curves. Course content also includes air psychometries, air and hydronic system balancing and measurement of sound. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

132 Advanced Refrigeration Theory
3 hours lecture, 3 units
Grade Only

Corequisite: Air Conditioning, Refrigeration, and Environmental Control Technology 133.
Advisory: Air Conditioning, Refrigeration, and Environmental Control Technology 100 and 103, each with a grade of "C" or better, or equivalent. This course is a comprehensive thermodynamic analysis of air conditioning and refrigeration systems using Mollier diagrams and mathematical system process calculations. Topics include heat exchanger design, condensers, evaporators, cooling towers, evaporative condensers, metering devices, compressor design and performance, system piping and lubrication. Studies include multi-evaporator vapor-compression, cascade, cryogenic, and absorption systems. This course is intended for students pursuing certificates or an associate degree in Air Conditioning, Refrigeration and Environmental Control Technology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

133 Advanced Refrigeration Lab
6 hours lab, 2 units
Grade Only

Corequisite: Air Conditioning, Refrigeration, and Environmental Control Technology 132.
Advisory: Air Conditioning, Refrigeration, and Environmental Control Technology 100 and 103, each with a grade of "C" or better, or equivalent. This course is a rigorous series of projects in the functioning and service of heating, ventilating, air conditioning and refrigeration (HVACR) systems. Projects include taking pressure, temperature and airflow readings on normal and malfunctioning systems, thermodynamic analyses using Mollier diagrams, troubleshooting, diagnosis and repair. Tasks involve the use of various refrigerants and secondary control devices such as pressure regulators and head pressure controls and the use of modern industry-standard tools and test equipment. This course is intended for students pursuing certificates or an associate degree in Air Conditioning, Refrigeration and Environmental Control Technology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

138 HVAC/Refrigeration System Design
3 hours lecture, 3 units
Grade Only

Limitation on Enrollment: This course is not open to students with credit for Environmental Control Technology 138.

An intensive course on the theory of design for heating, refrigeration, air conditioning, and solar energy systems. Includes building envelope heat load calculations, equipment selection criteria, system selection and optimization. Energy conservation techniques in design and hydronic system design applications are included. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

139 HVAC/Refrigeration System Design Lab
6 hours lab, 2 units
Grade Only

Limitation on Enrollment: This course is not open to students with credit for Environmental Control Technology 139.

Applied design techniques for the development of complete "HVAC" refrigeration and solar designs in an occupationally similar environment. A series of design projects includes applied heat load estimation; applied psychrometrics; system and equipment selection criteria; and use of design manuals, tables, and manufacturers catalogs. Applied energy conservation techniques are included. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

144 Direct Digital Controls Theory
4 hours lecture, 4 units
Grade Only

Corequisite: Air Conditioning, Refrigeration, and Environmental Control Technology 145 with a grade of "C" or better, or equivalent.

Advisory: Computer Business Technology 161 and 180, each with a grade of "C" or better, or equivalent. This course is a study of Direct Digital Control (DDC) theory: rationale, DDC system design, DDC system sensors, DDC controllers and advanced heating, ventilation and air conditioning (HVAC) controls, network architecture, Internet protocol (IP) addressing and interoperation, open and non-proprietary systems, American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) BACnet, and the LonWorks platform. The course examines BACnet DDC hybrid control strategies using various analog and binary system actuators. Specific emphasis is placed on developing

student skills using networks that are built into the AIRE Program DDC lab equipment and utilized throughout the world, including the SDCCD campuses and buildings. This course is intended for students pursuing certificates or an associate degree in Air Conditioning, Refrigeration and Environmental Control Technology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

145 Direct Digital Controls Lab

**6 hours lab, 2 units
Grade Only**

Corequisite: Air Conditioning, Refrigeration, and Environmental Control Technology 144 with a grade of "C" or better, or equivalent.

Advisory: Computer Business Technology 161 and 180, each with a grade of "C" or better, or equivalent. This course applies Direct Digital Control (DDC) theory to laboratory projects: system design, American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) BACnet DDC controller selection and integration with heating, ventilation and air conditioning (HVAC) system components, BACnet network architecture, development of graphical views and hierarchical database tree, logical BACnet program development, and construction of DDC system operator machine interface graphics. Course projects include the development of a facility graphical view and control hierarchy tree, setup of a control logic diagram using blocks, symbols and wires, and construction of an operator graphical interface. Laboratory training simulations are compared to actual DDC HVAC control strategies used by the San Diego Community College District's BACnet DDC system, and throughout the world. This course is intended for students pursuing certificates or an associate degree in Air Conditioning, Refrigeration and Environmental Control Technology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

160 Solar Energy Utilization Theory

**3 hours lecture, 3 units
Grade Only**

Corequisite: Air Conditioning, Refrigeration, and Environmental Control Technology 161.

Advisory: Air Conditioning, Refrigeration, and Environmental Control Technology 100 and 124, each with a grade of "C" or better, or equivalent. This course studies solar-thermal and photovoltaic (PV) systems, siting considerations, types of

collectors and systems, operating efficiencies, building codes and solar rights. Topics include: passive and active solar thermal systems; residential and commercial systems for water heating, space heating, space cooling, process heating, swimming pool heating, and hybrid systems. Study of photovoltaic technologies includes the solar cell, independent and grid-connected systems and electric bill reduction strategies. This course is intended for students pursuing certificates or an associate degree in Air Conditioning, Refrigeration and Environmental Control Technology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

161 Solar Energy Utilization Lab

**6 hours lab, 2 units
Grade Only**

Corequisite: Air Conditioning, Refrigeration, and Environmental Control Technology 160.

Advisory: Air Conditioning, Refrigeration, and Environmental Control Technology 100 and 125, each with a grade of "C" or better, or equivalent. This course includes a series of solar thermal and photovoltaic (PV) laboratory projects. Solar collector and system performance data are recorded and analyzed and efficiencies calculated. Topics include collector/module azimuth and tilt, thermal open and closed loop systems, freeze protection, stagnation; stand-alone and grid-connected photovoltaic systems are studied. This course is intended for students pursuing certificates or an associate degree in Air Conditioning, Refrigeration and Environmental Control Technology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

270 Work Experience in Air Conditioning, Refrigeration, Environmental Control Technology

**Hours by Arrangement (One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.), 1-4 units
Grade Only**

Limitation on Enrollment: Must obtain an Add Code from Work Experience Coordinator for registration. A program of on-the-job learning experiences for students employed in a job related to their major or their educational goals. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

290 Independent Study in Air Conditioning, Refrigeration, Environmental Control Technology

Hours by Arrangement, 1-3 units
Grade Only

Limitation on Enrollment: Must obtain an Add Code from instructor for registration. This course is not open to students with credit for Environmental Control Technology 290.

For students who wish to study special problems. This course may be taken four times with different content for a maximum of six units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Computer Technical Illustration

Description

Provides an opportunity to develop the theory and techniques necessary for employment as a technical illustrator in the fields of engineering, manufacturing, publishing and scientific industries. Students will plan and produce drawings from specific data, blueprints and prototypes. Production methods, visual skills, technical documentation procedures and developments, as they apply to the technical illustration industry, will be studied.

Faculty	Office	Telephone
David Fierro	A-107E	619-388-3731
Farnaz Khoromi	A-107C	619-388-3527
Fred Julian	A-107D	619-388-3720

Career Options

Technical Illustrator, graphic specialist, technical publications specialist, manager technical publications, CAD drafter, CAD illustrator, CAD designer, engineering technician, computer graphics specialist.

Student Learning Outcomes

Students who complete the program will be able to:

- Plan and produce drawings from specific data, blueprints and prototypes.

- Construct two and three-dimensional models of an engineering design using available engineering software.
- Demonstrate knowledge of print reading and symbology.

Academic Programs

Additional general education and graduation requirements for the associate degree are listed in the catalog. The associate degree requires a minimum of 60 units.

Certificate of Performance: Computer Technical Illustration*

Prepares students with drafting and Computer Aided Design (CAD) experience to obtain entry-level Technical Illustration positions.

Courses:	Units
TECI 101, Basic Technical Illustration	3
TECI 102, Advanced Technical Illustration	3
Total Units = 6	

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Achievement: Computer Technical Illustration

Prepares students for entry-level positions in Technical Publications with emphasis on graphic design.

Courses Required for the Major:		Units
TECI 101	Basic Technical Illustration	3
TECI 102	Advanced Technical Illustration	3
ENGL 101	Reading and Composition	3
ARTG 120	Illustration	3
ENGE 111	Introduction to Computer-Aided Design	3
MATH 96	Intermediate Algebra and Geometry	5
MFET 105	Print Reading and Symbology	3
Total Units = 23		

Associate in Science Degree: Computer Technical Illustration

Prepares students for entry level positions in Technical Illustration, Technical Publications with emphasis in technical illustrating, technical writing and graphic design.

Courses Required for the Major:		Units
TECI 101	Basic Technical Illustration	3
TECI 102	Advanced Technical Illustration	3
ARTG 125	Digital Media	3
ARTG 120,	Illustration	3
ENGL 101	Reading and Composition	3
ENGE 111	Introduction to Computer-Aided Design	3
MATH 96	Intermediate Algebra and Geometry	5
MFET 105	Print Reading and Symbolology	3
Total Units = 26		

Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Associate in Science Degree: Computer Technical Illustration

Engineering Emphasis

Prepares students for entry level positions in Technical Illustration with emphasis in engineering, graphics, engineering design including CAD.

Courses Required for the Major:		Units
TECI 101	Basic Technical Illustration	3
TECI 102	Advanced Technical Illustration	3
ARTG 125	Digital Media	3
ARTG 120	Illustration	3
ENGL 101	Reading and Composition	3
ENGE 111	Introduction to Computer-Aided Design	3
ENGE 151	Engineering Drawing	2
ENGE 152	Engineering Design	3
ENGE 198	Computer Applications in Engineering	3
MATH 96	Intermediate Algebra and Geometry	5
MFET 105	Print Reading and Symbolology	3
Total Units = 34		

Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Recommended electives: Mathematics 104, 116.

Courses

Technical Illustration (TECI)

50 Bridging to Technical Illustration

**1 hour, 1 unit
Grade Only**

This course is designed to assist students in exploring the possibility of pursuing a career in the field of technical illustration. This introductory course, outlines career options within the field, places of employment, overview of the current technology, areas of specialization, testing requirements and professional organizations. (FT) Associate Degree Credit only and not Transferable.

101 Basic Technical Illustration

**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

This course covers the basics of technical illustration as it applies to the technical publications industry. Emphasis is placed on visualization skills, technical document analysis, and illustration development. Projects progress from technical illustration of mechanical details on CAD to pictorial procedures as required by industry. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

102 Advanced Technical Illustration

**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Prerequisite: Technical Illustration 101 with a grade of "C" or better, or equivalent.

This course is a continuation of Basic Technical Illustration 101. This course is designed to emphasize advanced pictorial problems of complex mechanical assemblies as they apply to current technical illustration industrial standards. Projects will progress from CAD generated technical illustrations of exploded views in isometric, wireframe, and solids modes to exploring current procedures of pictorial development as required by industry. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265),

Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Electricity

Description:

The electricity program is designed to provide the student with an opportunity to master the skills required for success in the electrical trades. Prior knowledge of the electrical trade is not required. Students in the program learn skills and knowledge needed to install, maintain and troubleshoot a variety of electrical systems, residential as well as commercial and industrial facilities, while adhering to the National Electrical Code (NEC), specifications and blueprints. The two-year curriculum leads to a Certificate of Achievement or an Associate in Science degree. Recommended electives are designed to introduce additional areas in the electrical field to students or working electricians. These courses may also be used to satisfy the State of California re-certification requirements for electricians.

Program Goals:

The goal and objective of this program is to provide students with hands-on skills and theoretical knowledge needed to meet the demands of an electrician entering the field.

Program Emphasis

The program begins with an introduction to basic electrical theory and continues through advanced electrical theory, installation and maintenance of industrial equipment, familiarization with electrical codes and blueprints, and the characteristics and uses of motor controls. Emphasis is also placed on electrical safety and application of the National Electric Code to residential and commercial electrical installations. The program also offers courses intended to satisfy the State of California re-certification requirements for electricians working for or as a C-10 Electrical Contractor.

Career Options:

Employment may be found as an electrician, electric lineman, maintenance electrician, electrical helper, electrical motor repairer, appliance repairer, or protective signal installer and repairer. Industries that hire electricians range from city and government agencies to commercial firms as well as homeowners.

Students interested in an Electrical Apprenticeship with Associated Builders and Contractors (ABC), Electric Meter Tester or Substation Electrician with SDG&E, are directed to Apprenticeship Information in this Catalog (see Index). The Electricity Program offers Electrician Trainees who have taken courses for the ABC Apprenticeship Program the opportunity to apply their courses toward earning a certificate or an associate degree in Electricity. (See the Professor in charge of the Electricity Program.)

Faculty	Office	Telephone
Mike Brown	T-205	619-388-3111

Career Options

Employment may be found as an electrician, electric lineman, maintenance electrician, electrical helper, electrical motor repairer, appliance repairer, or protective signal installer and repairer.

Student Learning Outcomes

Students who complete the program will be able to:

- Demonstrate knowledge of electrical codes and blueprints.
- Discuss and demonstrate knowledge of safety in the electrical field.
- Evaluate electrical wiring diagrams as they relate to implementation.
- Demonstrate a basic knowledge of generators and motors.
- Prepare and apply to take the State of California electrician certification exam.

Academic Programs

The certificates of achievement and associate degree, Electricity, require completion of the courses listed below.

Certificate of Performance: Electrical Recertification Preparation*

Courses:	Units
ELCT 20 Blueprint Reading for Electricians	3
ELCT 30 Modern Commercial Wiring	3
ELCT 40 Data, Voice and Video Cabling for Electricians	3
	Total Units = 9

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Achievement: Electricity

Courses Required for the Major:		Units
ELCT 111	Electrical Theory I	3
ELCT 111L	Electrical Laboratory I	2
ELCT 121	Electrical Theory II	3
ELCT 121L	Electrical Laboratory II	2
ELCT 131	Electrical Theory III	3
ELCT 131L	Electrical Laboratory III	2
ELCT 141	Electrical Theory IV	3
ELCT 141L	Electrical Laboratory IV	2
Total Units = 20		

Certificate of Achievement: Electricity

Lineman

Completion of this program will not guarantee employment as a Lineman with San Diego Gas and Electric Company.

Courses Required for the Major:		Units
ELCT 190	Electric Lineman IA	5
ELCT 191	Electric Lineman IB	5
ELCT 192	Electric Lineman IIA	5
ELCT 193	Electric Lineman IIB	5
ELCT 194	Electric Lineman IIIA	5
ELCT 195	Electric Lineman IIIB	5
Total Units = 30		

Certificate of Achievement: Electricity

Electrical Control Systems Option

Electrical Control Systems Option emphasizes the study of electrical control system theory including standard motor controls, transducers, static control devices, programmed controllers, and remote electronic controls.

Courses Required for the Major:		Units
Complete requirements for the Certificate of Achievement, Electricity		20
AND, in addition, complete:		
ELCT 200	Electric Control Systems	3
ELCT 200L	Electric Control Systems Laboratory	2
Total Units = 25		

Recommended electives: Electricity 20, 30, 40, 270.

Associate in Science Degree: Electricity

Courses Required for the Major:	Units
Complete the Certificate of Achievement, Electricity	20
Total Units = 20	

Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Recommended elective: Electricity 270.

Associate in Science Degree: Electricity

Lineman

Completion of this program will not guarantee employment as a Lineman with San Diego Gas and Electric Company.

Courses Required for the Major:		Units
ELCT 190	Electric Lineman IA	5
ELCT 191	Electric Lineman IB	5
ELCT 192	Electric Lineman IIA	5
ELCT 193	Electric Lineman IIB	5
ELCT 194	Electric Lineman IIIA	5
ELCT 195	Electric Lineman IIIB	5
Total Units = 30		

Complete the Certificate of Achievement, Electricity. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Recommended elective: Electricity 270.

Transfer Information

Common university majors related to the field of Electricity include:

Industrial Engineering, Industrial Technology.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific

transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Electricity (ELCT)

20 Blueprint Reading for Electricians

**3 hours lecture, 3 units
Grade Only**

This course is a practical survey of blueprint reading for electricians. Emphasis is placed on architectural considerations and electrical symbology for residential, commercial, and industrial blueprints. This course is intended for students in the Electricity Program as well as for working electricians who want to further their skills and/or fulfill state certification and accreditation requirements. (FT) Not Applicable to Associate Degree, Occupational/Vocational basic skills.

30 Modern Commercial Wiring

**3 hours lecture, 3 units
Grade Only**

This course is a study of modern commercial wiring systems. Emphasis is placed on practical application of the material through in-class projects. This course is intended for students in the Electricity Program as well as for working electricians who want to further their skills and/or fulfill state certification and accreditation requirements. (FT) Not Applicable to Associate Degree, Occupational/Vocational basic skills.

40 Data, Voice and Video Cabling for Electricians

**3 hours lecture, 3 units
Grade Only**

This course is a study of current data, voice and video cabling systems. Emphasis is placed on practical application of the material through in-class projects. This course is intended for students in the Electricity Program as well as for working electricians who want to further their skills and/or fulfill state certification and accreditation requirements. (FT) Not Applicable to Associate Degree, Occupational/Vocational basic skills.

111 Electrical Theory I

**3 hours lecture, 3 units
Grade Only**

Corequisite: Electricity 111L.

Advisory: English 48 and Mathematics 96, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and M50.

This course is a study of the fundamentals of electrical theory including basic safety practices and a history of industrial electricity and electronics. Course topics include the theory and application of fundamental units of measurement, wire splicing, permanent magnets, electromagnets, and electrical/electronic symbols. This course includes a study of the theory of electricity sources including batteries, mechanical generators, photocells, and thermocouples. In addition, Basic Ohm's Law theory including calculations of DC voltage, DC current, resistance, DC power, inductance and capacitance in DC circuits is discussed. This course is designed as preparation for the major in electricity. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

111L Electrical Laboratory I

**6 hours lab, 2 units
Grade Only**

Corequisite: Electricity 111.

Advisory: English 48 and Mathematics 96, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and M50.

This course involves laboratory practice in basic electricity. Laboratory time includes instruction and laboratory assignments in the proper use and care of electrical tools, meters, instruments, and equipment with an emphasis on safe working habits. Laboratory assignments include the application of basic direct and alternating current circuitry and wattage of fabricated circuits. Students gain additional practice in the development of electrical diagrams using proper symbols and nomenclature. An introduction to inductance and capacitance in direct current or DC circuits is included. This course is designed as a preparation for the major in Electricity. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

121 Electrical Theory II

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Electricity 111 and 111L, each with a grade of "C" or better, or equivalent.

Corequisite: Electricity 121L.

This course involves a detailed study of the theory of alternating current including the generation of AC; electrical degrees, effective and average values; addition and subtraction of phasors; resistance, inductance, and capacitance in AC circuits; reactance; and impedance. This course also includes an in-depth study of single-phase series and parallel circuits, three-phase power generation, current and voltage relationships in wye and delta connected power sources and loads. A study of three-phase transformers with various connections and under various load conditions is also included. This course is designed as a preparation for the major in Electricity. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

121L Electrical Laboratory II

**6 hours lab, 2 units
Grade Only**

Prerequisite: Electricity 111 and 111L, each with a grade of "C" or better, or equivalent.

Corequisite: Electricity 121.

This course involves laboratory practice in direct current and alternating current circuits. Activities include practice with basic DC motor circuits, power transmission lines, and instruction in the safe use of three-phase power supplies. This course also includes practice using AC voltmeters, AC ammeters, and AC wattmeters to measure phase angle, real power, apparent power, watts, vars, volt-amps, and power factor in single-phase and poly-phase circuits including three-phase circuits with wye and delta connections. This course is designed as preparation for the major in Electricity. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

131 Electrical Theory III

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Electricity 121 and 121L, each with a grade of "C" or better, or equivalent.

Corequisite: Electricity 131L.

This course involves practice in planning the installation of electrical circuits on construction jobs according to the National Electrical Codes and Blueprints. This course also includes practice in making detailed drawings of electrical wiring circuits using standard symbols and estimating the wiring material required to complete a single-family dwelling. Planning the installation of communication circuits, heating systems, service entrance equipment, remote control systems, motor starting

equipment, circuit protective devices, control components, and pilot devices is also included. This course is designed as preparation for the major in Electricity. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

131L Electrical Laboratory III

**6 hours lab, 2 units
Grade Only**

Prerequisite: Electricity 121 and 121L, each with a grade of "C" or better, or equivalent.

Corequisite: Electricity 131.

This course involves laboratory practice in the installation of construction wiring materials including installation and connection of lighting circuits, receptacle circuits, special purpose circuits, communication circuits, heating systems, service entrance equipment, remote control systems, electric motor circuits, and pilot devices. Safety is emphasized through practice in the installation of electrical equipment according to blueprints and local and national codes. Instruction and practice in fire prevention and construction site safety habits are also included. This course is designed as preparation for the major in Electricity. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

141 Electrical Theory IV

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Electricity 131 and 131L, each with a grade of "C" or better, or equivalent.

Corequisite: Electricity 141L.

This course involves the advanced theory of the characteristics and uses of direct current generators, direct current motors, direct current motor controls, alternating current generators, and three-phase motors. This course also includes the advanced theory of the characteristics and uses of three-phase motors and three-phase controllers, single-phase motors and single-phase controllers, electronic devices, and static controls. Digital and logic controls are also investigated. This course is designed as preparation for the major in Electricity. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

141L Electrical Laboratory IV

**6 hours lab, 2 units
Grade Only**

Prerequisite: Electricity 131 and 131L, each with a grade of "C" or better, or equivalent.

Corequisite: Electricity 141.

This course involves laboratory practice and experimentation with DC generators, DC motors, three-phase alternators, squirrel-cage induction motors, and wound rotor induction motors. This course also includes laboratory practice and experimentation with induction motors, synchronous motors, and single-phase motors, including split-phase, capacitor start, universal, and repulsion-start induction run motors. Additionally, experiments are conducted with phase sequence, frequency, selsyn systems, and SCR speed controls. This course is designed as preparation for the major in Electricity. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

190 Electric Lineman IA

**5 hours lecture, 5 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better or equivalent, or Assessment Skills Levels W5 and R5 and M40.

Limitation on Enrollment: This course is not open to students with credit for San Diego Gas and Electric 302.

This course provides an orientation in the power distribution and line construction industry. Basic electrical principles and safety on the job are emphasized. Topics include basic mathematical computations, including trigonometry fundamentals, electron theory and the fundamentals of magnetism. Students will combine electrical theory with laboratory and practical applications in the course of study. (FT) Associate Degree Credit only and not Transferable.

191 Electric Lineman IB

**5 hours lecture, 5 units
Grade Only**

Prerequisite: Electricity 190, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for San Diego Gas and Electric 304.

This course involves the study of the power distribution and line construction industry. Topics include methods of producing electricity, A.C. and D.C. meters and circuitry and electric batteries. Students will also learn about Ohm's Law and Kirchhoff's Law and electromagnetic induction. (FT) Associate Degree Credit only and not Transferable.

192 Electric Lineman IIA

**5 hours lecture, 5 units
Grade Only**

Prerequisite: Electricity 191, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for San Diego Gas and Electric 310.

This course is a study of alternating current circuits, A.C. and D.C. motors and generators, pole and overhead construction, and transformers and voltage regulators. Topics include schematics, shunt and series capacitors and safety issues outlined by the Occupational Safety and Health Act (OSHA). Calculating power used by electrical circuits is also covered. (FT) Associate Degree Credit only and not Transferable.

193 Electric Lineman IIB

**5 hours lecture, 5 units
Grade Only**

Prerequisite: Electricity 192, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for San Diego Gas and Electric 312.

This course is a continuation of pole and overhead line construction. Topics covered include state safety orders for line construction and maintenance, transmission and distribution systems and conductors and electrical systems faults. Students will also learn about short circuits, system protective concepts and how to identify control circuits from wiring diagrams. (FT) Associate Degree Credit only and not Transferable.

194 Electric Lineman IIIA

**5 hours lecture, 5 units
Grade Only**

Prerequisite: Electricity 193, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for San Diego Gas and Electric 320.

This course covers advanced theory of electrical distribution lines and systems. Other topics include phasing, system groundings, substations and the use of electrical instruments. Students will also learn how to connect transformers in accordance with the state code. Usage of fusing tables and reference tables, including technical symbols are also covered. (FT) Associate Degree Credit only and not Transferable.

195 Electric Lineman IIIB**5 hours lecture, 5 units
Grade Only**

Prerequisite: Electricity 194, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for San Diego Gas and Electric 322.

This course is a continuation of advanced theory of electrical distribution lines and systems. Topics include the use of "hot sticks" and special equipment; repair and maintenance of poles and lines both cold and energized, safety practices and the local/state requirements. Students will be expected to master competencies such as those included in elements of electricity, overhead pole and electrical line construction, safety codes and applications, electric power system, transformer and meter installations, and exploration of underground electrical distribution. (FT) Associate Degree Credit only and not Transferable.

200 Electrical Control Systems**3 hours lecture, 3 units
Grade Only**

Prerequisite: Electricity 121 and Electricity 121L each with a grade of "C" or better, or equivalent.

Corequisite: Electricity 200L.

This course is a study of electrical control system theory emphasizing standard motor controls, transducers, static control devices, programmed controllers, and remote electronic controls. This course is intended for students in the Electricity Program as well as for working electricians who want to further their skills and/or fulfill state certification and accreditation requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

200L Electrical Control Systems Laboratory**6 hours lab, 2 units
Grade Only**

Prerequisite: Electricity 121 and Electricity 121L each with a grade of "C" or better, or equivalent.

Corequisite: Electricity 200.

This course is a hands-on laboratory in electrical control systems. Emphasis is placed on standard motor controls, transducers, static control devices, programmed controllers, and remote electronic controls. This course is intended for students in the Electricity Program as well as for working electricians who want to further their skills and/or fulfill state certification and accreditation requirements. (FT)

Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

**Electromechanical Engineering
Technology****Description**

The Electromechanical Engineering Technology course of study provides a comprehensive learning environment of both electronic and mechanical principles. Learning emphasis is placed upon the hands-on application and design of electromechanical systems that include analog & digital electronics, engineering design, and computer controlled mechanical systems.

Program Emphasis

The curriculum is based on integrated technical and core competencies (electronics, engineering design, engineering sciences), and it emphasizes a project-based learning format. Students work in teams to learn concepts, solve problems and make discoveries in a workplace-related environment. Students use traditional, Internet resources and industry supplied data as sources of information.

Faculty	Office	Telephone
David Fierro	A-107E	619-388-3731
Fred Julian	A-107D	619-388-3720
Robert Pruitt	A-107E	619-388-3875

Career Options

Design-Development Technician, Automation Technician, Instrumentation Technician, Electromechanical Technician, Engineering Aide

**Certificate of Performance:
Electromechanical Technology***

Courses:	Units
ENGN 110 Science for Technical Applications	4
ELDT 123 Introduction to Digital Circuits	3
ELDT 123L Digital Circuits Laboratory	1
ELDT 124 Basic DC Electronics	4

ELDT 124L	Basic DC Laboratory	1
ENGE 151	Engineering Drawing	2

Total Units = 15

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Advanced Electromechanical Technology*

Courses:		Units
ELDT 143	Semiconductor Devices	3
ELDT 143L	Semiconductor Devices Laboratory	1.5
ELDT 225	Microcontrollers	3
ELDT 225L	Microcontrollers Laboratory	1.5
ENGE 152	Engineering Design	3

Total Units = 12

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Transfer Information

Common university majors related to the field of Electromechanical Technology include:

Industrial Engineering, Electromechanical Technology, Engineering Technology.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Electronics

Description

Electronics is a field of technology that is concerned with the installation, operation, repair, maintenance, calibration, modification and service of electronic circuitry, components and systems. Technicians are also trained to diagnose problems arising from

electro-mechanical malfunctions and to assist engineers or technologists in preparing prototypes of electronic units or systems.

Program Emphasis

Graduates of the Electronics program understand the physical sciences, mathematics, applications and customer relations necessary in the installation, construction, programming, operation, maintenance and diagnosis of microcomputers and microprocessor based systems.

Faculty	Office	Telephone
Fred Julian	A-107D	619-388-3720
Farnaz Khoromi	A-107C	619-388-3527
Robert Pruitt	A-107E	619-388-3875

Career Options

Electronic Technician

Student Learning Outcomes

Students who complete the program will be able to:

- Demonstrate the proper use of basic electronic test instrumentation including an oscilloscope, a digital volt-ohm meter, a signal generator, and a dual power supply.
- Analyze and explain basic electronic theory including Ohm's Law, the power formula, and calculation of voltage gain and power gain.
- Identify standard electronic components including resistors, capacitors, inductors, diodes, bipolar transistors, field effect transistors, and integrated circuits.
- Demonstrate the ability to prepare reports that include text, tables, and spreadsheets using productivity software on a computer.

Certificate of Performance: Electronics Technician Level I*

Certificate of Performance for entry level electronics technician.

Courses Required for the Major:		Units
ELDT 123	Introduction to Digital Circuits	3
ELDT 123L	Digital Circuits Laboratory	1
ELDT 124	Basic DC Electronics	4
ELDT 124L	Basic DC Laboratory	1
ELDT 125	AC Circuit Analysis	4
ELDT 125L	DC/AC Circuit Analysis Laboratory with Pspice	1
Total Units = 14		

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Achievement: Electronics

This certificate of achievement provides basic preparation for electronic technicians.

Courses Required for the Major:		Units
ELDT 123	Introduction to Digital Circuits	3
ELDT 123L	Digital Circuits Laboratory	1
ELDT 124	Basic DC Electronics	4
ELDT 124L	Basic DC Laboratory	1
ELDT 125	AC Circuit Analysis	4
ELDT 125L	DC/AC Circuit Analysis Laboratory with Pspice	1
ELDT 126	Using C AND C++ for Technology	3
ELDT 126L	Using C AND C++ for Technology Laboratory	1
ELDT 143	Semiconductor Devices	3
EDLT 143L	Semiconductor Devices Laboratory	1.5
ELDT 144	OP-AMPS, Sensors & Computers	3
ELDT 144L	OP-AMPS, Sensors & Computers Laboratory	1.5
Total Units = 27		

Certificate of Achievement: Electronics

Electronic Communication Systems Option

This program prepares students to function in entry level positions in electronic communication systems.

Courses Required for the Major:		Units
Complete the requirements for the Certificate of Achievement: Electronics		27
In addition, complete:		
ELDT 227	Introduction to Laser and Fiber Optics	3
ELDT 227L	Lasers and Fiberoptics Laboratory	1
ELDT 228	Communication Circuits	3
ELDT 228L	Communication Circuits and Certification Laboratory	1
ELDT 229	Advanced Telecommunications Networks	3
Total Units = 39		

Certificate of Achievement: Electronics

Electronic Microprocessor/ Microcontroller Design Option

This program provides basic preparation in the electronic microprocessor and/or microcontroller occupation.

Courses Required for the Major:		Units
Complete all the requirements for the Certificate of Achievement: Electronics,		27
In addition, complete:		
ELDT 224	Microprocessor Design	3
ELDT 224L	Microprocessor Design Laboratory	1.5
ELDT 230	Advanced Computer Designs	3
ELDT 230L	Advanced Computer Designs Laboratory	1
ELDT 231	Advanced System Interfacing	3
Total Units = 38.5		

Associate in Science Degree: Electronics

Electronic Communication Systems Option

An Associate in Science Degree may be earned in Electronic Communication Systems. Complete the appropriate Certificate of Achievement in Electronic Systems and add: Electronic Systems 230, 230L, 231.

Courses Required for the Major:		Units
Complete all the requirements for the Certificate of Achievement, Electronic Communication Systems Options		39
In addition, complete:		
ELDT 230	Advanced Computer Designs	3
ELDT 230L	Advanced Computer Designs & Laboratory	1
ELDT 231	Advanced System Interfacing	3
Total Units = 46		

Associate in Science Degree: Electronics

Electronic Microprocessor/ Microcontroller Design Option

An Associate in Science Degree may be earned in Electronic Microprocessor/Microcontroller Design Option. Complete the appropriate Certificate

of Achievement in Electronic Systems and add: Electronic Systems 230, 230L, 231.

Courses Required for the Major:	Units
Complete all the requirements for the Certificate of Achievement, Electronic Microprocessor/Microcontroller Design Option,	38.5
Total Units = 38.5	

Additional general education and graduation requirements for the associate degree are listed in the catalog ACADEMIC REQUIREMENTS section. **The associate degree requires a minimum of 60 units.**

Recommended electives: Electronic Systems 198, 270, 290.

Transfer Information

Common university majors related to the field of Electronics include:

Industrial Engineering, Industrial Technology.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Electronic Systems (ELDT)

100 Electronic Assembly and Certification **2 hours lecture, 6 hours lab, 4 units** **Grade Only**

Advisory: English 42 and English 43 and Mathematics 38, each with a grade of "C" or better or equivalent, or Assessment Skills Levels W4 and R4 and M30.

Limitation on Enrollment: This course is open to students with credit for Electronic Systems 110 or Digital Technology 100.

This is a combination electronic survey and electronic assembly course. Using a modular approach, students are systematically promoted from one electrical concept to the next. Topics include D.C. electronics, A.C electronics, semiconductors, power supplies, amplifiers, oscillators, digital gates, and fiber optics (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

123 Introduction to Digital Circuits **3 hours lecture, 3 units** **Grade Only**

Advisory: Concurrent enrollment in Electronic Systems 123L.

Limitation on Enrollment: This course is not open to students with credit for Electronic Systems 220, 223 or Digital Technology 223.

This course is an introduction to digital technology with an emphasis on understanding, constructing and troubleshooting integrated circuits. Course content includes number systems and codes, truth tables, Boolean functions, combinatorial logic, registers, counters and device characteristics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

123L Digital Circuits Laboratory **3 hours lab, 1 unit** **Grade Only**

Advisory: Concurrent enrollment in Electronic Systems 123.

Limitation on Enrollment: This course is not open to students with credit for Electronic Systems 222A, 223L or Digital Technology 223L.

This laboratory course is designed to demonstrate the concepts studied in Electronic Systems 123 and to familiarize students with a variety of digital electronic components and circuits. Emphasis is placed on developing students' skills in designing, analyzing and constructing simple logic circuits including basic digital blocks, combinational networks, and sequential networks. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

124 Basic DC Electronics **4 hours lecture, 4 units** **Grade Only**

Advisory: Mathematics 96 or 98, with a grade of "C" or better, or equivalent, or Assessment Skill Level M50.

Advisory: Concurrent enrollment in: Electronic Systems 124L.

Limitation on Enrollment: This course is not open to students with previous credit for Electronics 120A or Digital Technology 124.

This course is a study of basic electricity and electrical circuit concepts. Course content includes direct current (DC) series and parallel circuits, Ohm's and Kirchhoff's Laws, mesh and nodal analysis, Superposition Theorem, Thevenin's and Norton's Theorems. Throughout the course, students apply the concepts of basic electronics to solve problems commonly found in industrial settings. This course is designed for students interested in learning DC electronics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

124L Basic DC Laboratory

**3 hours lab, 1 unit
Grade Only**

Advisory: Mathematics 96 or 98 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50.

Advisory: Concurrent enrollment in: Electronic Systems 124

Limitation on Enrollment: This course is not open to students with previous credit for Electronics 121A or Digital Technology 124L.

This laboratory course demonstrates the basic concepts of electricity and electrical circuits and familiarizes students with various electronic components and circuits. Course content is designed to develop students skills in reading schematic diagrams, fabricating simple circuits and safely using basic test equipment for measuring and troubleshooting. Equipment used in this lab includes volt-ohm-amp meters, digital multimeters (DMMs), and power supplies. This course is designed for students interested in acquiring laboratory skills in DC electronics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

125 AC Circuit Analysis

**4 hours lecture, 4 units
Grade Only**

Advisory: Mathematics 96 or 98, with a grade of "C" or better, or equivalent, or Assessment Skill Level M50; and Electronic Systems 124 and 124L, each with a grade of "C" or better, or equivalent.

Advisory: Concurrent enrollment in: Electronic Systems 125L

Limitation on Enrollment: This course is not open to students with previous credit for Digital Technology 125.

This course is a study of alternating current (AC) electronic concepts. Course material includes the study of inductor and capacitor transients in direct current (DC) circuits, alternating current (AC) electronic basics, impedance, phasors, power and energy in series, parallel and combination circuits, network theorems, transformers, passive filters and response curves. This course is designed for students interested in learning AC electronics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

125L DC/AC Circuit Analysis Laboratory with Pspice

**3 hours lab, 1 unit
Grade Only**

Advisory: Mathematics 96 or 98, with a grade of "C" or better, or equivalent, or Assessment Skill Level M50; and Electronic Systems 124 and 124L, each with a grade of "C" or better, or equivalent.

Advisory: Concurrent enrollment in: Electronic Systems 125

Limitation on Enrollment: This course is not open to students with previous credit for Digital Technology 125L.

This laboratory course demonstrates the basic concepts of hands-on and computer-assisted direct current and alternating current (DC/AC) circuit analysis. Equipment used in this course includes oscilloscopes, frequency counters, function generators, digital multimeters (DMM) and microcomputers utilizing industry standard software applications (Pspice). This course is designed for students interested in learning PSpice and acquiring laboratory skills in AC electronics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

126 Using C and C++ for Technology

**3 hours lecture, 3 units
Grade Only**

Advisory: Concurrent enrollment in Electronic Systems 126L.

This course is an introduction to the C and C++ programming languages as they apply to the analysis of the theoretical concepts of electronic technology. The course is structured around a variety of prepared programming assignments that emphasize problem solving techniques and use of the computer as a problem solving tool with applications in electronics. Students work with state of the art and industry standard microcomputers, hardware, software application programs, and

compilers. This course is designed as preparation for majors in the field of Electronics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

126L Using C and C++ for Technology Laboratory

**3 hours lab, 1 unit
Grade Only**

Advisory: Concurrent enrollment in Electronic Systems 126.

This course provides the laboratory component to the study of C and C++ programming languages as they apply to the analysis of the theoretical concepts of electronic technology. The course is structured around a variety of prepared programming assignments that emphasize problem solving techniques and use of the computer as a problem solving tool with applications in electronics. Students work with state of the art and industry standard microcomputers, hardware, software application programs and compilers. This course is designed as preparation for majors in the field of Electronics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

143 Semiconductor Devices

**3 hours lecture, 3 units
Grade Only**

Advisory: Electronic Systems 124 and 124L, each with a grade of "C" or better, or equivalent; and Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50; and concurrent enrollment in Electronic Systems 143L. *Limitation on Enrollment:* This course is not open to students with credit for Electronic Systems 140A or Digital Technology 143.

This course is an introductory study of the characteristics and operation of semiconductor devices and their associated circuitry. Emphasis is placed on junction diodes, bipolar-junction transistors, power supplies, feedback, linear integrated circuits (IC's), multistage amplifiers, push-pull amplifiers, junction field-effect transistors (JFETs), metal oxide semiconductor field-effect transistors (MOSFETs) and PSpice analysis. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

143L Semiconductor Devices Laboratory

**4.5 hours lab, 1.5 units
Grade Only**

Advisory: Electronic Systems 124 and 124L, each with a grade of "C" or better, or equivalent; and Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50; and concurrent enrollment in Electronic Systems 143.

Limitation on Enrollment: This course is not open to students with credit for Electronics Technology 142A or Digital Technology 143L.

This laboratory course focuses on the theoretical concepts of electronic devices and circuits through practical experimentation, Pspice analysis and computer simulation. Course content and materials include circuit operation, testing, troubleshooting and measurement of diodes, transistors and field-effect transistors (FETs), the use of computer-aided engineering software, microcomputers, oscilloscopes, digital multimeters (DMM's), function generators, and power supplies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

144 OP-AMPS, Sensors and Computers

**3 hours lecture, 3 units
Grade Only**

Advisory: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50; and concurrent enrollment in Electronic Systems 144L; and completion of or concurrent enrollment in Electronic Systems 143 and 143L, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Digital Technology 144. This course is a study of operational amplifier theory and circuit applications. Course content emphasizes sensors, transducers, data conversions, and the associated circuitry necessary to condition outputs for interface to a computer. Applications to analog-to-digital and digital-to-analog conversions, optical sensors, displacement transducers and instrumentation devices are included. This course is designed as preparation for majors in the field of Electronics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

144L OP-AMPS and Sensors Laboratory

**4.5 hours lab, 1.5 units
Grade Only**

Advisory: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50; and concurrent enrollment in Electronic Systems

144; and completion of or concurrent enrollment in Electronic Systems 143 and 143L, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Digital Technology 144L. This course provides the laboratory component to the study of operational amplifier theory and circuit applications. Course content emphasizes sensors, transducers, data conversions and the associated circuitry necessary to condition outputs for interface to a computer. Applications to analog-to-digital and digital-to-analog conversions, optical sensors, displacement transducers and instrumentation devices are included. This course is designed as preparation for majors in the field of Electronics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

198 Computer Applications in Electronics
2 hours lecture, 3 hours lab, 3 units
Grade Only

Limitation on Enrollment: This course is not open to students with credit for Digital Technology 198. This course is a presentation of computer applications in electronics through specific software and hardware currently utilized in local in electronics business and industry. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

224 Microprocessor Design
3 hours lecture, 3 units
Grade Only

Advisory: Completion of or concurrent enrollment in Electronic Systems 123 and Electronic Systems 123L, each with a grade of "C" or better, or equivalent and concurrent enrollment in Electronic Systems 224L. This course is an applied study of digital circuits in microcomputer systems. Throughout the course, students examine the overall architecture of microcomputer systems, the interfacing of memory and input/output (I/O) devices, and machine language programming for the Z-80 microprocessor. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

224L Microprocessor Design Laboratory
4.5 hours lab, 1.5 units
Grade Only

Advisory: Completion of or concurrent enrollment in Electronic Systems 123 and Electronic Systems 123L, each with a grade of "C" or better, or equivalent

concurrent enrollment in Electronic Systems 224. This laboratory course demonstrates the application of digital circuits in microprocessor systems. Course content includes assembly of printed circuit boards, troubleshooting of microprocessor-based designs and software/firmware design and troubleshooting. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

225 Microcontrollers
3 hours lecture, 3 units
Grade Only

Corequisite: Completion of or concurrent enrollment in: Electronic Systems 123, 124 and 225L, each with a grade of "C" or better, or equivalent.

Advisory: Mathematics 107 with a grade of "C" or better, or equivalent.

This course focuses on the fundamentals of both the hardware and software aspects of the microcontroller. Typical devices that are connected to the microcontroller are: switches, light emitting diodes, seven segment displays, stepper motors and a matrix keypad. An engineering evaluation board is used as the development system for the controller. Structured programming and flow charts are emphasized. Code is written in assembly language, compiled and then downloaded to the controller. This course is intended for students majoring in Engineering Technology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

225L Microcontrollers Laboratory
4.5 hours lab, 1.5 units
Grade Only

Corequisite: Completion of or concurrent enrollment in: Electronic Systems 123L, 124L and 225, each with a grade of "C" or better, or equivalent.

This laboratory demonstrates microcontroller applications. The course emphasizes microcontroller construction, design, programming and troubleshooting. Students conduct the laboratory with a software development kit (SDK) and microcontroller trainer equipment. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

227 Introduction to Lasers and Fiber Optics
3 hours lecture, 3 units
Grade Only

Advisory: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50; and concurrent enrollment in Electronic Systems

227L; and completion of or concurrent enrollment in Electronic Systems 124 and 124L, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Digital Technology 144. This course is an introductory study of lasers, optical power meters, and laser systems designed to familiarize students with various industry supported lasers/fiber optics families. Emphasis is placed on providing students with a working knowledge of lasers and the ability to troubleshoot in the field. Topics covered include the properties of light, emission and absorption of light, lasing action, the temporal and spatial characteristics of lasers, optical energy, optical fibers, light sources, light receivers, fiber optic geometry, alignment and splicing techniques, communication links, and fiber optic system design. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

227L Lasers and Fiber Optics Laboratory **3 hours lab, 1 unit** **Grade Only**

Advisory: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50; and concurrent enrollment in Electronic Systems 227; and completion of or concurrent enrollment in Electronic Systems 124 and 124L, each with a grade of "C" or better, or equivalent.

This laboratory course is designed to familiarize students with the elements and operation of lasers, optical power meters, and laser and fiber optics systems through experiments and projects conducted individually and in groups. This course provides students with the opportunity to enhance and further investigate the concepts presented in Electronic Systems 227. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

228 Communication Circuits **3 hours lecture, 3 units** **Grade Only**

Advisory: Mathematics 96 or 98, with a grade of "C" or better, or equivalent, or Assessment Skill Level M50.

Advisory: Concurrent enrollment in: Electronic Systems 228L.

Advisory: Completion of or concurrent enrollment in: Electronic Systems 143, 143L, 144 and 144L, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Digital Technology 228.

This course is a study of basic communication theory, circuitry, and troubleshooting including transmission and reception of Amplitude Modulated (AM), Frequency Modulated (FM), and digital signals. The course is intended for students seeking careers in radio, TV and digital data communication technology, and the telecommunication industry. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

228L Communication Circuits and Certification Laboratory **3 hours lab, 1 unit** **Grade Only**

Advisory: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50; and concurrent enrollment in Electronic Systems 228; and completion of or concurrent enrollment in Electronic Systems 143, 143L, 144, and 144L, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Digital Technology 228L. This laboratory course is a verification of the theoretical concepts of communication theory and mastery of the basic electronic instruments used in industry. This course is designed to prepare students to take the Associate Electronics Technician (CET) and the 3rd Class Radio Telecommunications Technician (NARTE) examinations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

229 Advanced Telecommunications Networks **3 hours lecture, 3 units** **Grade Only**

Advisory: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50; and concurrent enrollment in Electronic Systems 229L; and completion of or concurrent enrollment in Electronic Systems 126, 126L, 228, and 228L, each with a grade of "C" or better, or equivalent.

This course is a project-oriented course that focuses on local, metropolitan, and wide-area network hardware system design, installation, maintenance and troubleshooting. Hardware topics presented include topologies, transmission media, access and interfacing techniques. Hardware technologies utilized include Fiber Distributed Data Interface (FDDI), Asynchronous Transfer Mode (ATM), Fast

Internet and Token Ring. This course prepares students to take the Network Plus exam. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

229L Advanced Telecommunications Networks Laboratory

**3 hours lab, 1 unit
Grade Only**

Advisory: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50; and concurrent enrollment in Electronic Systems 229; and completion of or concurrent enrollment in Electronic Systems 126, 126L, 228, and 228L, each with a grade of "C" or better, or equivalent. This is a team project-oriented course that familiarizes students with the hardware and software needed to establish, run, and maintain advanced telecommunications networks at the local, metropolitan, and wide-area levels. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

230 Advanced Computer Designs

**3 hours lecture, 3 units
Grade Only**

Advisory: Concurrent enrollment in Electronic Systems 230L; and completion of or concurrent enrollment in Electronic Systems 224 and 224L, each with a grade of "C" or better, or equivalent. *Limitation on Enrollment:* This course is not open to students with credit for Digital Technology 230. This course is an advanced practical study of operating systems, chip sets, system board configurations, and bus architecture. Emphasis is placed on the application of digital course material to modern microprocessor-based systems from a design perspective. This project oriented course examines: microprocessor machine language programming, hardware devices, hardware designs, system clock generation, bus characteristics, tri-state characteristics, buffers, I/O techniques, major microprocessor family comparisons, timing diagrams, memory organization, ROM, EPROM, RAM, memory mapping, memory refresh, decoding techniques and chip level troubleshooting. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

230L Advanced Computer Designs Laboratory

**3 hours lab, 1 unit
Grade Only**

Advisory: Concurrent enrollment in Electronic Systems 230; and completion of or concurrent enrollment in Electronic Systems 224 and 224L, each with a grade of "C" or better, or equivalent. *Limitation on Enrollment:* This course is not open to students with credit for Digital Technology 230L. This is a practical course designed as a verification of the student's understanding of the theoretical concepts of computer and microprocessor based designs through construction and testing of a complete microcomputer system. Throughout the course, students work with several pieces of electronic test equipment currently used in the industry in order to build and troubleshoot their projects. Students are expected to locate and purchase necessary components and breadboarding materials. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

231 Advanced System Interfacing

**3 hours lecture, 3 units
Grade Only**

Advisory: Electronic Systems 224 and 224L, each with a grade of "C" or better, or equivalent; and concurrent enrollment in Electronic Systems 230 and 230L. *Limitation on Enrollment:* This course is not open to students with credit for Digital Technology 231. This course is a continuation of the study of microprocessors and their support families. Course material emphasizes peripheral chips and various microprocessors that work together to add intelligence to modern electronic equipment. This course is designed to expose students to common usage microprocessor devices in order to gain a working knowledge of I/O techniques and to be able to troubleshoot in the field. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

270 Work Experience

**Hours by Arrangement (One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.), 1-4 units
Grade Only**

Limitation on Enrollment: Must obtain an Add Code from Work Experience Coordinator for registration. This course is not open to students with credit for Digital Technology 270.

A program of on-the-job learning experiences for students employed in a job related to their major or their educational goals. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

290 Independent Study 1-3 Hours by Arrangement, 1-3 units Grade Only

Limitation on Enrollment: Must obtain an Add Code from instructor for registration. This course is not open to students with credit for Digital Technology 290.

For advanced students in Electronic Systems or Electro-Optical Technology who wish to pursue special problems and projects relating to their particular subject area. The student meets with the instructor at specific intervals and is expected to do primary research, analyze problems and submit reports. This course may be taken four times with different content for a maximum of six units. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Machine Technology

Description

The Machine Technology program offers a variety of instruction in the process of modern manufacturing. Emphasis is placed on CAD/CAM and C.N.C. technology.

Program Emphasis

The Machine Technology program prepares students for C.N.C. machining and is also ideal for students who need to upgrade prior machine shop training to comply with the current needs of industry.

Faculty	Office	Telephone
John Bollinger	T-103	619-388-3659

Career Options

CAD/CAM technician, C.N.C. machining technician

Student Learning Outcomes

Students who complete the program will be able to:

- Demonstrate an understanding of common safety policies used in modern machining facilities.
- Utilize common measuring instruments to insure projects are within given specifications.
- Solve common machining problems using various mathematical equations.
- Demonstrate knowledge of print reading and symbology.
- Setup machine tools to specification in a given time period.
- Machine projects to specifications using both conventional, and C.N.C. machines. Create C.N.C. program using both "hand coding" and CAD/CAM software.
- Create designs, both basic and advanced using CAD/CAM software.
- Complete necessary documentation and inspection forms as required.

Academic Programs

The certificates of performance and achievement and the associate degrees in Machine Technology require completion of the courses listed below.

Certificate of Performance: C.N.C. Operator Option*

Courses:	Units
MACT 140 Machine Technology	4
MACT 150 Intro/Computer Num Control (CNC) and Elec Dis Mach	4
MACT 170 Introduction to CNC Controlled Vertical Machining	4
MACT 171 Application of CNC Controlled Vertical and Electrical Discharge Machining (EDM) I	2
MACT 172 Application of CNC Controlled Vertical Machining and Electrical Discharge Machining (EDM) II	2
Total Units = 16	

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: C.N.C. Technology Option*

Courses:	Units
MACT 140 Machine Technology	4
MACT 150 Intro/Computer Num Control (CNC) and Elec Dis Mach	4
MACT 160M Introduction to CAD/CAM or	
MACT 160S Introduction to CAD/CAM	4
Total Units = 12	

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Achievement: Machine Technology

C.N.C. Technology Option

Courses Required for the Major:	Units
Certificate of Performance, C.N.C. Operator Option	16
MACT 160M Introduction to CAD/CAM or	
MACT 160S Introduction to CAD/CAM	4
Total Units = 20	

Certificate of Achievement: Machine Technology

Computer Aided Manufacturing Option

Courses Required for the Major:	Units
Certificate of Achievement, C.N.C. Technology Option	20
MACT 161M Applications of CAD/CAM I or	
MACT 161S Applications of CAD/CAM I	2
MACT 162M Applications of CAD/CAM II or	
MACT 162S Applications of CAD/CAM II	2
MACT 180M Advanced CAD/CAM or	
MACT 180S Advanced CAD/CAM	4
MACT 181M Application in Advanced CAD/ CAM I or	
MACT 181S Application in Advanced CAD/ CAM I	2
MACT 182M Application in Advanced CAD/ CAM II or	
MACT 182S Application in Advanced CAD/ CAM II	2
Total Units = 32	

Associate in Science Degree: Machine Technology

Computer Aided Manufacturing Option

An Associate in Science Degree may be earned in Computer Aided Manufacturing Option. Complete the Computer Aided Manufacturing Option Certificate of Achievement as specified above (32 units).

Courses Required for the Major:	Units
Certificate of Achievement, Computer Aided Manufacturing Option	32
Total Units = 32	

Additional general education and graduation requirements for the associate degree are listed in the catalog ACADEMIC REQUIREMENTS section. **The associate degree requires a minimum of 60 units.**

Recommended electives: Machine Technology 290.

Courses

Machine Technology (MACT)

140 Machine Technology

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; and completion of or concurrent enrollment in Mathematics 46 with a grade of "C" or better, or equivalent, or Assessment Skill Level M40.

This course is an introduction to the Machine Technology field. Emphasis is placed on safety, measurements, common formulas, machining applications, drawings, and career opportunities in the field. This course is designed for students planning to major in the occupational field of machine technology. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

150 Introduction to Computer Numerical Control (CNC) and Electrical Discharge Machining (EDM)

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40. This course is a study of advanced machining techniques including numerically controlled mills and lathes and electro-discharging machining. Emphasis is placed on introducing the student to Computer Numerical Control (CNC) programming using "G" and "M" codes. This course is designed for students majoring in Machine Technology and with previous machine laboratory experience. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

160M Introduction to CAD/CAM

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40; and concurrent enrollment in Machine Technology 161M. This course is an introductory, hands-on study of Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) theory and applications using Mastercam software. Emphasis is placed on generating programs at a basic level for both the Computer Numerical Control (CNC) Mill and CNC Lathe. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

160S Introduction to CAD/CAM

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40; and concurrent enrollment in Machine Technology 161S. This course is an introductory, hands-on study of Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) theory and applications using Surfcam software. Emphasis is placed on generating programs at a basic level for both the Computer Numerical Control (CNC) Mill and CNC Lathe. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

161M Applications of CAD/CAM I

**6 hours lab, 2 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40; and completion of or concurrent enrollment in Machine Technology 160M with a grade of "C" or better, or equivalent.

This course presents students with intermediate-level Computer Aided Design/Computer Aided Manufacturing CAD/CAM projects dealing with Computer Numerical Control (CNC) program generation for the CNC Mill and CNC Lathe using Mastercam software. Students at this level work under moderate instructor supervision to increase efficiency and quality of work. This course may be taken four times to enhance skills or proficiencies by supervised repetition and practice within class periods. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

161S Applications of CAD/CAM

**6 hours lab, 2 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40; and concurrent enrollment in Machine Technology 160S. This course presents students with intermediate-level Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) projects dealing with Computer Numerical Control (CNC) program generation for the CNC Mill and CNC Lathe using Surfcam software. Students at this level work under moderate instructor supervision to increase efficiency and quality of work. This course may be taken four times to enhance skills or proficiencies by supervised repetition and practice within class periods. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

162M Applications of CAD/CAM II

**6 hours lab, 2 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40; and completion of or concurrent enrollment in Machine Technology 161M with a grade of "C" or better, or equivalent.

This course presents students with advanced-level Computer Aided Design/Computer Aided

Manufacturing (CAD/CAM) exercises dealing with Computer Numerical Control (CNC) program generation for the CNC Mill and CNC Lathe using Mastercam. Students at this level work with minimal instructor supervision to increase efficiency and quality of work. This course may be taken four times to enhance skills or proficiencies by supervised repetition and practice within class periods. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

162S Applications of CAD/CAM II

**6 hours lab, 2 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40; and completion of or concurrent enrollment in Machine Technology 161S with a grade of "C" or better, or equivalent.

This course presents students with advanced-level Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) exercises dealing with Computer Numerical Control (CNC) program generation for the CNC Mill and CNC Lathe using Surfcam software. Students at this level work with minimal instructor supervision to increase efficiency and quality of work. This course may be taken four times to enhance skills or proficiencies by supervised repetition and practice within class periods. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

170 Introduction to CNC Controlled Vertical Machining

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40; and completion of or concurrent enrollment in Machine Technology 150 with a grade of "C" or better, or equivalent.

This course is an introductory, hands-on study Computer Numerical Control (CNC) Vertical Machining theory and techniques. Emphasis is placed on Vertical Machining basic operations and Electrical Discharge Machining (EDM). (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

171 Application of CNC Controlled Vertical and Electrical Discharge Machining (EDM) I

**6 hours lab, 2 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40; and completion of or concurrent enrollment in Machine Technology 170 with a grade of "C" or better, or equivalent.

This laboratory course provides exercises in Computer Numerical Control (CNC) Vertical Machining techniques and Electrical Discharge Machining (EDM) at an intermediate level. Students at this level work under moderate instructor supervision to increase efficiency and quality of work. This course may be taken four times to enhance skills or proficiencies by supervised repetition and practice within class periods. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

172 Application of CNC Controlled Vertical Machining and Electrical Discharge Machining (EDM) II

**6 hours lab, 2 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40; and completion of or concurrent enrollment in Machine Technology 171 with a grade of "C" or better, or equivalent.

This laboratory course provides exercises in Computer Numerical Control (CNC) Vertical Machining techniques and Electrical Discharge Machining (EDM) at an advanced level. Students at this level work under minimal instructor supervision to increase efficiency and quality of work. This course may be taken four times to enhance skills or proficiencies by supervised repetition and practice within class periods. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

180M Advanced CAD/CAM

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40; and completion of or concurrent enrollment in Machine Technology 160M with a grade of "C" or better, or equivalent.

This course is an advanced, hands-on study of Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) theory and applications using Mastercam software. Emphasis is placed on generating programs using advanced modeling surface techniques for both the Computer Numerical Control (CNC) Mill and CNC Lathe at a beginning level under direct instructor supervision. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

180S Advanced CAD/CAM

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40; and completion of or concurrent enrollment in Machine Technology 160S with a grade of "C" or better, or equivalent.

This course is an advanced, hands-on study of Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) theory and applications using Surfcam software. Emphasis is placed on generating programs using advanced surface modeling techniques for both the Computer Numerical Control (CNC) Mill and CNC Lathe at a beginning level under direct instructor supervision. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

181M Application in Advanced CAD/CAM I

**6 hours lab, 2 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40; and completion of or concurrent enrollment in Machine Technology 180M with a grade of "C" or better, or equivalent.

This course is an advanced, hands-on study of Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) theory and applications using Mastercam software. Emphasis is placed on generating programs using advanced modeling techniques for both the Computer Numerical Control (CNC) Mill and CNC Lathe at an intermediate level under moderate instructor supervision. This course may be taken four times to enhance skills or proficiencies by supervised repetition and practice within class periods. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

181S Application in Advanced CAD/CAM I

**6 hours lab, 2 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40; and completion of or concurrent enrollment in Machine Technology 180S with a grade of "C" or better, or equivalent.

This course is an advanced, hands-on study of Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) theory and applications using Surfcam software. Emphasis is placed on generating programs using advanced modeling techniques for both the Computer Numerical Control (CNC) Mill and CNC Lathe at an intermediate level under moderate instructor supervision. This course may be taken four times to enhance skills or proficiencies by supervised repetition and practice within class periods. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

182M Application in Advanced CAD/CAM II

**6 hours lab, 2 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40; and completion of or concurrent enrollment in Machine Technology 181M with a grade of "C" or better, or equivalent.

This course is an advanced, hands-on study of Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) theory and applications using Mastercam software. Emphasis is placed on generating programs using advanced surface modeling techniques for both the Computer Numerical Control (CNC) Mill and CNC Lathe at an advanced level under minimal instructor supervision. This course may be taken four times to enhance skills or proficiencies by supervised repetition and practice within class periods. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

182S Advanced CAD/CAM II

**6 hours lab, 2 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40; and completion of or concurrent enrollment in Machine Technology 181S with a grade of "C" or better, or equivalent.

This course is an advanced, hands-on study of Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) theory and applications using Surfcam software. Emphasis is placed on generating programs using advanced surface modeling techniques for both the Computer Numerical Control (CNC) Mill and CNC Lathe at an advanced level under minimal instructor supervision. This course may be taken four times to enhance skills or proficiencies by supervised repetition and practice within class periods. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

290 Independent Study in Machine Technology

**Hours by Arrangement, 1 - 3 units
Grade Only**

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

For advanced students in machine technology who wish to pursue problems and projects relating to their particular subject area. The student meets with the instructor at specific intervals and is expected to do primary research, analyze problems and submit reports. This course may be taken four times with different content for a maximum of six units. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Manufacturing Engineering Technology

Description

Manufacturing Engineering Technology (MFET) program provides students the opportunity to acquire highly valued skills in an innovative, hands-on learning environment. The program features integrating experiences through which students participate in all aspects of a manufacturing enterprise, from materials and processes to safety, design, automation, quality and lean manufacturing. Armed with these skills, MFET graduates can pursue rewarding, growth-oriented careers in such diverse industries as plastics, automotive, biomedical,

electronics, aerospace, machining and other high-value manufacturing sectors.

Program Emphasis

MFET program has two options: Electronics and Fabrication. Upon successful completion of the program, students will be able to: A) For the Electronics Option: (1) Utilize and operate various test equipment, and use measurement results to support product development; (2) Demonstrate the knowledge of design tools used in electronics industry for product development; (3) Identify and apply quality control tools used in electronics manufacturing industry; (4) Explain and apply the fundamentals of electronics applications and theory; (5) Describe different types of materials, process flows, equipment and techniques used to manufacture electronics products. B) For the Fabrication Option: (1) Identify and utilize CAD/CAM (Computer-Aided Design/Computer-Aided Manufacturing) applications in various manufacturing processes; (2) Explain product design to optimize manufacturing efficiency; (3) Identify and apply quality control tools and instruments used in a manufacturing environment; (4) Demonstrate proficiency in programming and operation of NC/CNC (Numerical Control/Computer Numerical Control) equipment; (5) Describe different types of materials, process flows, equipment and techniques used in manufacturing.

Statement of Goals

The Manufacturing Engineering Technology (MFET) program is developed with two specific goals: 1) To train students with a high level of technical and non-technical skills, and prepare them for the highly competitive world of today's manufacturing. 2) To provide a continuous path for students to acquire a firm foundation of skills and knowledge in the field of manufacturing, transfer successfully to a 4-year college or university.

Faculty	Office	Telephone
David Fierro	A-107E	619-388-3731

Career Options

Areas of employment include manufacturing engineering or engineering technician, manufacturing operation management, equipment maintenance and troubleshooting, quality and production control, production planning, and automation. All MFET major courses are transferable to 4-year colleges/universities. MFET graduates may also further their education by transferring to a number of four-year colleges and universities.

Student Learning Outcomes**MFET Option 1: Electronics Manufacturing**

Upon successful completion of the Manufacturing Engineering Technology program with the option in Electronics Manufacturing, the student will be able to:

- Utilize, operate and measure the results of various test equipment to support product development.
- Demonstrate the knowledge of design tools used in electronics industry for product development.
- Identify and apply quality control tools used in electronics manufacturing industry.
- Explain and apply the fundamentals of electronics applications and theory.
- Describe different types of materials, process flows, equipment and techniques used to manufacture electronics products.

MFET Option 2: Fabrication Manufacturing

Upon successful completion of the Manufacturing Engineering Technology program with the option in Fabrication Manufacturing, the student will be able to:

- Identify and utilize CAD/CAM applications in various manufacturing processes.
- Explain product design to optimize manufacturing efficiency.
- Identify and apply quality control tools and instruments used in a manufacturing environment.
- Demonstrate proficiency in programming and operation of NC/CNC equipment.
- Describe different types of materials, process flows, equipment and techniques used in manufacturing.

Academic Programs

The certificates of performance and achievement and associate degree require completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Certificate of Performance: Introduction to Manufacturing*

This certificate prepares students with necessary skills, knowledge and experience to continue on with the coursework and projects in MFET program.

Courses:	Units
MFET 101 Introduction to Manufacturing Engineering Technology or	
MFET 101A Introduction to Manufacturing I and	
MFET 101B Introduction to Manufacturing II and	
MFET 101C Introduction to Manufacturing III	3
MFET 105 Print Reading and Symbology or	
MFET 105A Print Reading I and	
MFET 105B Print Reading II or	
ENGN 130 Introduction to Engineering Design and	
MFET 105B Print Reading II	3 - 4.5
MFET 107 Introduction to Manufacturing Project	1
Total Units = 7 - 8.5	

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Manufacturing Fundamentals*

The Certificate of Performance on Manufacturing Fundamentals provides fundamental knowledge for students to enter the workforce in a manufacturing field.

Courses:	Units
MFET 101 Introduction to Manufacturing Engineering Technology or	
MFET 101A Introduction to Manufacturing I and	
MFET 101B Introduction to Manufacturing II and	
MFET 101C Introduction to Manufacturing III	3
MFET 105 Print Reading and Symbology or	
MFET 105A Print Reading I and	
MFET 105B Print Reading II or	
ENGN 130 Introduction to Engineering Design and	
MFET 105B Print Reading II	3 - 4.5
MFET 115 Properties of Materials	3
MFET 120 Manufacturing Processes	4
Total Units = 13-14.5	

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Advanced Manufacturing*

The Certificate of Performance in Advanced Manufacturing furthers student's knowledge with the innovative experience and exposure to modern manufacturing practices.

Courses:	Units
MFET 110 Industrial Safety	2
MFET 150 Manufacturing Automation or	
MFET 150A Manufacturing Automation I and	
MFET 150B Manufacturing Automation II	3
	3
MFET 210 Statistical Process Control	3
MFET 230 Lean Manufacturing	3
Total Units = 11	

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Lean Six Sigma*

This certificate covers topics in quality, lean and six sigma, with both theoretical and hands-on training contents. The certificate prepares students for quality-related jobs, and also for taking the six sigma green belt or other quality-related certification.

Courses:	Units
MFET 210 Statistical Process Control	3
MFET 230 Lean Manufacturing	3
MFET 240 Six Sigma and Lean Implementation	3
Total Units = 9	

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Achievement: Manufacturing Engineering Technology

Electronics Manufacturing

The Certificate of Achievement in Electronics Manufacturing focuses in the manufacturing of electronic devices and related products.

Courses:	Units
Certificate of Performance, Manufacturing Fundamentals	13-14.5
Certificate of Performance, Advanced Manufacturing	11
ENGN 128 Electronics for Technology	3
MFET 220 Programmable Logic Controllers	3
Total Units = 30-31.5	

Certificate of Achievement: Manufacturing Engineering Technology

Fabrication Manufacturing

The Certificate of Achievement in Fabrication Manufacturing focuses in the manufacturing of non-electronic devices and related products.

Courses:	Units
Certificate of Performance, Manufacturing Fundamentals	13-14.5
Certificate of Performance, Advanced Manufacturing	11
MACT 150 Intro/Computer Num Control (CNC) and Elec Dis Mach	4
MACT 160M Introduction to CAD/CAM or	
MACT 160S Introduction to CAD/CAM	4
Total Units = 32-33.5	

Associate in Science Degree Manufacturing Engineering Technology - Option: Electronics

Associate in Science Degree Manufacturing Engineering Technology - Option: Electronics
The Associate in Science Degree in Manufacturing Engineering Technology with Electronics Option prepares students with necessary skills, knowledge and experience to take on important roles as team members or leaders in an electronics manufacturing enterprise.

Courses:	Units
Certificate of Achievement, Electronics Manufacturing	30-31.5
MATH 96 Intermediate Algebra and Geometry or	
MATH 98 Technical Intermediate Algebra and Geometry	4-5
ENGN 110 Science for Technical Applications	4
TEHW 101 Introduction to Technical Writing	3

Select one course from:

ENGE 111 Introduction to Computer-Aided Design or	
ENGE 151 Engineering Drawing or	
TECI 101 Basic Technical Illustration	2-3

and select one course from:

MFET 250 Manufacturing Capstone Course or	
ENGN 275 Engineering Technology Industrial Internship	4

Total Units = 47-50.5

Associate in Science Degree Manufacturing Engineering Technology - Option: Fabrication

The Associate in Science Degree in Manufacturing Engineering Technology with Fabrication Option prepares students with necessary skills, knowledge and experience to take on important roles as team members or leaders in a fabrication manufacturing enterprise.

Courses:	Units
Certificate of Achievement, Fabrication Manufacturing	32-33.5
MATH 96 Intermediate Algebra and Geometry or	
MATH 98 Technical Intermediate Algebra and Geometry	4-5
ENGN 110 Science for Technical Applications	4
TEHW 101 Introduction to Technical Writing	3

and select one course from:

ENGE 111 Introduction to Computer-Aided Design or	
ENGE 151 Engineering Drawing or	
TECI 101 Basic Technical Illustration	2-3

and select one course from:

MFET 250 Manufacturing Capstone Course or	
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ENGN 275 Engineering Technology Industrial Internship	4
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Total Units = 49-52.5

Courses

Manufacturing Engineering Technology (MFET)

55 Metal Cutting Processes for Welding 3 hours lecture, 3 units Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is a practical study of metal cutting processes for the welding trades. Emphasis is placed on instruction in oxygen/fuel and plasma arc cutting techniques used in the field of welding. This course is designed for students planning to enter the welding field. (FT) Associate Degree Credit only and not Transferable.

60 Shielded Metal Arc Welding Process (SMAW)

**3 hours lecture, 3 units
Pass/No Pass Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course provides instruction on the process and principles of Shielded Metal Arc Welding (SMAW). Emphasis is placed on the use of electrodes and basic joints in the welding trades according to the American Welding Society standards. This course is designed for students working or planning on working in the welding trades. (FT) Associate Degree Credit only and not Transferable.

101 Introduction to Manufacturing Engineering Technology

**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: This course is not open to students with previous credit for Manufacturing Engineering Technology 101A or 101B or 101C. This course is designed for students who are interested in the field of Manufacturing Engineering Technology (MFET). The course

introduces manufacturing principles, including manufacturing systems, design concepts, process and material selection, computer-integrated manufacturing, quality control and management, global competitiveness and manufacturing costs, safety and environmental concerns. It also provides an overview of the MFET program structure, job perspectives for graduates, salary ranges and various career options in manufacturing. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

101A Introduction to Manufacturing I 1 hour lecture, 1 unit Grade Only

Limitation on Enrollment: This course is not open to students with previous credit for Manufacturing Engineering Technology 101 or Engineering Technology 120.

This project-based module is designed for high school and entry college students who might be interested in the field of Manufacturing Engineering Technology (MFET). The module discusses common manufacturing terminologies, current business trends, and design process involved with product and process development. It also provides an overview of the MFET program, job perspectives for graduates, salary ranges and various career options in manufacturing. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

101B Introduction to Manufacturing II 1 hour lecture, 1 unit Grade Only

Prerequisite: Manufacturing Engineering Technology 101A or Engineering Technology 120, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Manufacturing Engineering Technology 101.

This project-based module is designed for high school and entry college students who might be interested in the field of Manufacturing Engineering Technology. The module introduces manufacturing principles in a product realization process, automation, quality control and management, and lean manufacturing. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

101C Introduction to Manufacturing III 1 hour lecture, 1 unit Grade Only

Prerequisite: Manufacturing Engineering Technology 101B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Manufacturing Engineering Technology 101.

This project-based module is designed for high school and entry college students who might be interested in the field of Manufacturing Engineering Technology. The module introduces environmental and safety rules, regulations and practices in manufacturing enterprises. In this module, students also apply previous knowledge and training in manufacturing engineering technology to work in teams, build robots that are capable of performing various challenging tasks and compete at the end of the module. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

105 Print Reading and Symbology 3 hours lecture, 3 units Grade Only

Advisory: English 49 and Mathematics 38, each with a grade of "C" or better, or equivalent or Assessment Skill Level W5 and M30.

Limitation on Enrollment: This course is not open to students with previous credit for Manufacturing Engineering 105A or 105B, or Engineering 108.

This course is a study of the types of symbols and engineering notations used for mechanical, electrical, electronic, hydraulic and pneumatic diagrams, as well as precision sheet metal drawings and welding specifications. Other topics include scales, precision measurement instruments, geometric dimensioning and tolerancing (GD&T). Actual drawings are used to demonstrate concepts and practice in interpreting the symbols and notations. This course is designed for students who are currently working in a manufacturing plant or pursuing a career in an engineering or technology field. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

105A Print Reading I 1.5 hours lecture, 1.5 units Grade Only

Advisory: Mathematics 38 with a grade of "C" or better, or equivalent, or Assessment Skill Level M30.

Limitation on Enrollment: This course is not open to students with previous credit for Manufacturing Engineering Technology 105 or Engineering Technology 124 or 130.

This project-based module teaches student basic sketching techniques, print layout, views, and fundamentals of working and pictorial drawings. Students also learn drawing and annotation standards for different mechanical parts, the principles of dimensioning and tolerancing and their applications and practices in industrial prints. The module is designed for students who are interested in studying manufacturing. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

105B Print Reading II

**1.5 hours lecture, 1.5 units
Grade Only**

Prerequisite: Manufacturing Engineering Technology 105A or Engineering Technology 124 or 130, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Manufacturing Engineering Technology 105.

This project-based module teaches student different types of scales, precision measurement instruments, methods for geometric tolerancing. Students also learn to interpret symbols and notes on electrical and electronic diagrams, precision sheet metal drawings and welding specifications. Module includes a final project in which students work in teams to generate a print for a part using different drafting symbols, notes, specifications and standards learned throughout the print reading modules. This module is designed for students who are interested in studying manufacturing. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

107 Introduction to Manufacturing Project

**.5 hours lecture, 1.5 hours lab, 1 unit
Letter Grade or Pass/No Pass Option**

Prerequisite: Manufacturing Engineering Technology 101 or 101C, each with a grade of "C" or better, or equivalent; and Manufacturing Engineering Technology 105 or 105B, with a grade of "C" or better, or equivalent.

This course provides students the opportunity to apply a combination of skills and knowledge acquired in Manufacturing Engineering Technology (MFET) 101 and 105 courses to solve an industrial manufacturing problem. Students work together

in groups to address an integrated, technical problem selected by industry and/or program faculty. Topics cover the fundamental principles of manufacturing, such as production stages, design, quality, lean manufacturing, automation and manufacturing prints. This course is designed for students as preparation to enter the manufacturing engineering technology field. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

110 Industrial Safety

2 hours lecture, 2 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

The course is a study of safety fundamentals in an industrial environment and their relationship to accident prevention. It introduces students to the Occupational Safety and Health Administration (OSHA) policies, procedures and standards for industries. Course topics include electrical safety, hazardous materials and conditions, fire protection, tools and machines, welding and cutting, personal protective equipment, hazard communication, construction, ergonomics and industrial hygiene. This course is designed for students who are currently or will be working in construction or general industries. Upon successful course completion, students may receive an OSHA 30-hour Construction or General Industry Outreach Training Completion Card. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

115 Properties of Materials

**2.5 hours lecture, 1.5 hours lab, 3 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 and M40; Engineering Technology 110 with a grade of "C" or better, or equivalent.

This lecture/lab course is a study of the chemical, physical and mechanical properties of industrial materials including metals, ceramics, polymers and composites. The course emphasizes the processes and tests used with different industrial materials during the manufacturing cycles. It also discusses function and structure as they relate to specific design considerations. This course is designed for students who are currently working

in a manufacturing plant or pursuing a career in engineering and technology fields. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

120 Manufacturing Processes

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in: Manufacturing Engineering Technology 115 or Engineering 210, with a grade of "C" or better, or equivalent.

Advisory: Completion of or concurrent enrollment in: Engineering 111 or 151 or Technical Illustration 101 or Engineering Technology 130, with a grade of "C" or better, or equivalent.

This lecture/lab course provides basic understanding of how raw materials, including metals, polymers, ceramics and composites, are converted to finished products. In this course, students study commonly used and advanced manufacturing processes, understand the pros & cons of different industrial techniques. Students also learn key terms in manufacturing, and identify various types of equipment in common manufacturing processes. This course is designed for students who are pursuing a career in engineering or engineering technology fields, or working in a manufacturing industry. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

150 Manufacturing Automation

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Manufacturing Engineering Technology 120 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Manufacturing Engineering Technology 150A or 150B.

This lecture/lab course introduces students to the principles of manufacturing automation, process and machine control, programmable logic controllers, robotics, part handling and assembly. Students also learn concepts of group technology, flexible manufacturing systems and their applications in manufacturing industries. Through lectures, hands-on learning experience and demonstrations, students gain knowledge and skills in modern manufacturing that are necessary for seeking rewarding employment opportunities. This course uses a project-based learning approach. It is intended for students, technicians, technologists and engineers who are interested in manufacturing

automation. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

150A Manufacturing Automation I

**1 hour lecture, 1.5 hours lab, 1.5 units
Grade Only**

Prerequisite: Manufacturing Engineering Technology 101 or 101C or 120 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Manufacturing Engineering Technology 150 or Engineering Technology 126.

This project-based module introduces students to the principles of manufacturing automation, computer-integrated manufacturing (CIM) which includes process and machine control, programmable logic controllers and robotics. Students also learn different applications of automation to improve quality and productivity in manufacturing industries. This module is designed for students who are interested in modern manufacturing. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

150B Manufacturing Automation II

**1 hour lecture, 1.5 hours lab, 1.5 units
Grade Only**

Prerequisite: Manufacturing Engineering Technology 150A or Engineering Technology 126, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Manufacturing Engineering Technology 150.

This project-based module covers additional automation topics and applications in manufacturing industry, including sensors and actuators, part handling and assembly. Students also learn the concepts of group technology, flexible manufacturing systems and their applications. This module is designed for students who like to gain further knowledge and experience in modern manufacturing practices. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

210 Statistical Process Control

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 96, each with a grade of "C" or better, or equivalent, or Assessment Skill Level R5 and W5 and M50; and

completion of Mathematics 119 or Psychology 258 with a grade of "C" or better, or equivalent. This lecture/lab course familiarizes students with the applications of statistics in process and quality control function. Students learn to acquire, analyze and interpret data from a process to determine if it is in statistical control and capable of meeting customer's requirements. Statistical techniques include the use of basic graphs and diagrams, control charts, process mean and variability, process capability, sampling and normal distribution. The course also introduces students to the concepts of Six Sigma and design of experiments as part of quality control and improvement. This course is designed for students who are interested in process control, quality improvement and industrial management. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

220 Programmable Logic Controllers
2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: English 48 and English 49 and Mathematics 96, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M50. This course assists students in developing and building fundamental knowledge of the operation, construction, interfacing and programming of programmable logic controllers (PLCs). Students learn different hardware components, input and output devices associating with PLCs, and PLC applications in various manufacturing systems. Students also acquire hands-on experience on constructing, operating, configuring and programming PLCs. The course is designed for students, technicians, technologists and engineers from industry who are interested in automation and the integration of PLCs in manufacturing. This course may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

225 Introduction to Photovoltaic Manufacturing and Applications
3 hours lecture, 3 hours lab, 4 units
Grade Only

Advisory: English 48 and Mathematics 46 each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and M40; Electricity 111 or Electronic Systems 124 with a grade of "C" or better, or equivalent.

This lecture/lab course is a study of solar photovoltaic (PV) cell manufacturing, the types of

cells and the advantages and applications of solar PV cells. Emphasis is placed on the underlying physical and chemical characteristics of solar cells, the types of manufactured cells and modules, their fabrication processes and applications. This course is designed for students pursuing a career in engineering and technology fields and anyone interested in understanding solar photovoltaics and their applications. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

230 Lean Manufacturing
2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: Manufacturing Engineering Technology 210 and 150 or 150A and 150B, each with a grade of "C" or better, or equivalent.

This overview course focuses on the terminology, tools, techniques, concepts and principles of Lean Manufacturing. Students are introduced to different Lean tools including value stream mapping, 5-S process, seven deadly wastes, standardized work flow, error proofing, setup reduction, integrated reliability, and production and inventory control. This course uses a project-based approach; provides students with theories, guided discussions, hands-on exercises and industrial case-studies. Course is open to all students who are planning to join industry or currently working in a company instituting Lean Manufacturing. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

240 Six Sigma and Lean Implementation
2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: Manufacturing Engineering Technology 210 and 230, each with a grade of "C" or better, or equivalent.

This course concentrates on six sigma concepts and implementation of lean in a business organization. Students learn the principles of six sigma and the utilization of six sigma tools in project application. The course also covers DMAIC (Define, Measure, Analyze, Improve, Control) problem solving methodology, team building and project management skills. This course is designed for those who are interested in participating in and/or implementing lean/six sigma at their organization. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

250 Manufacturing Capstone Course

**1 hour lecture, 9 hours lab, 4 units
Grade Only**

Prerequisite: Manufacturing Engineering Technology 101, 105 and 115, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Manufacturing Engineering Technology 110 and 230, each with a grade of "C" or better, or equivalent. This is a capstone course for the Manufacturing Engineering Technology program. It provides students the opportunity to apply a combination of skills and knowledge to solve an industrial manufacturing problem. Students work together in groups to tackle an integrated, technical problem selected by industry and approved by program faculty. Topics include, but are not limited to, manufacturing materials and processes, design, quality, lean manufacturing and automation. This course is intended solely for students enrolled in the last semester of the Manufacturing Engineering Technology program, and is a major requirement. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

270 Work Experience

**Hours by Arrangement (One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.), 1-4 units
Grade Only**

Limitation on Enrollment: Must obtain an Add Code from Work Experience Coordinator for enrollment. A program of on-the-job learning experiences for students employed in a job related to their major or their educational goals. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Mechanical Design Technology

Description:

Mechanical Design Technology graduates pursue careers in industry in the areas of industrial machinery, consumer products, construction, automotive, power transmission, automation, and other mechanical machinery related fields. Related areas of employment include sales, manufacturing and testing mechanical products. Graduates create designs as well as analyze and specify the components and systems of machinery and products.

Program Goals:

Provide local and regional industry with skilled workers in the field of Mechanical Design.

Program Emphasis:

The curriculum is based on integrated technical and core competencies (machine technology, engineering design, engineering sciences), and it emphasizes a project-based learning format. Students work in teams to learn concepts, solve problems and make discoveries in a workplace-related environment. Students use traditional, internet and industry supplied data as sources of information.

Career Options:

Mechanical Designer, CAD Designer, Machinery Field Technician, Tool and Die Designer

Certificate of Performance: Mechanical Design*

Courses:	Units
ENGN 110 Science for Technical Applications	4
ENGE 108 Dimensioning and Tolerancing	3
MACT 150 Intro/Computer Num Control (CNC) and Elec Dis Mach	4
ENGE 151 Engineering Drawing	2
Total Units = 13	

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Advanced Mechanical Design*

Courses:	Units
ENGN 220 Component Design	3
MFET 115 Properties of Materials	3
MACT 160M Introduction to CAD/CAM	4
Total Units = 10	

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Engineering Technology Mecomtronics

Description

MECOMTRONICS (MEchanics + COMputers + Telecommunications + elecTRONICS) is defined as an Engineering Technology discipline that combines the areas of mechanical and electronics technology, and computer hardware and software systems. This discipline has been created to respond to the specialized demands for the multifunctional engineering technician. MECOMTRONICS technicians are prepared with the knowledge and skills to work in a technologically diversified business environment. These technicians will be able to participate on a team to specify, trouble-shoot, develop, design, and prepare for production of cost-efficient, state-of-the-art products which can compete for value in a global economy.

Program Emphasis

The MECOMTRONICS curriculum is based on integrated technical and core (English, Math and Physics) competencies, and it emphasizes project-based learning using a just-in-time instructional delivery. Students will work in teams to learn concepts, solve problems and make discoveries in a workplace-related environment. Students will use traditional, as well as on-line electronics resources and industry supplied data as sources of information.

Faculty	Office	Telephone
Fred Julian	A-107D	619-388-3720
Carlos de la Lama	M-211	619-388-3362
Farnaz Khoromi	A-107C	619-388-3527
David Fierro	A-107E	619-388-3489

Career Options

R & D technician, electronics technician, engineer-in-training

Transfer Information

Common university majors related to the field of Mecomtronics include:

Electronics and Computer Engineering, Engineering Technology, Industrial Engineering, Industrial Technology, Manufacturing Engineering, Manufacturing Systems Engineering Technology.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate

major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Mecomtronics (MCTR)

90 Science for Technical Applications

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50. This science course presents basic vocabulary, concepts and scientific techniques that are used to analyze and understand technical applications. Topics of study include the measurement of velocity and acceleration, the laboratory study of conductivity, Ohm's law, resistors in series and in parallel, the investigation of gas laws, capacitance bridge, Kirchoff's laws, AC voltage measurements, and the study of mass density and viscosity. The laboratory focuses on the specific current physical science needs of the Engineering Technology/ MECOMTRONICS program. Analytical reading and problem solving are required for success in this course. The lectures address theory, concepts and problems required for a solid comprehension of basic physical science and for rapidly bringing the student's knowledge to a level where modern ideas can be understood. Associate Degree Credit only and not Transferable.

102A DC Circuits

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Corequisite: Mathematics 181.

Advisory: Mathematics 96 with a grade of "C" or better or equivalent, or Assessment Skill Level M50. This course, the first semester of a two-semester sequence in electric circuits, introduces DC electronics principles and practices through integration of theory, application, and structured

discovery activities. Emphasis is placed on activity-based learning through a variety of hands-on projects. Topics include but are not limited to fundamental aspects of DC circuits and passive devices, Kirchhoff's voltage and current laws; mesh and nodal analysis; DC network theorems; applications using P-Spice, Electronics Workbench, or equivalent software; DC measurements and instrumentation; magnetism. This course is intended solely for the students enrolled in the Engineering Technology/Mecomtronics program. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

103A AC Circuits

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Mecomtronics 102A with a grade of "C" or better, or equivalent.

Corequisite: Mathematics 181 with a grade of "C" or better, or equivalent.

This course is the second semester of a two-semester sequence in electric circuits. Topics include DC (Direct Current) transient analysis in RL (resistor-inductor) and RC (resistor-capacitor) circuits; basic AC (alternating current) circuit theorems; phasor analysis of AC circuits; simulation of AC circuits using PSpice, Electronics Workbench or equivalent simulation software; and transformer and operation, application, and theory of basic electrical measurement instrumentation. This course is intended for students enrolled in Engineering Technology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

120A Basic Physics for Technical Applications I

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Prerequisite: Mecomtronics 90 and Mathematics 181, each with a grade of "C" or better, or equivalent.

Corequisite: Mathematics 182.

This course is an introduction of physics presenting tools that are used in technical applications. Topics of study include measurement standards, scalar and vector quantities, kinetics in one, two and three dimensions, Newton's laws of motion, the gravitational force, the harmonic oscillator, work and energy, and momentum. The course centers on "hands-on" approaches to analysis of physical phenomena, without neglecting conceptual and calculation rigor. This course is intended for students in the Engineering Technology/MECOMTRONICS

program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

120B Basic Physics for Technical Applications II

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Prerequisite: Mecomtronics 120A and Mathematics 182, each with a grade of "C" or better, or equivalent.

Corequisite: Mathematics 183.

This course is the second in a sequence of three introductory technical physics courses intended for the Engineering Technology/MECOMTRONICS program.

This sequence of courses presents the tools that are used in technical applications. The topics of study include angular momentum and torque, solids and fluids, waves, temperature, heat transfer, the first and second laws of thermodynamics, and kinetic theory. Emphasis is placed on the conceptual and calculational nature of physical principles and on experimental studies that demonstrate the use of the equations discussed in the theory. Analytical reading and problem solving are required for success in this course. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

201A Electronic Devices and Circuits

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Mecomtronics 103A and Mathematics 182, each with a grade of "C" or better, or equivalent.

This is an introductory course on the theory, operation, and application of semiconductor junction devices. Emphasis is placed on activity-based learning through a variety of hands-on projects. Topics include but are not limited to physical principles of semiconductors, characteristics and operation of diodes, Zener diodes, bipolar junction transistors, junction field effect transistors, d-c characteristics, biasing and d-c stability of diodes and bipolar junction transistors, algebraic and load line analysis techniques, electronic simulation using P-Spice, Electronics Workbench or equivalent, and applications of semiconductor devices. This course is intended solely for students enrolled in the third semester of the Engineering Technology/Mecomtronics program. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

202A Digital Electronics**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Mecomtronics 103A with a grade of "C" or better, or equivalent.

This is an introductory course to digital electronics and its applications to engineering. Emphasis is placed on activity-based learning through a variety of hands-on laboratory projects. Topics include applied Boolean algebra and number systems; Karnaugh maps; combinatorial logic and analysis; logic building blocks including gates, gate analysis, flip-flops, shift registers; and digital circuit simulation using Logic Works or equivalent software. This course is intended solely for students enrolled in the second semester of the Engineering Technology/ Mecomtronics program. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

203 Telecommunications**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Mecomtronics 201A and Mecomtronics 202A and Mathematics 183, each with a grade of "C" or better, or equivalent.

This course focuses on telecommunications and networking for students in the Engineering Technology Mecomtronics program. The course provides students with a background in the theory of telecommunications and hands-on experience installing and administering a network. Students learn technical characteristics of telecommunications such as protocols, transmission characteristics, data representation, carrier techniques, and multiplexing. Students evaluate and select network components; install network hardware, software and cabling; troubleshoot network malfunctions; and perform network administration tasks. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Military Electronics Technology**Description**

The Military Electronics Technology Program provides the military and civilian student the opportunity to utilize their technical training and related theoretical instruction to earn an Associate Degree. The length of the program depends on the students training and can range from two to three years. The program encourages the development of theory, principles and health and safety knowledge to give the student a complete understanding of Military Electronics at the Associate Degree level. The courses recognize learning acquired through work outside a collegiate setting and will be offered in such a way that military or civilian students may complete their degree without staying at one educational institution.

Program Emphasis

The program begins by using the students' technical training and adds, through a series of theory courses in basic direct circuit, alternating current, analog circuits, digital circuits, mathematics and health and safety, necessary information to meet the educational need for the Associate degree.

Faculty	Office	Telephone
Fred Julian	A-107D	619-388-3720
Robert Pruitt	A-107E	619-388-3875

Career Options

Electronic Technician

Academic Programs

The associate degree in Engineering Technology Mecomtronics requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

**Associate in Science Degree:
Military Electronics Technology**

Courses Required for the Major		Units
MLET 50	Basic Direct Current	1
MLET 51	Working With Direct Current	3
MLET 52A	Basic Alternating Current I	1
MLET 53A	Working With Non Resonant Alternating Current	2.5
MLET 52B	Basic Alternating Current II	1
MLET 53B	Working with Resonant Alternating Current	2
MLET 54A	Basic Analog Circuits I	1

MLET 55A	Working With Basic Analog Circuits I	3.5
MLET 54B	Basic Analog Circuits II	1
MLET 55B	Working With Basic Analog Circuits II	3.5
Total Units = 19.5		

Recommended Electives: MLET 56A, 56B, 57A, 57B.

Courses

Military Electronics Technology (MLET)

50 Basic Direct Current

**3 hours lab, 1 unit
Grade Only**

This is a course on the basics of direct current (DC), including basic and complex circuit analysis. Emphasis is placed on the practical application of concepts in DC to calculate and measure voltage, current and resistance and to troubleshoot series, parallel, series-parallel, branch and bridge circuits. This course is designed for the military and civilian student. Associate Degree Credit only and not Transferable.

51 Working With Direct Current

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Military Electronics Technology 50 with a grade of "C" or better, or equivalent.

This is a course on direct current (DC) electronics designed to develop a practical familiarity with the concepts of conductance, voltage, resistance, current, capacitance, and inductance. Emphasis is placed on a common sense approach to using the measurement equipment and Mathematics skills used in the study of direct current. This course is designed for the military and civilian student. Associate Degree Credit only and not Transferable.

52A Basic Alternating Current I

**3 hours lab, 1 unit
Grade Only**

Prerequisite: Military Electronics Technology 50 with a grade of "C" or better, or equivalent.

This is a course on the basics of alternating current (AC), power, capacitance, and inductance. Emphasis is placed on providing students with a solid

understanding of AC test equipment and steady-state circuit analysis. This course designed for the military and civilian student. Associate Degree Credit only and not Transferable.

52B Basic Alternating Current II

**3 hours lab, 1 unit
Grade Only**

Prerequisite: Military Electronics Technology 50 with a grade of "C" or better, or equivalent.

This is a course on the basics of alternating current (AC), power, capacitance, and inductance. Emphasis is placed on providing students with a solid understanding of the fundamentals of transient and resonant AC circuit analysis, transformers, relays and switches. This course is designed for the military and civilian student. (FT) Associate Degree Credit only and not Transferable.

53A Working With Non Resonant Alternating Current

**2.5 hours lecture, 2.5 units
Grade Only**

Prerequisite: Military Electronics Technology 52A with a grade of "C" or better, or equivalent.

This is a course on non resonant alternating current (AC) electronics designed to develop a practical familiarity with the concepts of impedance, AC voltage, current, and power, and includes basic filter circuits. This course emphasizes a common sense approach to using the measurement equipment and Mathematics skills used in the study of non-resonant alternating current. This course is designed for the military and civilian student. Associate Degree Credit only and not Transferable.

53B Working with Resonant Alternating Current

**2 hours lecture, 2 units
Grade Only**

Prerequisite: Military Electronics Technology 52B with a grade of "C" or better, or equivalent.

This is a course on resonant alternating current (AC) electronics designed to develop a practical familiarity with the concepts of bandwidth, Quality factor (Q), center frequency, and resonance, and includes basic filter circuits. This course emphasizes a common sense approach to using the measurement equipment and Mathematics skills used in the study of resonant alternating current. This course is designed for the military and civilian student. Associate Degree Credit only and not Transferable.

54A Basic Analog Circuits I**3 hours lab, 1 unit
Grade Only**

Prerequisite: Military Electronics Technology 50 with a grade of "C" or better, or equivalent.

This is a course on the basics of analog circuits, including diodes and diode circuits, transistor circuits, and power supplies. Emphasis is placed on identifying normally operating circuits and troubleshooting circuit faults. This course is designed for the military and civilian student. Associate Degree Credit only and not Transferable.

54B Basic Analog Circuits II**3 hours lab, 1 unit
Grade Only**

Prerequisite: Military Electronics Technology 50 with a grade of "C" or better, or equivalent.

This is a course on the basics of analog circuits, including transistor circuits, oscillators and pulse circuits, trigger device circuits, operational amplifiers, and radio frequency (RF) electronics. Emphasis is placed on identifying normally operating circuits and troubleshooting common faults. This course is designed for the military and civilian student. Associate Degree Credit only and not Transferable.

55A Working With Basic Analog Circuits I**3.5 hours lecture, 3.5 units
Grade Only**

Prerequisite: Military Electronics Technology 54A with a grade of "C" or better, or equivalent.

This is a course on the basics of diode and Bipolar Junction Transistor (BJT) circuits and power supplies designed to develop a familiarity with their operation. Emphasis is placed on a practical approach to using the measurement equipment and Mathematics tools employed in the study of electronic devices. This course is designed for the military and civilian student.

Associate Degree Credit only and not Transferable

55B Working With Basic Analog Circuits II**3.5 hours lecture, 3.5 units
Grade Only**

Prerequisite: Military Electronics Technology 54B with a grade of "C" or better, or equivalent.

This is a course on the basics of Field Effect Transistors (FETs), Thyristors, Multivibrators, Operational Amplifiers, and Optical Semiconductor Devices. The course is designed to develop an understanding and familiarity with their operation. Emphasis is placed on a practical approach to using the measurement

equipment and Mathematics tools employed in the study of electronic devices. This course is designed for the military and civilian student. Associate Degree Credit only and not Transferable.

56A Basic Digital Electronics I**3 hours lab, 1 unit
Grade Only**

Prerequisite: Military Electronics Technology 50 with a grade of "C" or better, or equivalent.

This is a course on the basics of digital electronics. Emphasis is placed on providing students with an overview of the development of digital electronics, digital and combinational logic functions, a variety of flip-flop, conversion and data circuits. This course is designed for the military and civilian student. Associate Degree Credit only and not Transferable.

56B Basic Digital Electronics II**1.5 hours lab, .5 units
Grade Only**

Prerequisite: Military Electronics Technology 50 with a grade of "C" or better, or equivalent.

This is a course on the basics of digital electronics. Emphasis is placed on providing students with an overview of arithmetic counting and microprocessor operation. This course is designed for the military and civilian student. Associate Degree Credit only and not Transferable.

57A Working With Digital Electronics**3 hours lecture, 3 units
Grade Only**

Prerequisite: Military Electronics Technology 56A with a grade of "C" or better, or equivalent.

This is a course on the basics of digital electronics designed to develop a practical familiarity with digital combinational logic circuits including flip-flops, and data conversion circuits. Emphasis is placed on a common sense approach to developing and testing practical digital circuits. This course is designed for the military and civilian student. Associate Degree Credit only and not Transferable.

57B Working With Digital Electronics II**2.5 hours lecture, 2.5 units
Grade Only**

Prerequisite: Military Electronics Technology 56B with a grade of "C" or better, or equivalent.

This is a course on the basics of digital electronics designed to develop a practical familiarity with data control, arithmetic logic circuits, counter applications, data multiplexing and basic

microprocessor operation. Emphasis is placed on a common sense approach to developing and testing practical digital circuits. This course is designed for the military and civilian. Associate Degree Credit only and not Transferable.

Courses

Radio Frequency Technology (RAFT)

51 Introduction to the Radio Frequency Technology Industry

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

This course is a study of the San Diego Radio Frequency (RF) Microwave Technology industry. Emphasis is placed on understanding the current needs of the San Diego RF job market and gaining those skills in follow-on courses to obtain gainful employment. Course content includes identifying several RF companies in the San Diego area, discovering common job titles, defining the range of salaries and understanding common RF skill sets required for RF Technician positions. This course is designed for students seeking employment in the Wireless Telecommunication Industry. (FT) Associate Degree Credit only and not Transferable.

52 RF Microwave Technology I

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

This course is a basic study of basic Radio Frequency (RF) Microwave Technology. Emphasis is placed on the assembly process related to RF Technology, including the testing and tuning of RF circuits. This course is designed for students seeking employment in the Wireless Telecommunications Industry. (FT) Associate Degree Credit only and not Transferable.

53 RF Microwave Technology II

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

This course is an intermediate study of Radio Frequency (RF) Microwave Technology. Emphasis is placed on the assembly processes related to RF, including common circuits and test measurement methods. This course is designed for students seeking employment in the Wireless

Telecommunications Industry. (FT) Associate Degree Credit only and not Transferable.

54 RF Microwave Technology III

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

This course is an advanced study of RF Microwave Technology. Emphasis is placed on the use and care of RF test equipment. This course is designed for students seeking employment in the Wireless Telecommunication Industry. (FT) Associate Degree Credit only and not Transferable.

English

English, English as a Second Language, Humanities

Award Type	Units
Associate in Arts Degree:	
English	18*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

The English program provides a breadth of course work designed to improve reading, writing, listening, speaking, and critical thinking skills. Reading courses focus on academic reading and study skills. The English for Speakers of Other Languages (ESOL) program offers four levels of academic English instruction including reading, listening/speaking, and composition. Writing classes range from developmental writing to transfer-level courses in reading and composition, composition and literature, and intermediate composition and critical thinking, as well as a two-semester sequence in creative writing. Literature offerings include an introductory course and specialized courses such as British and American Literature and women in literature. Humanities courses explore cultural achievements of world civilizations. English department courses meet English Composition requirements for the associate degree and for University of California, and California State University, Communications in the English Language and Critical Thinking requirements. Literature courses may also meet general education, humanities, multicultural studies requirements and preparation for transfer.

Program Emphasis

The English major at the lower-division level emphasizes learning to read more critically and to write more effectively using strategies of narration, exposition and argument. The English major primarily serves students transferring to colleges and universities where the focus is on academic writing, research and criticism.

Faculty	Office	Telephone
Chris Baron	L-209B	619-388-3261
Audrey Breay	C-224B	619-388-3144
Jennifer Boots	C-226B	619-388-3264
Nancy Cary	C-216	619-388-3278
Laurel Corona	C-206	619-388-3597
Gwyn Enright	C-208	619-388-3086
Virginia Escalante	C-225A	619-388-3596
Aileen Gum	C-224B	619-388-3610
Barry Hicks	C-223	619-388-3562
Jan Jarrell	C-226B	619-388-3962
Karen Lim	C-224E	619-388-3084
Jan Lombardi	C-201	619-388-3587
Nadia Mandilawi	C-202	619-388-3420
Hector Martinez	C-215	619-388-3585
Patricia McGhee	A-1-0	619-388-3876
Kelly Mayhew	C-204	619-388-3136
Elizabeth Meehan	C-224C	619-388-3509
Jim Miller	C-207	619-388-3554
Oscar Preciado	A-1-0	619-388-3186
Elva Salinas	C-225D	619-388-3411
Adam Walelign	C-205	619-388-3306

Career Options

Most careers require education beyond the associate degree. Strong linguistic, analytical and imaginative skills developed in English help to prepare students for employment in many fields including law, education, communications, governmental affairs or business.

Academic Programs

The associate degree in English requires completion of the courses listed for the degree. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Student Learning Outcomes

Students who complete the program will be able to:

- Read and comprehend texts, recognize author strategies, purpose, perspective and argument, and use critical thinking to evaluate a variety of writing.
- Organize ideas and information and express them clearly and effectively in writing for both academic and workplace contexts for different communicative purposes.
- Apply appropriate research strategies and citation formats.
- Describe, explain and analyze multiple perspectives on issues in ways that demonstrate global awareness and appreciation of diversity in its many manifestations.
- Apply strategies both inside and outside the classroom that reflect an understanding of the reading and writing processes in order to become life-long learners, critical thinkers, and active citizens.

Students will be assessed through a combination of evaluations which may include projects, written assignments, presentations, tests, quizzes, and group or collaborative activities.

Associate in Arts Degree: English

Courses Required for the Major:		Units
ENGL 101	Reading and Composition or	
ENGL 105	Composition and Literature	3
*ENGL 205	Critical Thinking and Intermediate Composition	3
**ENGL 215	English Literature I: 800-1799	3
**ENGL 216	English Literature II: 1800-Present	3

Select three units from:

ENGL 208	Introduction to Literature	
ENGL 220	Masterpieces of World Literature I: 1500 BCE - 1600 CE	
ENGL 221	Masterpieces of World Literature II: 1600 - Present	
		3

Select three units from:

**ENGL 210	American Literature I	
**ENGL 211	American Literature II	
ENGL 245	Writing Creative Nonfiction	
ENGL 247	Writing Seminar-Poetry	
ENGL 249	Introduction to Creative Writing	
ENGL 254	Intermediate Fiction Writing	
		3

Total Units = 18

*Meets SDSU/CSU critical thinking requirement.

**Recommended sequences for UC transfer.

Not all courses are offered at each campus.

For graduation requirements see **Requirements for the Associate Degree** on page 73.

Electives as needed to meet minimum of 60 units required for the degree:

Recommended Electives: English 202, 209, 238, 240, 245, 247, 249, 253, 254; Humanities 101, 102, 201, 202; Journalism 200, 210A/B/C/D.

Courses designed to support this and other majors: ESOL 19, 20, 21, 22, 30, 31, 32, 40.

Transferable Units as Prep for the Major at SDSU
SDSU will accept a total of 12 units of literature and creative writing as preparation for the English Major. This includes any combination of lower division literature courses and up to six units of creative writing courses.

Note: English 215 and 216 are required by SDSU and UCSD. Other course electives are available at Mesa and Miramar Colleges.

Transfer Information

Common university majors related to the field of English include: Creative Writing, Comparative Literature, English, Humanities, Language Studies, Linguistics, Literature.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

English for Speakers of Other Languages (ESOL)

The English for Speakers of Other Languages Program is designed to prepare students to read, write, speak and listen at a level that enables them to succeed in college courses.

The program consists of four levels and the student is assigned a level based on the result of his/her placement test.

The first level, L19, is a combined skills class in a lecture/lab format. Students who successfully complete this course are at the intermediate-low level. Some students at the beginning level may find ESOL 19 difficult. For these students, counselors are available to discuss options and resources, including classes at Continuing Education.

The second and third levels, L20 and L30, are made up of three courses. The grammar-writing component is a six-unit course; the reading and listening/speaking components are three units each.

The fourth level, L40, is a single course in reading and writing. Students who successfully complete ESOL 40 can read and write at an advanced level. They are prepared to take English courses one level below transfer (English 48 and 49).

19 Transitional English For ESOL Students **3 hours lecture, 6 hours lab, 5 Units** **Letter Grade or Pass/No Pass Option**

Advisory: Assessment Skill Level L19. Students are advised to take the English for Speakers Other Languages placement test prior to enrollment and perform at level 19.

Limitation on Enrollment: This course is not open to students with credit for English 007 or 58.

This course prepares students to read, write, listen and speak at the intermediate-low ESOL level to facilitate successful participation in a college setting. This course will emphasize development of reading and writing skills in academic contexts, focusing heavily on the production of complete sentences with minimal errors and basic paragraph and composition development. Satisfactory completion of this course will enable students to enroll in ESOL 20, 21 and 22. (FT) Credit does not apply to the associate degree.

20 Writing for Non-native Speakers of English I

6 hours lecture, 6 units
Letter Grade or Pass/No Pass Option

Prerequisite: English for Speakers of Other Languages 19 with a grade of "C" or better, or equivalent, or Assessment Skill Level L20.

Limitation on Enrollment: This course is not open to students with credit for English 008 or 60.

This course in writing and grammar prepares students to write at the intermediate-mid ESOL level. In this course, students learn to write paragraphs, basic compositions and other types of texts and practice critical reasoning in their writing. Students read and understand a variety of texts and develop academic study skills and work habits. Students also practice grammatical structures in the production and editing of compositions so that meaning is generally clear and not obscured by error. (FT) Credit does not apply to the associate degree.

21 Reading for Non-native Speakers of English I

3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Prerequisite: English for Speakers of Other Languages 19 with a grade of "C" or better, or equivalent, or Assessment Skill Level L20.

This course prepares students to read at the intermediate-mid ESOL level. In this course, students learn reading strategies and apply them as they read a variety of texts. Students practice identifying text organization, vocabulary and grammar to facilitate comprehension. Students also begin to use information from class readings in discussion, critical thinking and writing. (FT) Credit does not apply to the associate degree.

22 Listening and Speaking for Non-native Speakers of English I

3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Prerequisite: English for Speakers of Other Languages 19 with a grade of "C" or better, or equivalent, or Assessment Skill Level L20.

This course prepares students to understand spoken English and to speak at the intermediate-mid ESOL level. In this course, students begin to develop communicative competence through listening to and participating in a variety of communicative activities. Students also begin to study grammatical structures specifically related to oral/aural course work to make connections between structure and

communicative needs. In addition, students discuss, write about and think critically about information from oral and written sources. (FT) Credit does not apply to the associate degree.

30 Writing for Non-native Speakers of English II

6 hours lecture, 6 units
Grade Only

Prerequisite: English for Speakers of Other Languages 20, 21, and 22, each with a grade of "C" or better, or equivalent, or Assessment Skill Level L30.

Limitation on Enrollment: This course is not open to students with credit for English 009 or 61.

This course in writing and grammar prepares students to write at the intermediate-high ESOL level. In this course, students learn to write compositions and other types of texts that communicate a basic awareness of critical reasoning and the components of the academic essay and other types of writing. To achieve these goals, students learn and apply knowledge of syntax and grammatical structures in the production and editing of compositions so that errors, which may be frequent, will not obscure meaning. Students also read and understand a variety of texts as well as communicate a familiarity with academic study skills and work habits. Credit does not apply to the associate degree.

31 Reading for Non-native Speakers of English II

3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Prerequisite: English for Speakers of Other Languages 20, 21, and 22, each with a grade of "C" or better, or equivalent, or Assessment Skill Level L30.

This course prepares students to read at the intermediate-high ESOL level. In this course, students continue to develop reading skills needed for academic and workplace success. To achieve these goals, students read a variety of texts and apply appropriate reading strategies to facilitate comprehension. In addition, students engage in activities to build background knowledge as well as knowledge of text structure, grammar and vocabulary. Students also use information from class reading in class discussion, critical thinking and writing. (FT) Credit does not apply to the associate degree.

32 Listening and Speaking for Non-native Speakers of English II

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: English for Speakers of Other Languages 20, 21, and 22, each with a grade of "C" or better, or equivalent, or Assessment Skill Level L30.

This course prepares students to understand spoken English and speak at the intermediate-high ESOL level. In this course, students continue to develop communicative competence through listening to and participating in a variety of communicative activities. Students also continue to develop knowledge of grammatical structures specifically related to oral/aural course work. In addition, students discuss, write about, and think critically about information from oral and written sources. (FT) Credit does not apply to the associate degree.

40 Reading and Writing for Non-native Speakers of English III

6 hours lecture, 6 units

Letter Grade or Pass/No Pass Option

Prerequisite: English for Speakers of Other Languages 30, 31, and 32, each with a grade of "C" or better, or equivalent, or Assessment Skill Level L40.

Limitation on Enrollment: This course is not open to students with credit for English 010 or 62.

This course prepares students to read and write at the advanced ESOL level. In this course students write essays and other types of texts that have some complexity of expression, contain relatively few mechanical and grammatical errors and illustrate evidence of critical reasoning. Students also read academic and workplace texts and apply study skills and work habits necessary for success in further academic and vocational studies. Students who complete this course will be prepared to enter English 48 and English 49. (FT) Credit does not apply to the associate degree.

Courses

English (ENGL)

Basic Skills Courses

All courses at this level are offered for college credit. Credit for these courses will not apply toward

the associate degree, but will count toward the determination of a student's workload and eligibility for financial aid.

12A Basic English Review

.5 hour lecture, 1.5 hours lab, 1 unit
Grade Only

This self-paced course is intended for students who need to review their English skills in order to succeed in college classes and/or their career. Students begin with an evaluation of their skills. Activities include assigned individualized reading and writing practice, mastery tests, and meetings with the instructor. This is an individualized course designed to develop student mastery in specific basic skills. (FT) Not Applicable to Associate Degree, pre-collegiate basic skills, English as a Second Language.

12B Basic Composition Across the Curriculum

.5 hours lecture, 1.5 hours lab, 1 unit
Pass/No Pass

This course is designed for students enrolled in transfer level courses in disciplines other than English who need additional instruction in critical reading and composition in order to complete the courses successfully. Students begin with the evaluation of their skills. Activities include assigned individualized reading and writing practice, mastery tests, and meetings with the instructor. This is an individualized course designed to develop student mastery in essential basic skills. (FT) Not applicable to the Associate Degree.

12E Basic Composition Review

.5 hour lecture, 1.5 hours lab, 1 unit
Grade Only

This self-paced course is intended for students enrolled in English 49 who would like additional instruction in order to complete the course successfully. Students begin with an evaluation of their skills. Activities include assigned individualized reading and writing practice, mastery tests, and meetings with the instructor. This is an individualized course designed to develop student mastery in specific basic skills for English 49. (FT) Not Applicable to Associate Degree, pre-collegiate basic skills, English as a Second Language.

12F Basic Composition Review**.5 hours lecture, 1.5 hours lab, 1 units
Pass/No Pass**

This course is designed for students enrolled in English 43 who would like additional instruction in order to complete the course successfully. Students begin with the evaluation of their skills. Emphasis is placed on assigned individualized reading and writing practice, mastery tests, and meetings with the instructor. This is an individualized course designed to develop student mastery in specific basic writing skills for English 43. (FT) Not applicable to the Associate Degree.

Reading**42 College Reading and Study Skills I****3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: Assessment Skill Level R3. This course is designed for native speakers of English. ESL students should enroll in ESOL 19, 20, 21, 22, 30, 31, 32 or 40 as recommended by the placement test for non-native English speakers.

Limitation on Enrollment: This course is not open to students with previous credit for English 55. This course is designed for students who need to improve their reading skills in order to succeed in college courses. In this course, students practice the reading process, reading extensively and intensively, and develop confidence and enjoyment in reading. Students also read and respond to a variety of materials, including non-fiction and textbook assignments, and learn strategies for reading difficult material to facilitate comprehension and critical thinking. In addition, students develop writing, vocabulary, discussion, and study skills. (FT) Credit for this course does not apply to the associate degree.

48 College Reading and Study Skills II**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Limitation on Enrollment: This course is not open to students with previous credit for English 56.

Prerequisite: English as a Second Language 40 or English 42, with a grade of "C" or better, or equivalent, or Assessment Skill Level R4.

This course is designed for students who need to develop advanced reading skills to succeed in transfer level courses. In this course, students focus on academic reading and study skills and practice strategies to improve reading comprehension and critical thinking. Students also build writing,

vocabulary, discussion and study skills to accurately express information and reflect the meaning of class readings. (FT) Not Applicable to Associate Degree, pre-collegiate basic skills.

Writing**37A Persuasive Writing****3 hours lecture, 3 units
Pass/No Pass Only**

Limitation on Enrollment: This course is not open to students with previous credit for English 92A.

This course is intended for students enrolled at San Diego State University; for Freshmen, a score of 150 or lower on the CSU English Placement Test (EPT), and for transfer students, a score of 7 or lower on the Transfer Writing Assessment (TWA). It is designed to help students develop methods of reading and writing necessary for success in SDSU's Rhetoric and Writing Studies 100. In this course, students read persuasive texts and integrate the ideas of multiple authors and their own into argumentative essays. The course stresses paragraph and essay development and reviews sentence structure, mechanics, and grammar as needed. (FT) Not Applicable to Associate Degree, pre-collegiate basic skills - reading, writing, computation.

37B Persuasive Writing II**3 hours lecture, 3 units
Pass/No Pass Only**

Limitation on Enrollment: This course is not open to students with previous credit for English 92B.

Enrollment is intended for students admitted to San Diego State University who have taken SDSU's Rhetoric and Writing Studies 92A, 94, or 95 and received a grade of Satisfactory Progress (SP). Only students who have not received credit for English 92A or Satisfactory Progress (SP) for RWS 92A or 97A at San Diego State University may enroll in English 92B. This course is designed to help students develop methods of reading and writing necessary for success in SDSU's Rhetoric and Writing Studies 100. In this course, students read persuasive texts and integrate the ideas of multiple authors and their own into argumentative essays. The course stresses paragraphs and essay development and reviews sentence structure, mechanics, and grammar as needed. To earn a grade of "CR," SDSU students must submit a passing final portfolio graded by SDSU's Rhetoric and Writing Studies (RWS) Department. (FT) Not Applicable to Associate Degree, pre-collegiate basic skills - reading, writing, computation.

43 English Review**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: Assessment Skill Level W3; or English 42 with a grade of "C" or better, or equivalent, or Assessment Skill Level R4. This course is designed for native speakers of English. ESOL students should enroll in English for Speakers of Other Languages 19, 20, 21, 22, 30, 31, 32, or 40 as recommended by the placement test for non-native speakers.

Limitation on Enrollment: This course is not open to students with previous credit for English 50. This course is designed for students who need review of and practice with writing unified paragraphs and purposeful basic compositions. In this course students develop knowledge of the writing process as well as knowledge of grammatical structures to compose clear and complete sentences, paragraphs, and short essays. Students also read texts as the basis for writing and develop critical thinking skills necessary for success in college courses. (FT) Credit for this course does not apply to the associate degree.

49 Basic Composition**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Limitation on Enrollment: This course is not open to students with previous credit for English 51.

Prerequisite: English as a Second Language 40 or English 43, with a grade of "C" or better, or equivalent, or Assessment Skill Level W4. This course is designed to prepare students to write successfully at the transfer level. In this course students practice the writing process in the production and editing of essays. Students also review grammatical and mechanical structures as needed to support the successful expression of meaning. In the addition, students read and think critically using a variety of texts which are the basis for writing and class discussion. A District-wide, timed-writing examination, holistically graded by English instructors is part of the final course grade. Designated section of this course may be taught from a specific cultural perspective and are cross-listed under Black Studies and Chicano studies in the class schedule. (FT) Not Applicable to Associate Degree, pre-collegiate basic skills.

English 101 Preparatory Courses

All courses at this level are offered for college credit. Three units of course work at this level may be applied to the associate degree. Credit for courses at this level will count toward the determination of a student's workload and eligibility for financial aid.

97 College Writing Skills**3 hours lab, 1 unit****Pass/No Pass Only**

Advisory: English 43 with a grade of "C" or better, or equivalent, or Assessment Skill Level W4. This course provides the application of college writing skills for all disciplines. Emphasis is on the writing of organized, clear, concise, coherent, and carefully reasoned essay exams, book reports, research papers, technical reports, expository and argumentative essays, and other college writing assignments. The course is individualized, with students working on specific learning outcomes tailored to their needs. (FT) Associate Degree Credit and not transferable.

English Courses

(Also see Humanities)

101 Reading and Composition**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Prerequisite: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; or English 37A or English 37B or English 64 with a grade of "C" or better, or equivalent.

This course is designed for transfer-level students or for those who want to develop competence in college level reading and composition. In this course, students read, analyze, discuss and think critically using a variety of works and sources. Based on these activities, students write essays, fully-documented research projects, and other types of texts for various purposes and audiences. This written work, which demonstrates effective, logical, and precise expression of ideas, totals at least 6000 graded words. Designated sections of this course may be taught from a specific cultural perspective. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

105 Composition and Literature**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Prerequisite: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; or English 064 or English 37A or 37B with a grade of "C" or better, or equivalent. This is a composition course using literature as a background for improving writing skills. Students discuss the general nature and elements of literature and literary criticism by reading and analyzing representative works of fiction, drama, and poetry. Based on this subject matter, students are required to write a variety of critical papers, including a research paper, comprising at least 6,000 graded words. This course is designed for transfer students and is suitable for those students interested in literature and in developing strong critical and analytical writing skills. Designated sections of this course may be taught from a specific cultural perspective. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

202 Introduction to Linguistics**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Prerequisite: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.
Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of "C" or better, or equivalent. This course is designed to introduce students to the field of Linguistics. In this course, students develop an understanding of the nature of language through the study of core areas in linguistics including phonetics, phonology, morphology, syntax, semantics and pragmatics. Students also read, write and think critically about related fields such as psycholinguistics, sociolinguistics, historical linguistics, and animal communication. This course is designed for students who plan to transfer as well as for those with a general interest in linguistics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

205 Critical Thinking and Intermediate Composition**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Prerequisite: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of "C" or better, or equivalent. This course is designed to help students who are planning to transfer to a four-year college or university to develop critical thinking, reading, writing, and research skills beyond the level of English 101 and English 105; it is a required course within many curricula. Assignments require a total of at least 8,000 words of graded writing. The course focuses on writing argumentative prose and critically evaluating arguments. A majority of the written assignments require some research and documentation, including library research. Designated sections of this course may be taught from a specific cultural perspective and are cross-listed under Black Studies and Chicano Studies in the catalog and class schedule. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

208 Introduction to Literature**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Prerequisite: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.
Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of "C" or better, or equivalent. This course provides an inquiry into the basic nature of literature and is designed for students with a general interest as well as for those majoring in the field. Students read and analyze representative literary works in fiction, non-fiction, poetry and drama from various cultures and periods, applying practical critical techniques in essays, reports, and exams. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

209 Literary Approaches to Film**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Prerequisite: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Advisory: English 101 with a grade of “C” or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of “C” or better, or equivalent.

This course focuses on literary values, such as plot, conflict, symbolism, theme and character as observed in feature films. It also focuses on cultural values with special reference as to how films define problems, establish a network of varied values, confront moral dilemmas, and explore human emotions. This course satisfies requirements in humanities and serves as an elective for English majors. It is designed for students who are interested in literature as well as those interested in the study of film. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

210 American Literature I

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: English 101 with a grade of “C” or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of “C” or better, or equivalent.

This course is a survey of American literature from its beginning to the late 19th Century including representative works from the Colonial Period (1588-1765), and the New Republic (1765-1829). In this class students read and discuss the authors of these periods, addressing relevant social, political, cultural, and religious issues. The students critically analyze in essays, exams, and research papers the authors, specific works, and other topics as assigned. Classroom activities include lectures and discussions of the principal authors and works. Selected representative readings are required. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

211 American Literature II

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: English 101 with a grade of “C” or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of “C” or better, or equivalent.

A survey of American Literature from the late 19th Century to the present which includes representative works from the Age of Realism (1865-1914), the Modernist Period (1914-1945), and the Postmodern Era (1950-present). In this class students read and discuss the authors of these periods, addressing

relevant social, political, cultural, and religious issues. The students critically analyze in essays, exams, and research papers the authors, specific works, and other topics as assigned. Classroom activities include lectures and discussions of principal authors and their works. Selected representative readings are required. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

215 English Literature I: 800-1799

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: English 101 with a grade of “C” or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of “C” or better, or equivalent.

This course offers a survey of British literature from the Anglo-Saxon period to the pre-Romantic period (approximately 800 to 1799), including representative works from the Old and Middle English periods, the Renaissance and the Elizabethans, the Cavalier, Metaphysical, and Puritan periods, the Restoration and the Neoclassical periods. Students read and discuss the major authors of these periods, addressing relevant social, political, cultural, and religious issues. Students critically analyze, in essays and research papers, authors, specific works, and other topics as assigned. This course satisfies requirements for the major in English as well as general education and humanities requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

216 English Literature II: 1800-Present

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: English 101 with a grade of “C” or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of “C” or better, or equivalent.

This course offers a survey of British literature from the Romantic period to the 20th century (approximately 1800 to the present) including representative works from the pre-Romantic and Romantic periods, the Victorian and later Victorian period and the Modern period. Students read and discuss the major authors of these periods, addressing relevant social, political, cultural, and religious issues. Students critically analyze, in essays and research papers, authors, specific works, and other topics as assigned. This course satisfies

requirements for the major in English as well as general education and humanities requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

220 Masterpieces of World Literature I: 1500 BCE - 1600 CE

**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Level R5 and W5.

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of "C" or better, or equivalent.

This course offers a survey of world literature in translation, from the ancient world through the European renaissance (approximately 1500 BCE - 1600 CE), including the established classic literature of the Near East, Greece and Rome, India, China, Japan, Africa, the Islamic world, and Europe. Students read and discuss a variety of authors from these regions, and address relevant social, cultural, and religious issues. Students critically analyze, in essays and papers, specific authors, works, themes, and other topics as assigned. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

221 Masterpieces of World Literature II: 1600 - Present

**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of "C" or better, or equivalent.

This course offers a survey of world literature in translation, from the close of the European renaissance through the present time, including the literature of Asia, Europe, North America, Central America, South America, Africa and the Islamic world. Students read and discuss a variety of authors from these regions, and address relevant social, religious, and cultural issues. Students critically analyze, in essays and papers, specific authors, works, themes, and other topics as assigned. This course satisfies requirements for the major in English as well

as general education and humanities requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

237 Women in Literature

**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of "C" or better, or equivalent.

This course introduces the student to images of women in literature and to women writers. Students read from a variety of genres including stories, poetry, novels, and essays, written by women and men from a range of social, cultural, and ethnic backgrounds. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

238 Evaluating Children's Literature

**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of "C" or better, or equivalent.

This course is a survey of children's literature from folktales to current works. The course compares works from a variety of authors, cultures, and historical periods while emphasizing current American works. Principles of literary criticism are applied in evaluating the themes, language, and structure of works studied. This class is suitable for students interested in literature as well as for students who are preparing to teach. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

240 Shakespeare

**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Advisory: English 101 with a grade of “C” or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of “C” or better, or equivalent.

This course is a survey of William Shakespeare’s work. Emphasis is placed on analyses of representative plays and poems from the perspectives of theme, character, structure, and language in historical and contemporary contexts. This course is designed for students majoring in English and those with a general interest in the author or the period. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

245 Writing Creative Nonfiction

**3 hours lecture, 3 units
Grade Only**

Prerequisite: English 101 or English 105 with a grade of “C” or better, or equivalent, or Assessment Skill Levels R6 and W6.

Limitation on Enrollment: This course is not open to students with previous credit for English 246A and/or 246B.

This is an intensive course in writing creative nonfiction. Exploration of the principles and methods of creative nonfiction are offered through lecture and the critical analysis of student and master works addressing personal, social, political, and/or cultural issues. Students submit original creative nonfiction for class discussion and learn to use the workshop format to further their work. Increased writing skills help students not only in preparing for such writing-related careers as publishing, journalism, communications, and education, but also in better understanding literature and learning to use language successfully, which is necessary in many professions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

247 Writing Seminar - Poetry

**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: English 101 or English 105 with a grade of “C” or better, or equivalent, or Assessment Skill Levels R6 and W6.

This introductory course provides instruction in the study and creation of poetry. Students read and critique traditional, contemporary and multicultural poems that provide models for their original work. In addition, students create poetry which is discussed and analyzed by the class. Students learn to identify

the basic elements and techniques of poetry, use invention strategies, understand different forms, analyze poems, examine published and unpublished poems as models for writing poetry, use constructive criticism, identify current poetic values, and explore potential markets for publishing poems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

249 Introduction to Creative Writing

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: English 101 or English 105, with a grade of “C” or better, or equivalent, or Assessment Skill Levels R6 or W6.

Limitation on Enrollment: This course is not open to students with previous credit for English 249A and 249B.

This is an introductory course in creative writing which focuses on the study of fiction and poetry. Students analyze technique in the works of professional writers and in their own original works. After submitting writing, students participate in informal discussion of their work, which includes helpful criticism from the class and the instructor. Increased writing skills help students prepare for careers in communication, education, writing, advertising, selling, journalism, law, business, and government. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

253 Fundamentals of Fiction Writing

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: English 101 or English 105, with a grade of “C” or better, or equivalent, or Assessment Skill Levels R6 or W6.

Limitation on Enrollment: This course is not open to students with previous credit for English 252A.

This is an intensive course in fiction-writing techniques. Students read and evaluate fiction using elements of fiction writing as well as contemporary issues. Students write original fiction and submit for class discussion and learn to use criticism offered by the instructor and peers. Critical thinking abilities are applied as students analyze student and master works addressing personal, social, political, and/or cultural issues. Increased writing skills help students who may be interested in a writing-related career, such as publishing, journalism, communications, and education, but also in better understanding

literature, and learning to use language successfully. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Humanities (HUMA)

Faculty	Office	Telephone
Laurel Corona	C-206	(619)388-3597
Jan Lombardi	C-201	(619)388-3587
Elizabeth Meehan	C-224	(619)388-3509

Student Learning Outcomes

Students who complete the Humanities Program will be able to:

- Understand how the artistic and intellectual achievements of people living in other eras help them to imagine their lives and understand their culture's ideas, aesthetics, and values;
- Understand how the artistic and intellectual achievements of people in other parts of the world reflect their ideas, aesthetics, and values;
- Articulate ways in which the arts today reflect the ideas, aesthetics, and values of their own culture; and
- Compare and contrast the ideas, aesthetics, and values of several cultures.

101 Introduction to the Humanities I

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This interdisciplinary course develops students' understanding and appreciation of humankind's cultural heritage from the earliest time to approximately 1400. A survey is made of the literature, philosophy, music, painting, architecture, and sculpture of both Western and non-Western

civilizations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

102 Introduction to the Humanities II

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6. This interdisciplinary course is designed for students interested in meeting general education requirements in humanities. The course develops students' understanding and appreciation of humankind's cultural heritage from approximately 1400CE to the present time. A survey is made of the literature, philosophy, music, painting, architecture, and sculpture of both Western and non-Western civilization. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

103 Introduction to the New Testament

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6. This course provides an introduction to the history and culture of the New Testament period (First Century C.E.), methods of critical analysis of Biblical materials, and the content of the New Testament. It also examines the impact of the New Testament on western culture. This course may be of interest to students of history, literature, anthropology or those with a general interest in biblical studies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

106 World Religions

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6. This course is an introduction to the basic elements of the religions of the world, their similarities and differences, and their impact on believers and society. The course includes a study of the historical development, doctrines, rituals, sects, and scriptures of the major religions of the world. Some analysis of ancient religious traditions and tribal religious beliefs and practices may be included. This course is intended for all students interested in humanities and the study of world religions. (FT) Associate

Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

201 Mythology

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course introduces students to the major images and themes of the myths of widely separated peoples of the world throughout history. By analyzing various archetypal patterns found in the great civilizations and tribal cultures of the world, students understand both the uniqueness of each culture's world view and the commonality of human mythological conceptions. Literature and the arts are used to demonstrate these cultures' mythic ideas. This course meets GE and CSU requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

202 Mythology: Hero's Journey

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Analysis of the hero's journey, internal and external, as reflected in myths of the world, with consideration of such phenomena as the "shadow," the "double," the "other." Also, exposure to art in which the hero's journey is thematic. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Foreign Languages

See "Languages" on page 334.

French

See "Languages" on page 334.

Futures Studies

Award Type	Units
Certificate of Performance:	
Futures Studies Certificate	17

Description

The Futures Studies program offers practical skills, theory and methods to strategically identify and analyze trends that affect the world on a social, cultural, political, economic and environmental level. Through Futures Studies theory and methods, students learn to postulate possible, probable and preferable futures. The opportunity to gain professional experience in the field of Futures Studies is offered through participation in a one-unit service learning capstone course.

Program Goals:

Students will learn to:

- envision possible, probable and preferable futures
- apply methods of visioning, strategic planning and simulations to case studies
- assess and evaluate trends forecasted on a national and international level.
- critically analyze positive and negative factors that may influence the future of the world
- identify and explore just, equitable and sustainable solutions to social, environmental, political and economic issues

Program Emphasis:

A focus is placed upon the interdisciplinary nature of the application of Futures Studies to anthropology, political science, sociology, technology and computer science, economics and environmental science. Students will be encouraged to think critically about the future in a responsible manner taking into consideration just and equitable solutions to challenges facing the world.

Faculty	Office	Telephone
Stephen J. Bouscaren	A1-S	619-388-3260
Larry Forman	A-17-F	619-388-3666

Career Options

This Certificate prepares students to enter into academic and professional fields related to Futures Studies. Available career tracks include working as a strategic planner, demographer, futurist, sociologist,

pollster, researcher, political analyst, educator, anthropologist, industrial psychologist, business leader, consultant or a change agent.

Certificate of Performance: Futures Studies Certificate*

The Futures Studies certificate will provide students the tools to identify and analyze trends that impact the future of our world on a social, cultural, political, economic and environmental level.

Courses:		Units
FUTR 101	Introduction to Futures Studies	3
ANTH 103	Introduction to Cultural Anthropology	3
SOCO 223	Globalization and Social Change	3
POLI 103	Comparative Politics	3
CISC 181	Principles of Information Systems	4
FUTR 277C	Service Learning -- Community: Futures Studies	1
Total Units = 17		

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Courses

Futures Studies (FUTR)

101 Introduction to Futures Studies 3 hours lecture, 3 units Grade Only

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6. This course is an overview of the field of Futures Studies. Emphasis is placed on identifying and analyzing trends which impact the world on an anthropological, political, technological, sociological, and environmental level. Topics include strategies and planning for successful participation in society. In addition, students explore ways to create a more just, sustainable and equitable world for future generations. This course is designed for all students interested in exploring possible, probable and preferable futures. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

102 Creating Futures: Methods and Tools 3 hours lecture, 3 units Grade Only

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; Futures Studies 101 with a grade of "C" or better, or equivalent.

This course is a survey of the methods and tools used within the field of Futures Studies. Emphasis is placed on scanning, trend analysis and trend projection, visioning, gaming, and strategic planning. Students are encouraged to envision probable, possible and preferable futures, while considering the effects of their personal futures on the futures of their local and global environment. This course is intended for students interested in the practical applications of Futures Studies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

103 Emerging Technologies 3 hours lecture, 3 units Grade Only

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; Futures Studies 101 with a grade of "C" or better, or equivalent.

This course examines the intersection of technology and the future. Students identify state of the art developments in emerging technologies and examine how technologies can aid us in the pursuit of a more just, equitable and sustainable future world. Emphasis is placed on the impact of communication technologies, biotechnologies, and emerging energy technologies on the future of society. Students track trends in specific areas of interest and use futures studies methods and tools to forecast possible, probable and preferable futures. This course is intended for anyone interested in Futures Studies and emerging technologies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

250 Field Experience in Futures Studies 1- 3 hours lecture, 2 - 6 hours other, 1- 3 units Grade Only

Prerequisite: Futures Studies 101 with a grade of "C" or better, or equivalent.
Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6. Students in this course develop and implement field

experience projects under the supervision of college faculty. In cooperation with the staff of community organizations and agencies, students design these projects to assist the college's neighborhood communities. Students gain hands-on experience in project planning, development, implementation and evaluation. Students meet regularly with faculty and peers to receive feedback, support and guidance in their community projects. This course may be repeated up to two times, but the total units earned may not exceed three units. This course is intended for students interested in Futures Studies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

277C Service Learning -- Community: Futures Studies

**1-3 hours lecture, 1-3 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in: Futures Studies 101 with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Students in this course develop and implement service learning projects to help the college's community under the supervision of college faculty and in cooperation with the staff of community organizations and agencies. Projects may include collaboration with community projects and agencies and educational service-oriented projects for the college's community. Students gain hands-on experience in project planning, development, implementation and evaluation. Students meet weekly to receive support training and development opportunities regarding best practices in Service Learning. This course is intended for students from any discipline who are interested in project development, development of teaching skills, or enhancement of communication and planning skills. Course segments may be taken in any order. The combined credit for all 277C discipline courses may not exceed three units. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

General Education

Award Type	Units
Certificate of Performance:	
Futures Studies Certificate	17
Certificate of Achievement:	
General Education CSU Transfer Pattern	39-40*
General Education Intersegmental General Education Transfer Curriculum (IGETC)	37-40*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

The Certificate of Achievement in CSU General Education - Breadth and the Certificate of Achievement in Intersegmental General Education Transfer (IGETC) are designed for students who intend to complete university general education requirements prior to transfer to a California State University (CSU) or University of California (UC) campus.

General education (GE) is a set of courses from a variety of different subject areas that every student must complete in order to earn a degree, regardless of major. The goal is to provide a well-rounded or "liberal" education and to develop the knowledge, skills, and attitudes that together help make up an educated person. The completion of GE prior to transfer is not required for admission to most universities. However, it is usually in the students' best interest to complete an appropriate transfer GE pattern at the community college. This is because GE requirements that are not fulfilled prior to transfer must be completed later at the university, which often extends the time and expense of a university education.

**Certificate of Achievement:
CSU General Education - Breadth**

The student will select courses that fulfill the CSU GE certification pattern detailed on page 93 of this catalog. CSU GE is accepted by all CSU campuses and some private / independent or out of state universities. CSU GE is not accepted by the UC system.

Total Units = 39-40

Certificate of Achievement: Intersegmental General Education Transfer (IGETC)

The student will select courses that fulfill the IGETC certification pattern detailed on page 84 of this catalog. IGETC is accepted by all CSU campuses and most UC campuses and majors. It is also accepted by some private / independent or out of state universities.

Total Units = 37-40

Honors Global Competencies Certificate

Description

The Honors Global Competencies Certificate provides an interdisciplinary and systemic approach in order to prepare students for the highly diverse, technologically-rich, and multilingual global society in which we live. The Certificate offers students the opportunity to gain a global perspective through completion of coursework in intercultural competencies, communication skills, technology skills, and coping skills. This certificate helps students to transfer to four-year institutions in concert with the Honors designation. It prepares students for study and work in the world as a whole in professional fields such as international studies, intercultural studies, language studies, international business, international law, political science, comparative literature, environmental studies, history, technology, social sciences, humanities, teaching, and more.

Program Emphasis

The Honors Global Competencies certificate has an international emphasis.

Career Options

The Honors Global Competencies certificate might lead to careers in the following areas: International relations, international business, politics, international law, technology professions, teaching, translating, travel and tourism, and intercultural communications, among others.

Certificate of Performance: Honors Global Competencies Certificate*

The Honors Global Competencies Certificate offers you the opportunity to gain a global perspective

through completion of coursework in intercultural competencies, communication skills, technology skills, and coping skills.

Courses:		Units
ENGL 205	Critical Thinking and Intermediate Composition	3

Select three through five units from the following introductory or higher level foreign languages:

ARAB 101	First Course in Arabic	5
FREN 101	First Course in French	5
GERM 101	First Course in German	5
ITAL 101	First Course in Italian	5
JAPN 101	First Course in Japanese	5
RUSS 101	First Course in Russian	5
SPAN 101	First Course in Spanish	5
TAGA 101	First Course in Tagalog	5
VIET 101	First Course in Vietnamese	5

Select six units from the following:

ANTH 102	Introduction to Physical Anthropology	3
ANTH 103	Introduction to Cultural Anthropology	3
ARTF 110	Art History: Prehistoric to Gothic	3
ARTF 111	Art History: Renaissance to Modern	3
BIOL 101	Issues in Environmental Biology	4
COMS 180	Intercultural Communication	3
ECON 120	Principles of Macroeconomics	3
ENGL 101	Reading and Composition	3
ENGL 105	Composition and Literature	3
ENGL 220	Masterpieces of World Literature I: 1500 BCE - 1600 CE	3
ENGL 221	Masterpieces of World Literature II: 1600 - Present	3
HUMA 101	Introduction to the Humanities I	3
HUMA 102	Introduction to the Humanities II	3
HIST 100	World History I	3
HIST 101	World History II	3
MUSI 101	History I: Middle Ages to Mid 18th Century	3
MUSI 102	Music History II: Mid 18th - Early 20th Century	3
MUSI 109	World Music	3
PHIL 106	Asian Philosophy	3
PHIL 125	Philosophy of Women	3
POLI 101	Introduction to Political Science	3
POLI 103	Comparative Politics	3
POLI 140	Contemporary International Politics	3

Select three units from the following:

CHIL 101	Human Growth and Development	3
CISC 181	Principles of Information Systems	4
GEOG 102	Cultural Geography	3

HEAL 101	Health and Life-Style	3
PSYC 101	General Psychology	3

Total Units = 15-17

This certificate will be offered through the Honors Programs at City, Mesa, and Miramar Colleges. All coursework except for foreign language must be done as an honors class or as an honors contract.

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Geography

See "Physical and Earth Sciences" on page 387

Geology

See "Physical and Earth Sciences" on page 387.

German

See "Languages" on page 334.

Health Education

See "Physical Education" on page 399.

Health Sciences

There is currently no program in Health Sciences. The following courses are offered and may be used as associate degree electives.

Courses

Health Sciences (HEAN)

93 Residential Services Specialist I

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

Limitation on Enrollment: This course is not open to students with credit for Health Sciences 265, Residential Services Specialist I.

This course is a study of the theories and skills needed by persons involved in residential care for the developmentally disabled. Course content emphasizes the history and trends in service provision in the United States. This includes current principles of normalization and assessment procedures as well as an overview of common developmental disabilities. The interdisciplinary team process and basic counseling techniques are included. Associate Degree Credit only and not Transferable.

94 Residential Services Specialist II

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

Limitation on Enrollment: This course is not open to students with credit for Health Sciences 265, Residential Services Specialist II.

This course is a study of the theories, knowledge and practical skills needed by persons involved in residential care for the developmentally disabled. Course content emphasizes hands-on behavior management techniques, health and developmental needs, program planning and implementation, and approaches to developing social adaptation and other life skills. Associate Degree Credit only and not Transferable.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience

(270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

History

Award Type	Units
Associate in Arts Degree:	
History	18*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

History is the study of human experience from the dawn of time to the present. It examines people, institutions, ideas and events of the past and the present. The primary objectives of the History program are: to meet general education requirements for American Institutions, Humanities and Social Sciences; completion of the Associate in Arts degree; and preparation for transfer to a four-year institution and completion of general education requirements for the student enrolled in a four-year institution.

Program Emphasis

The study of history develops cultural literacy, critical thinking, and other useful skills. San Diego City College offers the two-semester World History survey sequence along with the two-semester American History survey sequence. Completion of these two sequences provides the student with the necessary lower division preparation for a baccalaureate degree in History at San Diego State University.

Faculty	Office	Telephone/Email
Peter Haro	R-120	619-388-3095 pharo@sdccd.edu
Susan Hasegawa	R-122	619-388-3370 shasegaw@sdccd.edu
Sofia Laurein	R-119	619-388-3092 slaurein@sdccd.edu

Career Options

Most careers in history require education beyond the associate degree and some require a graduate degree. This is not a comprehensive list but some of the most common career options with history preparation include: archivist, business person,

diplomatic corps, historian, journalist, lawyer, librarian, museum curator, park historian, professor, teacher and writer.

Student Learning Outcomes

Students who complete the program will be able to:

- Critically analyze primary and secondary sources in college-level essays, written assignments, and research papers.
- Identify and describe historic periods, movements, trends, people, and events important in the study of World, U.S., Asian and Latin American history, and Western Civilization.

Academic Programs

The associate degree in History requires completion of three of the four course sequences in History listed for the degree. Additional general education and graduation requirements for the associate degree are listed in the catalog. The associate degree requires a minimum of 60 units.

Associate in Arts Degree: History

Courses Required for the Major: Units

Select three of the seven six-unit course sequences or 18 units

HIST 100	World History I, and	
HIST 101	World History II, or	6
HIST 105	Introduction to Western Civilization I and	
HIST 106	Introduction to Western Civilization II or	6
HIST 109	History of the United States I and	
HIST 110	History of the United States II or	6
HIST 115A	History of the Americas I and	
HIST 115B	History of the Americas II or	6
HIST 120	Introduction to Asian Civilization and	
HIST 121	Asian Civilization in Modern Times or	6
HIST 109	History of the United States I and	
HIST 123	U.S. History from the Asian Pacific American Perspective or	6
HIST 141	Women in United States History I and	
HIST 142	Women in United States History II	6

Total Units = 18

Recommended electives: History 290, 296.

Transfer Information

Common university majors related to the field of History include: Art History, History, International

Studies, Liberal Studies, Social and Behavioral Studies, World Cultures and History.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

History (HIST)

100 World History I

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course examines the growth of civilizations and the inter relationships of peoples of Europe, Asia, Africa and America from the birth of civilization to 1650. Topics in social, intellectual, economic, and political history are covered. This course is of interest to history majors as well as anyone seeking a global historical perspective. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

101 World History II

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course examines the comparative history of the world's civilizations in Africa, the Americas, Asia, and Europe from the dawn of the modern era (1600) to the present. Topics in social, intellectual, economic, and political history are covered. This course is of interest to history majors as well as anyone seeking

a global historical perspective. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

105 Introduction to Western Civilization I

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is an historical survey of Western Civilization from the early human communities through early modernism. The course is designed to further students' general education by introducing the ideas, attitudes, and institutions basic to Western Civilization. It may be of interest to history majors as well as any student seeking a broad historical perspective. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

106 Introduction to Western Civilization II

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is an historical survey of Western Civilization from early modernism to the present. The course is designed to further students' general education by introducing the ideas, attitudes, and institutions basic to Western Civilization. It may be of interest to history majors as well as any student seeking a broad historical perspective. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

109 History of the United States I

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course, which covers the history of the United States from its colonial origins through the period of Reconstruction, provides an overview of the diverse peoples who interacted, settled, and influenced the history of the nation and its developing economic, social, and political institutions. The course requires students to analyze a variety of materials, think critically, and write thesis-based essays. History 109 taken in conjunction with History 110, 115B, 123, 142, 151; Black Studies 140B; Chicano Studies

141B; or Political Science 102 satisfies the District and may satisfy the CSU graduation requirements in United States History, Constitution, and American Institutions and the requirement in California state and local government. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: History (HIST) 109-110, 141-142, 150- 151, Black Studies (BLAS) 140A-140B, and/or Chicano Studies (CHIC) 141A-141B combined: maximum credit, one series.

110 History of the United States II

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course, which covers the history of the United States from Reconstruction to the present, provides an overview of the diverse peoples who influenced the history of the nation and its maturing economic, social, and political institutions. The course requires students to analyze a variety of materials, think critically, and write thesis-based essays. History 110 taken in conjunction with History 109, 115A, 141, 150; Black Studies 140A; or Chicano Studies 141A satisfies the District and may satisfy CSU requirements in United States History, Constitution, and American Institutions and the requirement in California state and local government. History 110 also satisfies the District and CSU requirements in California state and local government for those students who have completed equivalent United States history, Constitution, and American Ideals courses outside the State of California. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: History (HIST) 109-110, 141-142, 150- 151, Black Studies (BLAS) 140A-140B, and/or Chicano Studies (CHIC) 141A-141B combined: maximum credit, one series.

115A History of the Americas I

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course provides a framework for interpreting the history of the Americas, from 1500 through 1800. This survey examines how diverse peoples migrated or were transported to perform labor among indigenous peoples of varying levels of

social organization and technological sophistication. The course includes treatment of how these peoples interacted and reciprocally influenced each others' cultural forms, political institutions, social relations, and economics. Emphasizing the comparative history of these societies, the course traces the eventual emergence of independence movements setting the stage for establishment of autonomous nation states. The course also traces the simultaneous development and evolution of capitalism in the Western Hemisphere during the period. This course requires students to analyze a variety of source materials, think critically, and write thesis-based essays. This general education course is designed for both history majors and the general transfer student. History 115A taken in conjunction with History 115B, 110, 123, 142, 151; Black Studies 140B; Chicano Studies 141B; or Political Science 102 satisfies the District and CSU American Institutions/California Government requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

115B History of the Americas II

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with grade of "C" or better or equivalent, or Assessment Skill Levels R5 and W5.

This course provides a framework for interpreting the history of the Americas, from the 19th century into the 21st century. This survey examines the independence movements and the development of autonomous nation states throughout the Americas. Emphasizing the comparative history of these societies, the course traces Roman Catholic Church-state relations, the constitutional history of Latin American nations in relation to California, the United States, and Canada, including 20th century constitutional reforms. The course also outlines economic shifts, involving the expansion of agricultural commodity production, global commerce, and industrialization. Finally, the course highlights international relations among nations in the Western Hemisphere, the Cold War, and the impact of modernization theory. This general education course is designed for both history majors and the general transfer student. History 115B taken in conjunction with History 115A, 109, 141, 150; Black Studies 140A; or Chicano Studies 141A satisfies the District and CSU American Institutions/California Government requirements. (FT) Associate Degree

Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

120 Introduction to Asian Civilizations
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course examines the social, cultural, and political evolution of distinct civilizations in East, South, and Southeast Asia from prehistory to the end of the sixteenth century. Emphasis is placed on topics such as the development of indigenous religions/philosophies, the rise and decline of regional kingdoms/dynasties, cultural achievements, and gender roles. This course is intended for transfer students planning to major in history, business, or other social science. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

121 Asian Civilizations in Modern Times
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course examines the evolution of the distinct cultures, thought, and institutions in East, South, and Southeast Asia from the sixteenth century to the present through critical investigations into the impact of modernization on the political, social, economic, and cultural dimensions of these societies. Emphasis is placed on topics such as the first encounters with Western powers, the evolution of Western imperialism, the rise of nationalist movements and independent nation states, and their evolution and progress to the present. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

123 U.S. History from the Asian Pacific American Perspective
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Black Studies 112 or 140 or History 110 and 110B.

This course is a review of Asian Pacific Americans in the social, political, economic and cultural development of the United States from Reconstruction to the present. The emphasis is on the Chinese, Japanese, Korean, Filipino, Vietnamese, Cambodian, Lao, Hmong, and Hawaiian experiences. This course presents American history as it relates to the experience of Asian immigrants and Asian Pacific Americans. History 123 taken in conjunction with History 109, 115A, 141, 150; Black Studies 140A; or Chicano Studies 141A satisfies the District and CSU American Institutions/California Government requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

141 Women in United States History I
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course, which covers the history of the United States from its colonial origins through the period of Reconstruction, provides a special emphasis on the history and role of women, who in their diverse contributions influenced the history of the nation and its developing economic, social, and political institutions. The course requires students to analyze a variety of materials, think critically, and write thesis-based essays. This course may be of interest to students interested in Women's Studies. History 141 taken in conjunction with History 142, 110, 115B, 123, 151; Black Studies 140B; Chicano Studies 141B; or Political Science 102 satisfies the District and CSU American Institutions/California Governments requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: History (HIST) 109-110, 141-142, 150-151, Black Studies (BLAS) 140A-140B, and/or Chicano Studies (CHIC) 141A-141B combined: maximum credit, one series.

142 Women in United States History II
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course, which covers the history of the United States from Reconstruction to the present, provides an overview of the diverse peoples who influenced the history of the nation and its maturing economic,

social and political institutions, with a special emphasis on the history and role of women. This course requires students to analyze a variety of materials, think critically, and write thesis-based essays. This course may be of interest to students interested in Women's Studies. History 142 taken in conjunction with History 141, 109, 115A, 150; Black Studies 140A; or Chicano Studies 141A satisfies the District and CSU American Institutions/California Government requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: History (HIST) 109-110, 141-142, 150- 151, Black Studies (BLAS) 140A-140B, and/or Chicano Studies (CHIC) 141A-141B combined: maximum credit, one series.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Humanities

See "English" on page 309.

Journalism

See "Communications" on page 197.

Labor Studies

Award Type	Units
Certificate of Performance:	
History and Politics of American Labor	6
Labor Law	5
Shop Steward Specialist	8
Certificate of Achievement:	
Labor Studies	18
Associate in Science Degree:	
Labor Studies	24*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

The Labor Studies program provides students a sound foundation in the law, history, culture, politics, institutions, and contemporary issues of American

work life. Students will gain a comprehensive introduction to the role and contributions of organized labor to American society, a thorough grounding in the rights of employees on the job, and specialized training in the skills necessary to be an effective leader in labor unions or in other contexts for labor-management relations.

Program Emphasis

The Labor Studies program offers a Certificate of Achievement in Labor Studies which provides shop stewards as well as union organizers and officers the skills needed to qualify for and to be effective in their positions. Students can also pursue the Associate of Science degree in Labor Studies.

Faculty	Office	Telephone/Email
Kelly Mayhew	224B	619-388-3136

Career Options

The program is designed to train union representatives, members of unions, labor leaders, industry coordinators and others interested in pursuing a career in labor relations.

Certificate of Performance: History and Politics of American Labor*

Courses:	Units
LABR 100 American Labor Movement	3
LABR 108 Labor and Politics	3
Total Units = 6	

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Labor Law*

Courses:	Units
LABR 102 Labor Law	3
LABR 124 California Labor Law	1
LABR 127 Labor Law for the Public Sector	1
Total Units = 5	

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Shop Steward Specialist*

This certificate demonstrates the successful completion of shop steward training, grievance handling, and American Labor Movement course work.

Courses:	Units
LABR 100 American Labor Movement	3
LABR 106A Grievance Handling	3
LABR 122A Shop Steward, Level I	1
LABR 122B Shop Steward, Level II	1
Total Units = 8	

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Achievement: Labor Studies

Courses Required for the Major:	Units
LABR 100 American Labor Movement	3
LABR 102 Labor Law	3
LABR 104 Collective Bargaining	3
LABR 106A Grievance Handling	3

Select six units from:

LABR 106B Arbitration Procedure	3
LABR 108 Labor and Politics	3
LABR 110 Administrative Practices	3
LABR 112 California Workers Compensation	3
LABR 122A Shop Steward, Level I	1
LABR 122B Shop Steward, Level II	1
LABR 123A Occupational Safety and Health	1.5
LABR 124 California Labor Law	1
LABR 127 Labor Law for the Public Sector	1

Total Units = 18

Associate in Science Degree: Labor Studies

Courses Required for the Major:	Units
LABR 100 American Labor Movement	3
LABR 102 Labor Law	3
LABR 104 Collective Bargaining	3
LABR 106A Grievance Handling	3
LABR 108 Labor and Politics	3
LABR 110 Administrative Practices	3

Select six units from:

LABR 106B Arbitration Procedure	3
LABR 112 California Workers Compensation	3

LABR 122A Shop Steward, Level I	1
LABR 122B Shop Steward, Level II	1
LABR 123A Occupational Safety and Health	1.5
LABR 124 California Labor Law	1
LABR 127 Labor Law for the Public Sector	1
Total Units = 24	

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of the catalog. **The associate degree requires a minimum of 60 units.**

Transfer Information

Common university majors related to the field of History include: Labor Studies.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Labor Studies (LABR)

100 American Labor Movement

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with credit for Labor Studies 101.

This class provides an historical overview of the struggles and philosophy of American workers and their unions. Over the course of the semester the students examine the historical roots of unions, define and discuss different varieties of unionism,

and analyze how unions function in both the private and public sectors. This survey of American labor history begins with early American class and race conflicts and the fight against slavery, and ends with an analysis of globalization and labor in the 21st century. This course helps students investigate and seek to understand how class in the United States has intersected with race and gender in the American workplace and American politics. It explores how the American labor movement has suffered from disunity and helped expand the meaning of equality in American society when workers of different backgrounds have stood together to fight for basic rights. This course is intended for anyone interested in the American labor movement, including students who are employees and/or union members, and workers who are in leadership roles or are preparing for leadership positions in their workplace or unions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

102 Labor Law

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Labor Studies 105. Labor Law provides an overview of the legal framework and doctrines governing labor-management relations and the workplace rights of minorities and other individual employees. While "Labor Law" generally refers to the National Labor Relations Act or equivalent public sector laws, this class also covers laws that are sometimes referred to as "employment" laws. They include the various discrimination, retaliation, wage, and safety laws that may be enforced by individuals or unions. These laws offer additional ways to facilitate organizing and contract campaigns, as well as grievance handling. Designed to provide practical legal background for the study and practice of labor relations, this course focuses on real problems brought to the class by the students, and it aims to stimulate ways of using the law to build your local unions, as well as to support broader efforts such as organizing temporary workers, coalition work with human rights and environmental groups, and political lobbying campaigns. This course is intended for anyone interested in Labor Law including students who are employees and/or union members,

and individuals who are in leadership roles or are preparing for leadership positions in the workplace or in unions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

104 Collective Bargaining

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course covers major collective bargaining issues including the right to organize, employer/employee rights and the union, the structure of bargaining, bargaining strategies, the organizing component for setting the "climate" for bargaining, negotiating written agreements, public sector bargaining, impasse and arbitration procedures and mock negotiations. This course is intended for workers who are in leadership roles or are preparing for leadership positions in their workplace or unions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

106A Grievance Handling

3 hours lecture, 3 units

Grade Only

Advisory: Labor Studies 104 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Labor Studies 106.

A practical, problem-solving approach to grievance handling. Investigating, preparing and presenting cases using role-plays. Includes public and private sector procedures in handling grievances. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

106B Arbitration Procedure

3 hours lecture, 3 units

Grade Only

Advisory: Labor Studies 106A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Labor Studies 106.

A continuation of the grievance process with emphasis on the arbitration process. A practical, problem-solving approach in preparing and presenting cases. Includes mock arbitration and the preparing of pre and post briefs. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

108 Labor and Politics**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Labor Studies 135. This course provides a "how-to" approach to labor's involvement in political campaigns and elections. It covers the requirements under Political Action Committees (PACs), and the impact of U.S. Labor policies on foreign national employment and politics. It covers the establishment of legislative priorities and discusses the development of alternative political strategies for labor. This course is intended for anyone interested in the political strategy and tactics of the labor movement, including students who are employees and/or union members, and workers who are in leadership roles or are preparing for leadership positions in their workplace or unions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

110 Administrative Practices**3 hours lecture, 3 units
Grade Only**

Advisory: Labor Studies 108 with a grade of "C" or better, or equivalent.

Designed to present the concepts of business organization and management for a labor organization including finance, operation, compliance with federal government requirements, (e.g., LM-2 and LM-3) internal organization and the personnel practices of the labor organization as an employer and its role with their unionized employees. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

112 California Workers Compensation**3 hours lecture, 3 units
Grade Only**

Advisory: Labor Studies 110 with a grade of "C" or better, or equivalent.

An introduction to the basic California Workers' Compensation law: the rights of the employee, including the right to obtain medical treatment and be compensated for any disability as a result of the injury, and the role of an attorney in a Workers' Compensation case. (Does not include Longshoreman or Federal Workers Compensation Laws.). (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

122A Shop Steward, Level I**1 hour lecture, 1 unit
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This hands-on course covers the rights and responsibilities of shop stewards. It emphasizes development of communication and informal problem-solving skills, investigation and preparation of grievances, and interpreting and explaining the contract for members. The class addresses the current or past concerns and issues that students deal with in their workplace. This course is designed for shop stewards, union members, and employees who want to learn basic workplace rights and problem-solving skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

122B Shop Steward, Level II**1 hour lecture, 1 unit
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

The course covers skills and knowledge needed for more advanced shop steward responsibilities, such as recruiting new members, providing new member orientations, and educating members on political and workplace issues. It focuses on organizing members to address workplace issues as a group, helping with contract negotiations, and developing the communication and interpersonal skills to deal with difficult individuals. This course is designed for shop stewards, union members, and employees who want to have a leadership role in their union or place of employment. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

123A Occupational Safety and Health**1.5 hours lecture, 1.5 units
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This hands-on course studies the relationship between work and health through a variety of perspectives, beginning with the history of workplace injury, illness and death in the United States. Students learn the Occupational Safety and Health legislation and its implementation at

the federal and state level as well as employer and employee rights and responsibilities; the elements of a successful injury and illness prevention program in the workplace; and how to identify and evaluate hazards and control measures. Students apply the topics covered in the course to problem-solving based on workplace experience and case studies. This course is intended for students who are employees and/or union members interested in improving workplace health and safety. (This class may be offered in English or Spanish). (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

124 California Labor Law

1 hour lecture, 1 unit

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course provides a basic knowledge of the California Labor Code and Wage Orders and the Industrial Welfare Commission. Examples of the uses of Labor Code and Employment Laws are studied. Students learn to apply their knowledge of the laws-how they are violated and how they are enforced-to case studies as well as to their current or past workplace experiences. This course is designed for students who are employees and/or union members, as well as workers who are in leadership roles or are preparing for leadership positions in their workplace or unions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

127 Labor Law for the Public Sector

1 hour lecture, 1 unit

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course covers legal issues affecting public employee relations on the federal, state, and local levels, including development of public sector unionism, recent collective bargaining legislation, and dispute resolution in the public sector. This course is designed for students who are public sector employees and/or union members, and workers who are in leadership roles or are preparing for leadership positions in their workplace or unions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised

Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Languages

Arabic, American Sign Language, French, German, Italian, Russian, Spanish

Award Type	Units
Associate in Arts Degree:	
French	26*
German	21*
Italian	21*
Spanish	26*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

The study of languages provides communication skills, provides exposure to the richness of cultural variety, increases transfer options to universities with language requirements, opens new career opportunities, enriches global travel, and provides personal enrichment. The program is designed to prepare students for transfer to a baccalaureate institution and for proficiency in a language in a variety of settings.

Program Emphasis

The Language program provides transfer level courses in Arabic, French, German, Italian, Spanish and Russian. Students develop skills of understanding, speaking, reading and writing, culture and increase familiarity with basic features of the English language. They also have opportunities to become acquainted with the literature, culture, history and current events of other countries through films, videotapes, field trips and campus and community international events.

Faculty	Office	Telephone/Email
Juan Bernal	A1-L	619-388-3369
Jaime Estrada-Olalde	A1-K	619-388-3785
Philippe Patto	A1-K	619-388-3591
Maria Clara Romero-Huerta	A1-M	619-388-3397

Faculty	Office	Telephone/Email
Rosalinda Sandoval	A1-I	619-388-3295

Career Options

Knowledge of another language is required or highly desirable for consular and junior foreign service, import, export, and international business and travel, health and missionary fields, overseas teaching, translating and interpreting, and travel and tourism industries. Learning another language is an asset in broadening communication skills and in the travel and tourism industry.

Student Learning Outcomes

Students who complete the program will be able to:

- Demonstrate preparedness for successful transition to the language program of four year institutions.
- Demonstrate accurate foreign language grammar including writing, speaking, and listening in the target language.
- Discuss the social and cultural life of Foreign Language speakers in the target language.
- Read and analyze writings in Foreign Language target areas.
- Accept and value other peoples.

Academic Programs

The associate degree in French, German, Italian, or Spanish requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. The associate degree requires a minimum of 60 units.

Associate in Arts Degree: Languages

French

Courses Required for the Major:		Units
FREN 101	First Course in French	5
FREN 102	Second Course in French	5
FREN 201	Third Course in French	5
FREN 202	Fourth Course in French	5
FREN 210	The Grammar of Spoken French I	3
FREN 211	The Grammar of Spoken French II	3
Total Units = 26		

Associate in Arts Degree: Languages

German

Courses Required for the Major:		Units
GERM 101	First Course in German	5
GERM 102	Second Course in German	5
GERM 201	Third Course in German	5
GERM 210	The Grammar of Spoken German I	3
GERM 211	The Grammar of Spoken German II	3
Total Units = 21		

Associate in Arts Degree: Languages

Italian

Courses Required for the Major:		Units
ITAL 101	First Course in Italian	5
ITAL 102	Second Course in Italian	5
ITAL 201	Third Course in Italian	5
ITAL 210	The Grammar of Spoken Italian I	3
ITAL 211	The Grammar of Spoken Italian II	3
Total Units = 21		

Student Learning Outcomes

Students who complete the program will be able to:

- Accurately use the language mechanics in the five spheres of Foreign Language learning.
- Apply critical thinking skills.
- Develop writing processes in Spanish.
- Demonstrate intermediate-high comprehension and language production.
- Demonstrate cultural fluency and awareness.

Associate in Arts Degree: Languages

Spanish

Courses Required for the Major:		Units
SPAN 101	First Course in Spanish	5
SPAN 102	Second Course in Spanish	5
SPAN 201	Third Course in Spanish	5
SPAN 202	Fourth Course in Spanish	5
SPAN 210	Conversation & Composition Spanish I	3
SPAN 211	Conversation & Composition Spanish II	3
Total Units = 26		

Recommended electives: American Sign Language 115, 116, 215, 216; Arabic 101, 102, 296; French 280, 290, 296; German 290, 296; Italian 296; Spanish 290, 296.

Courses Offered in Support of Other Majors:
Spanish 85.

Transfer Information

Common university majors related to the field of History include: Arabic, French, German, Italian, Language Studies, Literature, Modern Languages, Spanish, Translation and Interpretation.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

American Sign Language/ Interpreting (AMSL)

115 American Sign Language Level I 4 hours lecture, 4 units Grade Only

Corequisite: American Sign Language/Interpreting 115L.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skills Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for American Sign Language/Interpreting 100.

This is an entry-level course designed to introduce students to American Sign Language (ASL) and fingerspelling as it is used within Deaf Culture. Students are taught to use American Sign Language by signing, fingerspelling, using facial grammar

at the novice level. Emphasis is placed on the development of ASL and receptive skills. The course is designed for students who want to explore the basic language structure of ASL and Deaf Culture. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Corresponds to two years of high school study.

115L American Sign Language I (Lab) 3 hours lab, 1 unit Grade Only

Corequisite: American Sign Language/Interpreting 115

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for American Sign Language/Interpreting 100.

This laboratory course provides students with the opportunity to apply their American Sign Language (ASL) skills through an individualized program. Students utilize interactive media to express their comprehension of basic ASL sentences and stories as well as their signing skills. Lab activities are designed to provide students the opportunity to practice vocabulary and syntax. The course is designed for students who want to explore the basic language structure of ASL and Deaf Culture. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

116 American Sign Language Level II 4 hours lecture, 4 units Grade Only

Prerequisite: American Sign Language/Interpreting 115 with a grade of "C" or better, or equivalent.

Corequisite: American Sign Language/Interpreting 116L.

Limitation on Enrollment: This course is not open to students with previous credit for American Sign Language/Interpreting 101.

This course is a continuation of the study of American Sign Language (ASL) at the beginning intermediate level. Emphasis is placed on increasing development of students' receptive and expressive skills through ASL vocabulary, fingerspelling and knowledge of Deaf culture. Instruction includes a natural approach to teaching a second language by exposing students to authentic conversations in the classroom. This course is designed for students

and/or professionals interested in working and interacting with Deaf people. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

116L American Sign Language II (Lab)
3 hours lab, 1 unit
Grade Only

Corequisite: American Sign Language/Interpreting 116

Limitation on Enrollment: This course is not open to students with previous credit for American Sign Language/Interpreting 101.

This laboratory course provides students with the opportunity to apply their American Sign Language (ASL) skills through an individualized program. Students utilize interactive media to express their comprehension of basic to intermediate ASL sentences and stories as well as to hone their signing skills. Lab activities are designed to provide students the opportunity to practice vocabulary and syntax at the intermediate level. This course is designed for students and/or professionals interested in working and interacting with Deaf people. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

215 American Sign Language Level III
4 hours lecture, 4 units
Grade Only

Prerequisite: American Sign Language/Interpreting 108 and 116, each with a grade of "C" or better, or equivalent.

Corequisite: American Sign Language/Interpreting 215L.

This third course in American Sign Language (ASL) is designed to enhance students' receptive and expressive skills at an advanced intermediate level. Emphasis is placed on the ASL syntax, facial grammar, vocabulary, and fingerspelling skills that enable students to participate in increasingly more complex conversations with Deaf community members. Instruction utilizes a natural approach to teaching a second language by engaging students in authentic conversations within the classroom environment. Conversational content seeks to develop student knowledge and understanding of the Deaf community and its art and history. This course is intended for students or professionals interested in working and/or interacting with Deaf people. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

215L American Sign Language III (Lab)
3 hours lab, 1 unit
Grade Only

Corequisite: American Sign Language/Interpreting 215

This laboratory course provides students with the opportunity to apply their American Sign Language (ASL) skills through an individualized program. Students utilize interactive media to express their comprehension of intermediate to advanced ASL sentences and narratives as well as to hone their signing skills. Lab activities are designed to provide students the opportunity to practice vocabulary and syntax at the intermediate to advanced level. This course is designed for students and/or professionals interested in working and interacting with Deaf people. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

216 American Sign Language Level IV
4 hours lecture, 4 units
Grade Only

Prerequisite: American Sign Language/Interpreting 215 with a grade of "C" or better, or equivalent.

Corequisite: American Sign Language/Interpreting 216L.

This fourth course in the study of American Sign Language (ASL) continues to build upon students' receptive and expressive skills at the advanced level while expanding their knowledge of Deaf culture and the influences of other sign language systems. Emphasis is placed on advanced fingerspelling, ASL structure and vocabulary. Instruction utilizes a natural approach to teaching a second language by engaging students in authentic conversations within the classroom environment. This course is intended for students or professionals interested in working and/or interacting with Deaf people. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

216L American Sign Language IV (Lab)
3 hours lab, 1 unit
Grade Only

Corequisite: American Sign Language/Interpreting 216.

This laboratory course provides students with the opportunity to apply their American Sign Language (ASL) skills through an individualized program. Students utilize interactive media to express their comprehension of advanced ASL sentences and narratives as well as to hone their signing skills. Lab activities are designed to provide students the

opportunity to practice vocabulary and syntax at the advanced level. This course is designed for students and/or professionals interested in working and interacting with Deaf people. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Arabic (ARAB)

101 First Course in Arabic

5 hours lecture, 5 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 with a grade of "C" or better, or equivalent or Assessment Skill Level R5.

This course is an introduction to the sound and writing system of the Arabic language. The course also provides students with the basic structural and lexical knowledge to enable them to communicate orally and in writing in Arabic at a beginning level. Emphasis is placed on developing the students' ability to perform language functions in real-life situations through structured activities and grammatical exercises and on providing students with an overview of Arabic culture. This course is for all students interested in learning Arabic. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Corresponds to two years of high school study.

102 Second Course in Arabic

5 hours lecture, 5 units

Letter Grade or Pass/No Pass Option

Prerequisite: Arabic 101 with a grade of "C" or better, or equivalent.

This interactive course builds upon the structural and lexical base of the Arabic language to move students from a beginning to a beginning-intermediate communication level through the introduction of a variety of noun and verb forms including the present and past tenses. Emphasis is placed on developing the student's ability to perform language functions in real-life situations through structured activities and grammatical exercises and on providing students with an overview of Arabic history, customs and culture. This course is for students in their second semester of Arabic. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

105 Elementary Spoken Egyptian Arabic

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5.

This course focuses on Spoken Egyptian Arabic, the spoken language of Cairo. It is the most understood Arabic dialect of the Arab World. Emphasis is placed on oral comprehension, fluency and writing skills through verbal and written communication based on everyday situations, current events and culture. An introduction to basic grammar and syntax of Egyptian colloquial Arabic is included. This course is intended for transfer students with an Arabic major or those who want to learn Spoken Egyptian Arabic. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

French (FREN)

101 First Course in French

5 hours lecture, 5 units

Letter Grade or Pass/No Pass Option

Advisory: English 43 with a grade of "C" or better, or equivalent, or Assessment Skill Level W4.

Limitation on Enrollment: This course is not open to students with credit for French 100.

This is an entry-level course designed to introduce students to the French language and cultures of the French-speaking world. In this interactive course, students use the language by speaking, listening, reading, and writing at the novice level. Basic language structures and vocabulary for communication are examined and explored in French. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Corresponds to two years of high school study.

102 Second Course in French

5 hours lecture, 5 units

Letter Grade or Pass/No Pass Option

Prerequisite: French 101 or two years of high school French, with a grade of "C" or better, or equivalent.

This course is a continuation of French 101 and is intended for students interested in further study of the French language and cultures of the French-speaking world. In this interactive course, students use listening, reading, speaking and writing at a more complex level than in the first course. The students further develop their receptive

and productive competencies to the low or mid-intermediate level. Additional language structures and vocabulary for communication are examined and explored in French. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

201 Third Course In French

5 hours lecture, 5 units

Letter Grade or Pass/No Pass Option

Prerequisite: French 102 or three years of high school French with a grade of "C" or better, or equivalent. This is an intermediate course in French. Language structures and vocabulary for communication are examined and explored through speaking, listening, reading and writing at the intermediate level. Students explore in more depth than in previous courses the history and the culture of the French-speaking world. This course is appropriate for students preparing for a major in French as well as for those who wish to continue their studies of the French language and culture. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

202 Fourth Course in French

5 hours lecture, 5 units

Letter Grade or Pass/No Pass Option

Prerequisite: French 201, or four years of high school French, with a grade of "C" or better, or equivalent. This is an advanced-intermediate course and is the fourth course in the French language sequence. In this interactive course, language structures and vocabulary for communication are examined and studied through speaking, listening, reading and writing at the high-intermediate level. Students continue to explore the history and the culture of the French-speaking world. Readings of literary and culturally relevant authentic materials are examined in depth. This course is designed for students preparing for a major in French as well as for those who have a strong interest in the French language and culture. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

210 The Grammar of Spoken French I

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: French 102 with a grade of "C" or better, or equivalent, or successful completion of three years of high school French.

Advisory: Concurrent enrollment in French 201.

This course further develops oral comprehension and fluency as well as written communication at a mid-intermediate level in French through culturally relevant materials. Students develop spoken and written vocabulary, dramatize everyday topics of conversation, interpret and describe materials, and compare and contrast the cultures of the French speaking world with U.S. culture both orally and in writing. Writing strategies are emphasized and literature is introduced. This course is intended for students who want to enhance their skills in the French language. Students who intend to major or minor in French are advised to take French 210 concurrently with French 201, if possible. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

211 The Grammar of Spoken French II

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: French 210 with a grade of "C" or better, or equivalent.

This course develops oral comprehension and fluency as well as written proficiency in French at an advanced-intermediate level through reading, analyzing, discussing, and reporting on culturally relevant materials. Students develop oral and reading vocabulary skills, study the cultures of the French-speaking world, and further develop the reading strategies introduced in French 210 through reading literature. This course is intended for students who want to further enhance their skills in the French language. Students who plan to major or minor in French are advised to take French 211 concurrently with French 202. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

280 French Reading Seminar

1.5 hours lecture, 1.5 hours lab, 2 units

Letter Grade or Pass/No Pass Option

Guided reading in French literature adapted to individual interests and needs: novels, short stories, poetry, newspapers and magazines. Discussed in French by students during class. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience

(270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

German (GERM)

101 First Course in German

5 hours lecture, 5 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5.

Limitation on Enrollment: This course is not open to students with previous credit for German 100.

This is an introductory course designed to teach students to understand, speak, read and write German, and become familiar with recent German culture and history. Emphasis is placed on learning the fundamentals of grammar, speaking in simple sentences using correct pronunciation, responding to questions regarding everyday life, and reading short selections about everyday activities. Fundamentals of oral and written grammar and a correct reading of simple German are practiced. This course is appropriate for students who are preparing to major in German as well as those who are interested in developing proficiency in the language. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Corresponds to two years of high school study.

102 Second Course in German

5 hours lecture, 5 units

Letter Grade or Pass/No Pass Option

Prerequisite: German 101 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for German 100

This course is a continuation of German 101 and is designed to teach students to speak, read and write German at a low-intermediate level and enhance students' familiarity with recent German culture and history. Emphasis is placed on improving students' knowledge of fundamental grammar, reading more complex texts and speaking with moderate proficiency. This course is appropriate for students who plan to major in German as well as for those who are interested in developing proficiency with the language. (FT) Associate Degree Credit and transfer to CSU and/or private colleges and universities. UC Transfer Course List.

201 Third Course in German

5 hours lecture, 5 units

Letter Grade or Pass/No Pass Option

Prerequisite: German 102 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for German 200.

This course is a continuation of the basic fundamentals of German pronunciation, grammar, composition and reading covered in German 102. Emphasis is placed on further developing listening, speaking, reading and writing skills through course content based on everyday life as well as German history and culture at the advanced-beginning level. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

210 German Conversation and Composition I

3 hours lecture, 3 units

Grade Only

Prerequisite: German 201 with a grade of "C" or better, or equivalent.

This course develops oral comprehension, fluency and writing skills at an intermediate level in German through verbal and written communication based on everyday situations, current events and culture. Emphasis is placed on increased vocabulary through class discussions, prepared talks and short compositions in German. This course is intended for students who want to further enhance their skills in German. (FT) Associate Degree Credit and transfer to CSU and/or private colleges and universities. UC Transfer Course List.

211 German Conversation and Composition II

3 hours lecture, 3 units

Grade Only

Prerequisite: German 210 with a grade of "C" or better, or equivalent.

This course further develops oral comprehension, fluency and writing skills at an advanced-intermediate level in German through verbal and written communication based on culturally relevant material. Emphasis is placed on increased vocabulary through written and oral dramatizations, descriptions and interpretations of everyday life situations and of German, Swiss-German and Austrian culture. This course is intended for students who want to further enhance their skills in German.

(FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

Italian (ITAL)

101 First Course in Italian

5 hours lecture, 5 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5.

Limitation on Enrollment: This course is not open to students with credit for Italian 100.

This is the first course in the sequence of study of the Italian language and culture. In this interactive course, students use Italian in speaking, listening, reading, and writing at the novice level. Basic language structures and vocabulary for communication are examined and explored in Italian. Students with two years of high school Italian are eligible to enroll in Italian 101. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Corresponds to two years of high school study.

102 Second Course in Italian

5 hours lecture, 5 units

Letter Grade or Pass/No Pass Option

Prerequisite: Italian 101 with a grade of "C" or better, or equivalent. Students with two years of high school Italian are eligible to enroll in this course.

Advisory: concurrent enrollment in Italian 296

Limitation on Enrollment: This course is not open to students with credit for Italian 100.

This is a continuation of Italian 101. In this interactive course, students use listening, reading, speaking and writing at a more complex level. The students further develop their receptive and productive languages competencies at the low- to mid- intermediate level. Additional language structures and vocabulary for communication are examined and explored in Italian. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

201 Third Course in Italian

5 hours lecture, 5 units

Letter Grade or Pass/No Pass Option

Prerequisite: Italian 102 with a grade of "C" or better, or equivalent, or three years of high school Italian with a grade of "C" or better, or equivalent.

Advisory: Concurrent enrollment in Italian 296. This is an intermediate course in Italian. In this interactive course, students use the language through speaking, listening, reading and writing at the intermediate level. More complex language structures and vocabulary for communication are examined and explored. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

210 The Grammar of Spoken Italian I

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Italian 210 is designed to give students abundant practice in developing oral and written fluency in the language. Topics providing basis for discussion and prepared talks will include everyday life situations, current event, and culture. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

211 The Grammar of Spoken Italian II

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Italian 211 is a continuation of Italian 210 at a more advanced level. Topics providing basis for discussion and prepared talks will include everyday life situations, current events, and culture. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

290 Independent Study

Hours by Arrangement, 1-3 units

Letter Grade or Pass/No Pass Option

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

For intermediate students who wish to work on special projects. This course may be taken four times with different content for a maximum of six units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Russian (RUSS)

101 First Course in Russian

5 hours lecture, 5 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5.

This is an entry level course designed to introduce students to the Russian language and cultures of the

Russian-speaking world. In this interactive course, students learn and use the language by speaking, listening, reading, and writing at the novice level. Basic language structures and vocabulary for communication are examined and explored in Russian. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Corresponds to two years of high school study.

Spanish (SPAN)

86A Spanish for Law Enforcement Officers

1 hour lecture, 1 unit

Letter Grade or Pass/No Pass Option

Advisory: Spanish 201 with a grade of "C" or better, or equivalent. Students are recommended to have some previous knowledge of the Spanish language before enrolling in Spanish 086A.

This course is open to any student that may or may not be pursuing a career in law enforcement. It is a practical study of Spanish for students employed in the field of law enforcement, especially those enrolled in the San Diego Police Department Language Certificate Program. Emphasis is placed on developing Spanish language skills and cultural understanding through activities and role play related to application in the field of law enforcement. In addition to students enrolled in the San Diego Police Department Language Certificate Program, this course is open to those working in other areas of law enforcement, such as the County Sheriff's Department and the Border Patrol. (FT) Associate Degree Credit only and not Transferable.

101 First Course in Spanish

5 hours lecture, 5 units

Letter Grade or Pass/No Pass Option

Advisory: English 43 with a grade of "C" or better, or equivalent, or Assessment Skill Level W4.

Limitation on Enrollment: This course is not open to students with previous credit for or concurrent enrollment in Spanish 100.

This entry level course introduces students to the Spanish language and cultures of the Spanish-speaking world. In this interactive course, students learn and use the language by speaking, listening, reading, and writing at the novice level. They also examine and explore basic Spanish language structures and vocabulary. This course is intended for beginning students who seek basic proficiency in the

Spanish language, students who want to take other Spanish courses, and students who want to learn Spanish for their personal enrichment. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Spanish (SPAN) 100, 101- 102 combined: maximum credit, 10 units.

102 Second Course in Spanish

5 hours lecture, 5 units

Letter Grade or Pass/No Pass Option

Prerequisite: Spanish 101 with a grade of "C" or better, or equivalent, or two years of high school Spanish with a grade of "C" or better, or equivalent.

Advisory: English 43 with a grade of "C" or better, or equivalent, or Assessment Skill Level W4.

Limitation on Enrollment: This course is not open to students with previous credit for or concurrent enrollment in Spanish 100.

In this interactive continuation of first-semester Spanish, students develop listening, reading, speaking, and writing skills at a more complex level. Students further develop their receptive and productive competencies to the intermediate low/mid level. The course explores additional Spanish language structures and vocabulary for communication. This course is intended for students who want to further their basic proficiency in the Spanish language, students who want to take a third-semester Spanish course, and students who want to continue learning Spanish for their personal enrichment. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Spanish (SPAN) 100, 101-102 combined: maximum credit, 10 units.

201 Third Course in Spanish

5 hours lecture, 5 units

Letter Grade or Pass/No Pass Option

Prerequisite: Spanish 102 with a grade of "C" or better, or equivalent, or three years of high school Spanish.

This course is an interactive study of Spanish at the intermediate level with increased emphasis on reading and writing while listening and speaking skills continue to develop. The course material emphasizes formal study of the language structure and further development of vocabulary and functional competence. The course also provides for increased awareness of cultural norms, values, and culturally relevant and appropriate customs and events. The content is expanded beyond "survival" needs in the immediate environment and deals in greater detail in areas such as the arts,

the environment, social interactions, careers and professions and general feelings. This course is intended for students who are planning to major in Spanish as well as those who are interested in studying the language. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Spanish (SPAN) 201-202 and Chicano Studies (CHIC) 203-204 combined: maximum credit, one series.

202 Fourth Course in Spanish

5 hours lecture, 5 units

Letter Grade or Pass/No Pass Option

Prerequisite: Spanish 201 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Spanish 200.

This course is offered as an advanced intermediate level course. It reviews and furthers grammatical features in Spanish through oral and written communication within a cultural background. Readings of literary and/or culturally relevant authentic materials are examined in depth. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Spanish (SPAN) 201-202 and Chicano Studies (CHIC) 203-204 combined: maximum credit, one series.

210 Conversation and Composition Spanish I

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: Spanish 102 with a grade of "C" or better, or equivalent.

This course further develops oral comprehension and fluency as well as written communication at a mid-intermediate level in Spanish through culturally relevant materials. Students increase vocabulary, dramatize everyday topics of conversation, interpret and describe materials, and compare and contrast Latin American and Spanish cultures with U.S. culture both orally and in writing. Writing strategies are emphasized and literature is introduced. This course is intended for students who want to enhance their skills in the Spanish language. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

211 Conversation and Composition Spanish II

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: Spanish 210 with a grade of "C" or better, or equivalent.

This course further develops oral comprehension and fluency as well as written communication at an advanced intermediate level in Spanish through culturally relevant materials. Students further increase vocabulary, dramatize everyday topics of conversation, interpret and describe materials, and compare and contrast Latin American and Spanish cultures with U.S. culture, both orally and in writing. Pre-reading strategies introduced in Spanish 210 are used as a basis upon which to build course emphasis in reading. More literature is introduced. This course is intended for students who want to further enhance their skills in Spanish. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

215 Spanish for Spanish Speakers I

5 hours lecture, 5 units

Letter Grade or Pass/No Pass Option

Prerequisite: Spanish 102 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Spanish 201.

This course is designed for students who are fluent in spoken, informal Spanish and who need to improve their writing, reading, and grammar skills. Emphasis is on the mastery of formal, written communication skills in Spanish at the intermediate level, and the study of Hispanic and Chicano culture through reading relevant, authentic materials. The course focuses on language challenges particular to Spanish speakers such as orthography, the inappropriate mix of English and Spanish in certain contexts, and contrasts between standard Spanish and regional variations. This course is conducted entirely in Spanish. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

216 Spanish for Spanish Speakers II

5 hours lecture, 5 units

Letter Grade or Pass/No Pass Option

Prerequisite: Spanish 215 or Spanish 201 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Spanish 202, or to

Spanish speakers who have received the equivalent of a high school degree in a Spanish speaking country.

This course is the continuation of Spanish 215. It is designed for students who are fluent in spoken, informal Spanish and who need to improve their writing, reading, and grammar skills. It furthers the mastery of formal, written communication in Spanish at the intermediate-advanced level, while integrating instruction in Hispanic and Chicano culture through increased practice in intermediate-advanced level readings, relevant, and authentic materials. The course focuses on language challenges that Spanish speakers still encounter at intermediate-advanced level, such as orthography, the inappropriate mix of English and Spanish in specific contexts, and standard Spanish as contrasted with regional variations. This course is conducted entirely in Spanish. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

290 Independent Study

**Hours by Arrangement, 1-3 units
Letter Grade or Pass/No Pass Option**

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

For intermediate students who wish to work on special projects. This course may be taken four times with different content for a maximum of six units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

296 Individual Instruction in Spanish

**1.5 - 6 hours lab, .5 - 2 units
Pass/No Pass Only**

Limitation on Enrollment: Concurrent enrollment in a designated Spanish course is required. The instructor of the related course will supply Add Code to the student, which permits registration in the course. This is a supplementary course designed to reinforce student achievement of the learning objectives and is offered concurrently with a designated Spanish course. Learning activities may employ a variety of self-paced multimedia systems or laboratory or field research arrangements to assist students in reaching the specific learning objectives in the concurrent Spanish course. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Legal Assistant (Paralegal)

Courses

Legal Assistant (LEGL)

There is currently no program in Legal Assistant or Paralegal at City College. The following courses are offered and may be used as Associate Degree electives.

100A Introduction to Paralegalism

**1 hour lecture, 1 unit
Grade Only**

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6.

Limitation on Enrollment: This course is not open to students with previous credit for Legal Assistant 100. This introductory course for students entering the paralegal program provides an overview of the paralegal's role in the workplace and legal system. Topics include controversies within the profession, ethics and responsibilities, sources of law, legal-research technology, and an introduction to federal and state court systems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

100B Legal Procedures

**2 hours lecture, 2 units
Grade Only**

Prerequisite: Legal Assistant 100A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Legal Assistant 100, Administration of Justice 105, or Business 180. This core course provides an overview of the various legal specialties offered within the paralegal program. Topics include litigation, torts, bankruptcy, family law, contract law, corporate law, trusts and wills, federal court practices and procedures, legal writing, immigration and legal research. Students learn specialized legal terminology and technology. This course is intended for students majoring in Paralegal. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

105 Legal Research**3 hours lecture, 3 units
Grade Only**

Prerequisite: Legal Assistant 100B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Administration of Justice 107 or Business 181.

This core course introduces students to legal research. Topics include an overview of research methods used, the primary and secondary sources available, an understanding of official and unofficial opinions, a review of binding and persuasive authority, the Shepard's system of validating cases and statutes, use of Internet research, and an introduction to LexisNexis and Westlaw. This course is intended for students majoring in Paralegal. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

110 Legal Writing & Communications**3 hours lecture, 3 units
Grade Only**

Prerequisite: Legal Assistant 105 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Administration of Justice 108 or Business 182.

This core course covers legal writing and oral communication. Topics include case analysis, legal reasoning, brief writing, legal memoranda, reports, and correspondence. This course is intended for students majoring in Paralegal. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

115 Civil Litigation - Procedures**3 hours lecture, 3 units
Grade Only**

Prerequisite: Legal Assistant 100B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Legal Assistant 109 or Business 183.

This course introduces students to the civil litigation process. Students examine the basic principles of civil procedures as applicable to both plaintiffs and defendants in the California court system. Other topics include jurisdiction, venue, discovery and preparation of pleadings. This course is intended for students majoring in Paralegal. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

120 Tort Law**3 hours lecture, 3 units
Grade Only**

Prerequisite: Legal Assistant 100B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Administration of Justice 110 or Business 184.

This core course introduces students to the broad area of civil wrongs and their appropriate remedies. Topics include tort law principles in the traditional areas of intentional torts, negligence, strict liability, product liability, nuisance, and commonly employed defenses. This course is intended for students majoring in Paralegal. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

140 Law Office Management and Technology**3 hours lecture, 3 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in Legal Assistant 100B with a grade of "C" or better, or equivalent.

This course examines systems and procedures for law office management and administration. Students learn how paralegals use computer systems and legal software applications to make their jobs easier and improve their value to employers. Topics include file management, personnel issues, computer systems, timekeeping and billing, case management/calendaring/docket control, litigation support, and legal ethics. This course is intended for students majoring in Paralegal or others interested in law office management and administration. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

145 Federal Court Practices and Procedures**3 hours lecture, 3 units
Grade Only**

Advisory: Legal Assistant 105 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Administration of Justice 112 or Business 186.

Students learn about federal court practices including criminal, civil, bankruptcy, and appellate procedures. The course emphasizes rules of practice to help students develop the skills legal assistants utilize in law offices. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

150 Criminal Litigation and Procedure**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: This course is not open to students with credit for Administration of Justice 113 or Business 187.

The criminal court system, criminal investigation and prosecution, discovery and investigation, pretrial motions, trial preparation and procedures, and post-trial motions and relief. This course will provide students with an understanding of criminal litigation practice and procedure. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

155 Employment Law**3 hours lecture, 3 units
Grade Only**

Advisory: Legal Assistant 105 or Legal Assistant 110 with a grade of "C" or better, or equivalent.

This course provides an overview of the legal relationship between employer and employee. It also provides a basic understanding of employment-related laws and the impact those laws have on employers/employees. Students learn about both the federal and state regulatory environment as it applies to employment law. Subjects include pre-employment concerns, legal aspects of the employer/employee relationship, discrimination issues and actions, terminations, and ethical issues in employment law. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

160 Bankruptcy Law**3 hours lecture, 3 units
Grade Only**

Advisory: Completion of or concurrent enrollment in Legal Assistant 105 or Legal Assistant 110 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Business 265: Bankruptcy Law.

This course is a specialty elective in the Legal Assistant program that focuses on bankruptcy law and procedures. It covers commencement of a case, preparing of schedules, operating and liquidating procedures, adversary matters and litigation in bankruptcy court, and debtors' and creditors' rights and obligations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

165 Family Law**3 hours lecture, 3 units
Grade Only**

Advisory: Completion of or concurrent enrollment in Legal Assistant 100B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Business 265: Family Law.

This course presents a legal specialty option in the Legal Assistant program. The family law course provides legal assistants exposure to domestic relations law and its application to family situations. The course encompasses formation of the marital relationship, dissolution, child custody and support, adoption, abortion, paternity, and domestic violence. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

170 Corporate Law**3 hours lecture, 3 units
Grade Only**

Prerequisite: Legal Assistant 100B with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with credit for Business 265: Corporate Law. This course introduces students to the various forms of business enterprises, including sole proprietorships, partnerships, and corporations. The course focuses on the legal steps and forms needed to create, maintain, and dissolve each type of business with an emphasis on corporations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

175 Estates, Trusts, and Wills**3 hours lecture, 3 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in Legal Assistant 100B with a grade of "C" or better, or equivalent.

This course identifies responsibilities and duties that paralegals perform under estate attorney supervision. Students review estate administration legal principles and terminology. They also study the procedural steps required to complete the administration, including current federal and state tax consequences. This course is intended for students majoring in Paralegal or others interested

in estate administration. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

180 Contract Law

**3 hours lecture, 3 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in Legal Assistant 100B with a grade of "C" or better, or equivalent.

This course provides students with the knowledge and skills for drafting and interpreting different types of contracts. Topics include elements of a contract, performance and breach issues, defenses to formation and enforcement, contract remedies, and third party contracts. This course is intended for students majoring in Paralegal. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

200 Elder Law

**3 hours lecture, 3 units
Grade Only**

Advisory: Legal Assistant 105 or Legal Assistant 110 with a grade of "C" or better, or equivalent.

This specialty elective in the Legal Assistant program focuses on legal topics that affect older people. These topics include financial and estate planning, health care, personal planning and protection, and consumer protection. This course benefits students seeking employment in law firms handling elder law and senior care housing facilities. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

210 Immigration Law

**3 hours lecture, 3 units
Grade Only**

Advisory: Legal Assistant 105 with a grade of "C" or better, or equivalent.

This legal specialty course is designed as an elective in the paralegal program. It also serves as a required class for students seeking an emphasis in Immigration Law. It provides an overview of the laws of immigration and Naturalization involving a history of immigrant migration, the evolution of this country's policies toward aliens and the interplay of the three administrative agencies which administer those laws: Justice Department, Labor Department and State Department. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Liberal Arts and Sciences

Award Type	Units
Associate in Arts Degree:	
Area of Emphasis in Visual and Performing Arts	18*
Area of Emphasis in Language Arts and Humanities	18*
Area of Emphasis in Scientific Studies:	
Biological Sciences Specialization	18*
Mathematics and Pre-Engineering Specialization	18*
Physical and Earth Sciences Specialization	18*
Area of Emphasis in Elementary (Multiple Subject) Teaching Preparation	33*
Area of Emphasis in Social and Behavioral Sciences	18*
*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.	

Description

The Liberal Arts and Sciences Degree is designed to enable students to complete the requirements for an Associate in Arts Degree with a minimum of 18 units in an area of emphasis and transfer to a University of California, a California State University or an independent/private college and university.

To meet the Liberal Arts and Sciences Degree requirements a student must complete the following:

1. One of the following four general education options
 - San Diego Community College District General Education and District Requirements. This GE pattern may fulfill all lower division general education requirements at an independent/private college or university. (See City College catalog page 74.)

- CSU General Education - Breadth (CSU GE Pattern). This GE pattern will fulfill all lower-division general education requirements at all CSU campuses. (See City College catalog page 104.)
 - Intersegmental General Education Transfer Curriculum (IGETC) pattern. This GE pattern will fulfill all lower-division general education requirements at all CSU campuses, most UC campuses/majors and some independent/private colleges and universities. (See City College catalog page 96.)
 - San Diego Community College District General Education and additional courses needed to meet all lower division general education requirements of an accredited U. S. postsecondary institution which awards the baccalaureate degree, as detailed in an inter-institutional articulation or transfer agreement and certified by a City counselor. (See City College Catalog page 78.)
- 2. A minimum of 18 units in an Area of Emphasis or Specialization. These include:**
- Area of Emphasis in Visual and Performing Arts
 - Area of Emphasis in Language Arts and Humanities
 - Area of Emphasis in Scientific Studies:
 - Biological Science Specialization
 - Mathematics and Pre-Engineering Specialization
 - Physical and Earth Sciences Specialization
 - Area of Emphasis in Elementary (Multiple Subject) Teaching Preparation
 - Area of Emphasis in Social and Behavioral Sciences
- 3. A minimum of 60 transferable units to a University of California, a California State University or an independent/private college and university.**

This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each transfer institution, courses used to complete this degree should be selected with the assistance of a City College counselor.

Completion of the Liberal Arts and Sciences Degree does not guarantee acceptance into a four year institution nor into a major.

Area of Emphasis in Visual and Performing Arts:

These courses emphasize the study of artistic activities and artistic expression of human beings. Students evaluate and interpret the ways in which people through the ages in different cultures have responded to themselves and the world around them in artistic and cultural creation. Students also learn to value aesthetic understanding and incorporate these concepts when constructing value judgments.

Common university majors in this emphasis include: Applied Design, Art, Art History, Arts and Crafts, Dance, Drama, Graphic Communications, Graphic Design, Industrial Arts, Painting and Printmaking, Photography, Sculpture, Studio Arts, Theatre Arts, Performing Arts.

This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each transfer institution, courses used to complete this major should be selected with the assistance of a San Diego City College counselor.

Associate in Arts Degree: Liberal Arts and Sciences with an Emphasis in Visual and Performing Arts

Courses Required for the Major:

Students should complete a minimum of 18 units including both Visual and Performing Arts courses:

ARTF 100	Art Orientation
ARTF 109	History of Modern Art
ARTF 110	Art History: Prehistoric to Gothic
ARTF 111	Art History: Renaissance to Modern
ARTF 113	African, Oceanic, and Native American Art
ARTF 115	African Art
ARTF 150A	Two-Dimensional Design
ARTF 150B	Beginning Graphic Design
ARTF 151	Three-Dimensional Design
ARTF 155A	Freehand Drawing I
ARTF 155B	Freehand Drawing II
ARTF 165A	Composition in Painting I

ARTF 165B	Composition in Painting II
ARTF 170A	Contemporary Crafts I
ARTF 170B	Contemporary Crafts II
ARTF 175A	Sculpture I
ARTF 175B	Sculpture II
ARTF 195A	Ceramics I
ARTF 195B	Ceramics II
ARTF 197A	Handbuilding Ceramics I
ARTF 197B	Handbuilding Ceramics II
ARTF 210A	Life Drawing I
ARTF 210B	Life Drawing II
ARTF 220A	Life Sculpture I
ARTF 220B	Life Sculpture II
ARTG 100	Basic Graphic Design
ARTG 106	Typography
ARTG 118	Graphic Design History
ARTG 125	Digital Media
DANC 110	Ballet
DANC 111	Ethnic Dance Forms
DANC 115	Tap
DANC 120	American Street Dance
DANC 127	Body Modalities and Injury Prevention
DANC 130	Dance Repertoire
DANC 135	Jazz Dance
DANC 140	Modern Dance I
DANC 145	Ballroom and Social Dance
DANC 150	Dance Making: Ballet
DANC 151	Dance Making: Jazz
DANC 152	Dance Making: Modern
DANC 153	Dance Making: Dance Theatre
DANC 177	Dance Improvisation
DANC 178	Advanced Contemporary Dance
DANC 179	Advanced Classical Dance
DANC 181	Introduction to Dance
DANC 183	Music for Dance
DANC 253	Choreography
DANC 261	Dance Performance
DANC 271	Dance Production
DRAM 103	Acting for Non-majors
DRAM 105	Introduction to Dramatic Arts
DRAM 108	Playwriting
DRAM 109	Theatre and Social Issues
DRAM 122	Makeup for the Stage
DRAM 123	Beginning Stagecraft
DRAM 126	Advanced Stagecraft
DRAM 132	Beginning Acting
DRAM 133	Intermediate Acting
DRAM 134	Beginning Voice for Actors
DRAM 136	History of Canonized Theatre-Ancient Greece to the Restoration
DRAM 137	History of Canonized Western Theatre-Restoration to the Present
DRAM 143	Beginning Costuming
DRAM 165	Introduction to Stage Movement
DRAM 200A	Fundamentals of Performance and Production III
DRAM 250	Rehearsal, Production and Performance
DRAM 251	Musical Comedy Rehearsal, Production and Performance
MUSI 100	Introduction to Music
MUSI 108	The Business of Music
MUSI 109	World Music
MUSI 111	Jazz - History and Development
MUSI 115A	Class Piano I
MUSI 115B	Class Piano II
MUSI 120	Beginning Voice Class
MUSI 121	Intermediate Voice
MUSI 130A	College Chorus I
MUSI 130B	College Chorus II
MUSI 150A	Basic Musicianship
MUSI 190	The Electronic Music Studio
MUSI 201	Recording Arts
MUSI 202	Computer Music
MUSI 215A	Class Piano III
MUSI 215B	Class Piano IV
MUSI 230A	Jazz Improvisation
MUSI 230B	Jazz Improvisation
MUSI 230C	Jazz Improvisation
MUSI 268A	Beginning Ear Training Laboratory I
MUSI 268B	Beginning Ear Training Laboratory II
PHOT 100	Basic Black-and-White Photography
PHOT 105	Introduction to Photography
PHOT 135	Intermediate Black-and-White Photography
PHOT 150	History of Photography
PHOT 102	Directed Photo Lab Studies
PHOT 143	Introduction to Digital Photography
PHOT 245	Landscape and Nature Photography

Area of Emphasis in Language Arts and Humanities:

These courses emphasize the study of cultural, literary, and humanistic activities of human beings. Students evaluate and interpret the ways in which people through the ages in different cultures have responded to themselves and the world around them in cultural creation. Students also learn to value aesthetic understanding and incorporate these concepts when constructing value judgments.

Common university majors in this emphasis include: Advertising, American Studies, Broadcast Media, Classics, Communication, Comparative Literature, Creative Writing, English, Ethics, Foreign Languages, Humanities, Journalism, Language Studies, Linguistics, Literature, Media Studies, Mass

Communications, Philosophy, Public Relations, Religious Studies, Speech Communication, Television and Film, Women's Studies.

This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each transfer institution, courses used to complete this major should be selected with the assistance of a San Diego City College counselor.

Associate in Arts Degree: Liberal Arts and Sciences with an Emphasis in Language Arts and Humanities

Description

These courses emphasize the study of cultural, literary, and humanistic activities of human beings. Students evaluate and interpret the ways in which people through the ages in different cultures have responded to themselves and the world around them in cultural creation. Students also learn to value aesthetic understanding and incorporate these concepts when constructing value judgments.

Common university majors in this emphasis

include: Advertising, American Studies, Broadcast Media, Classics, Communication, Comparative Literature, Creative Writing, English, Ethics, Foreign Languages, Humanities, Journalism, Language Studies, Linguistics, Literature, Media Studies, Mass Communications, Philosophy, Public Relations, Religious Studies, Speech Communication, Television and Film, Women's Studies.

This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each transfer institution, courses used to complete this major should be selected with the assistance of a San Diego City College counselor.

Courses Required for the Major:

Students should complete a minimum of 18 units in Arts and Humanities courses:

AMSL 115	American Sign Language Level I
AMSL 116	American Sign Language Level II
AMSL 215	American Sign Language Level III
AMSL 216	American Sign Language Level IV
ANTH 103	Introduction to Cultural Anthropology
ARAB 101	First Course in Arabic
ARAB 102	Second Course in Arabic
ARAB 105	Elementary Spoken Egyptian Arabic

BLAS 110	African American Art
BLAS 120	Black Music
BLAS 155	Afro-American Literature
CHIC 130	Mexican Literature in Translation
CHIC 135	Chicana/o Literature
CHIC 190	Chicano Images in Film
CHIC 210	Chicano Culture
COMS 101	Voice and Articulation
COMS 103	Oral Communication
COMS 104	Advanced Public Communication
COMS 111	Oral Interpretation
COMS 135	Interpersonal Communication
COMS 160	Argumentation
COMS 170	Small Group Communication
COMS 180	Intercultural Communication
ENGL 101	Reading and Composition
ENGL 105	Composition and Literature
ENGL 202	Introduction to Linguistics
ENGL 205	Critical Thinking and Intermediate Composition
ENGL 208	Introduction to Literature
ENGL 209	Literary Approaches to Film
ENGL 210	American Literature I
ENGL 211	American Literature II
ENGL 215	English Literature I: 800-1799
ENGL 216	English Literature II: 1800 - Present
ENGL 220	Masterpieces of World Literature I: 1500 BCE - 1600 CE
ENGL 221	Masterpieces of World Literature II: 1600 - Present
ENGL 230	Asian American Literature
ENGL 237	Women in Literature
ENGL 238	Evaluating Children's Literature
ENGL 240	Shakespeare
ENGL 245	Writing Creative Nonfiction
ENGL 247	Writing Seminar - Poetry
ENGL 249	Introduction to Creative Writing
ENGL 253	Fundamentals of Fiction Writing
FREN 101	First Course in French
FREN 102	Second Course in French
FREN 201	Third Course In French
FREN 202	Fourth Course in French
GERM 101	First Course in German
GERM 102	Second Course in German
GERM 201	Third Course in German
HIST 100	World History I
HIST 101	World History II
HIST 105	Introduction to Western Civilization I
HIST 106	Introduction to Western Civilization II
HIST 120	Introduction to Asian Civilizations
HIST 121	Asian Civilizations in Modern Times
HUMA 101	Introduction to the Humanities I
HUMA 102	Introduction to the Humanities II

HUMA 103	Introduction to the New Testament
HUMA 106	World Religions
HUMA 201	Mythology
ITAL 101	First Course in Italian
ITAL 102	Second Course in Italian
ITAL 201	Third Course in Italian
JOUR 200	Introduction to Newswriting and Reporting
JOUR 201	Advanced Newswriting and Reporting
JOUR 202	Introduction to Mass Communication
JOUR 205	Editing for Print Journalism
JOUR 206	Online Journalism
JOUR 210A	Newspaper Production
JOUR 210B	Newspaper Production 2
JOUR 210C	Newspaper Production 3
JOUR 210D	Newspaper Production 4
LABR 100	American Labor Movement
LIBS 101	Information Literacy and Research Skills
MATH 119	Elementary Statistics
PHIL 100	Logic and Critical Thinking
PHIL 101	Symbolic Logic
PHIL 102A	Introduction To Philosophy: Reality and Knowledge
PHIL 102B	Introduction To Philosophy: Values
PHIL 104A	History Of Western Philosophy
PHIL 104B	History of Western Philosophy
PHIL 106	Asian Philosophy
PHIL 107	Reflections on Human Nature
PHIL 108	Perspectives on Human Nature and Society
PHIL 111	Philosophy In Literature
PHIL 125	Philosophy of Women
PHIL 126	Introduction to Philosophy of Contemporary Gender Issues
POLI 101	Introduction to Political Science
POLI 102	The American Political System
PSYC 101	General Psychology
PSYC 258	Behavioral Science Statistics
RTVC 107	Audio Production
RTVC 110	Introduction to Scriptwriting
RTVC 115	Radio and Television Management Principles
RTVC 100	Introduction To Radio and Television
RTVC 105	Media Performance
RTVC 118	Television Studio Operations
RTVC 122	Television Production
RTVC 124	Electronic Field Production
RTVC 126	Art Direction for Film and Television
RTVC 128	Lighting for Television and Film
RTVC 140	Radio and TV Newswriting
RTVC 160	Introduction to Cinema
RTVC 167	Motion Picture Production
RTVC 247A	Radio Broadcasting Practicum

RTVC 247B	Radio Broadcasting Practicum
RUSS 101	First Course in Russian
RUSS 102	Second Course in Russian
SPAN 101	First Course in Spanish
SPAN 102	Second Course in Spanish
SPAN 201	Third Course in Spanish
SPAN 215	Spanish for Spanish Speakers I
SPAN 202	Fourth Course in Spanish
SPAN 216	Spanish for Spanish Speakers II

Area of Emphasis in Scientific Studies:

These courses emphasize the study of mathematical and quantitative reasoning skills and impart knowledge of the facts and principles that form the foundations of living and non-living systems. Students recognize and appreciate the methodologies of science as investigative tools, as well as the limitations of scientific endeavors. This area is divided into the following specializations: Biological Science, Mathematics and Pre-engineering, Physical and Earth Sciences.

Associate in Arts Degree: Liberal Arts and Sciences with an Emphasis in Scientific Studies Biological Sciences Specialization

The specialization in Biological Science is intended for students who plan to complete a bachelor's degree at a transfer institution in a biology-related major.

Common university majors in this field include: Agricultural Science, Biochemistry, Bioengineering, Bioinformatics, Biological Sciences, Biophysics, Biotechnology, Botany, Cell Biology, Conservation, Developmental Biology, Ecology, Entomology, Life Science, Genetics, Marine Biology, Medical Sciences, Microbiology, Molecular Biology, Natural Sciences, Neuroscience, Psychobiology, Toxicology, and Zoology/Animal Sciences.

This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each transfer institution, courses used to complete this major should be selected with the assistance of a San Diego City College counselor.

Courses Required for the Major:

Students should complete a minimum of 18 units in Biological Science courses:

BIOL 101	Issues in Environmental Biology (C)
BIOL 107	General Biology - Lecture and Laboratory
BIOL 110	Introduction to Oceanography (C, M)
BIOL 115	Marine Biology
BIOL 130	Human Heredity
BIOL 135	Biology of Human Nutrition
BIOL 180	Plants and People
BIOL 200	Biological Statistics (C, M)
BIOL 205	General Microbiology
BIOL 210A	Introduction to the Biological Sciences I
BIOL 210B	Introduction to the Biological Sciences II
BIOL 215	Introduction to Zoology
BIOL 230	Human Anatomy
BIOL 235	Human Physiology
CHEM 200	General Chemistry I - Lecture
CHEM 200L	General Chemistry I - Laboratory
CHEM 201	General Chemistry II Lecture
CHEM 201L	General Chemistry II Laboratory
CISC 190	Java Programming
CISC 192	C/C++ Programming
PHYS 125	General Physics
PHYS 126	General Physics II
PHYS 180A	General Physics I
PHYS 180B	General Physics II
PHYS 181A	General Physics Lab I
PHYS 181B	General Physics Lab II
PHYS 195	Mechanics
PHYS 196	Electricity and Magnetism
PHYS 197	Waves, Optics and Modern Physics

Associate in Arts Degree: Liberal Arts and Sciences with an Emphasis in Scientific Studies Mathematics and Pre-Engineering Specialization

The specialization in Mathematics and Pre-Engineering is intended for students who plan to complete a bachelor's degree at a transfer institution in a mathematical, computer science or engineering related major.

Common university majors in this field include:

Aerospace Engineering, Applied Mathematics, Civil Engineering, Cognitive Science, Computer Engineering, Computer Science, Construction Engineering, Electrical Engineering, Engineering, Engineering Technology, Environmental Engineering, Industrial Engineering Technology, Information

Systems, Manufacturing Engineering, Materials Science, Mathematics, and Statistics, Mechanical Engineering, Nuclear Engineering, and Structural Engineering.

This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each transfer institution, courses used to complete this major should be selected with the assistance of a San Diego City College counselor.

Courses Required for the Major:

Students should complete a minimum of 18 units including both Mathematics and Pre-Engineering courses:

CHEM 200	General Chemistry I - Lecture
CHEM 200L	General Chemistry I - Laboratory
CHEM 201	General Chemistry II Lecture
CISC 150	Introduction to Computer and Information Sciences (C, M)
CISC 152	Introduction to the Linux Operating System
CISC 181	Principles of Information Systems
CISC 186	Visual Basic Programming
CISC 187	Data Structures and Object Orientation (C, M)
CISC 189A	Introduction to Programming I (C, M)
	and
CISC 189B	Introduction to Programming II (C, M)
	or
CISC 190	Java Programming
CISC 192	C/C++ Programming
CISC 205	Object Oriented Programming Using C++ (C, MMR)
CISC 220	Fundamentals of Computer Game Programming
ELCT 111	Electrical Theory I
ELCT 111L	Electrical Laboratory I
ELCT 121	Electrical Theory II
ELCT 121L	Electrical Laboratory II
ELDT 124	Basic DC Electronics
ELDT 124L	Basic DC Laboratory
ELDT 125	AC Circuit Analysis
ELDT 125L	DC/ AC Circuit Analysis Laboratory with Pspice
ELDT 230	Advanced Computer Designs
ELDT 230L	Advanced Computer Designs Laboratory
ENGE 101	Introduction to Engineering (C)
ENGE 116	Computational Methods in Engineering
ENGE 151	Engineering Drawing (C, M)
ENGE 152	Engineering Design (C)

ENGE 200	Statics (C, M)
ENGE 210	Properties of Materials (C, M)
ENGE 240	Digital Systems (C, M)
ENGE 250	Dynamics (C, M)
ENGE 260	Electric Circuits (C, M)
MATH 104	Trigonometry
MATH 107	Introduction to Scientific Programming (C, M)
MATH 107L	Introduction to Scientific Programming Lab (C, M)
MATH 108	Intermediate Scientific Programming (C, M)
MATH 108L	Intermediate Scientific Programming Lab (C, M)
MATH 116	College and Matrix Algebra
MATH 118	A Survey of Modern Mathematics
MATH 119	Elementary Statistics
MATH 121	Basic Techniques of Applied Calculus I
MATH 122	Basic Techniques of Applied Calculus II
MATH 141	Precalculus
MATH 150	Calculus with Analytic Geometry I
MATH 151	Calculus with Analytic Geometry II
MATH 181	Mecomtronics College Algebra and Trigonometry (C)
MATH 183	Mecomtronics Calculus I (C)
MATH 245	Discrete Mathematics
MATH 252	Calculus with Analytic Geometry III
MATH 254	Introduction to Linear Algebra
MATH 255	Differential Equations
MCTR 102A	DC Circuits
MCTR 103A	AC Circuits
MCTR 120A	Basic Physics for Technical Applications I
MCTR 120B	Basic Physics for Technical Applications II
MFET 101	Introduction to Manufacturing Engineering Technology or
MFET 101A	Introduction to Manufacturing I
MFET 110	Industrial Safety
MFET 120	Manufacturing Processes
MFET 210	Statistical Process Control
PHYS 180A	General Physics I
PHYS 181A	General Physics Lab I
PHYS 195	Mechanics
PHYS 196	Electricity and Magnetism
PHYS 197	Waves, Optics and Modern Physics

Physical and Earth Sciences Specialization:

The specialization in Physical and Earth Sciences is intended for students who plan to complete a bachelor's degree at a transfer institution in a physical and earth science-related major.

Common university majors in this field

include: Astronomy, Astrophysics, Biochemistry, Biophysics, Chemical Engineering, Chemical Physics, Chemistry, Earth Sciences, Environmental Chemistry, Environmental Sciences, Engineering Physics, Geographic Information Science, Geology, Hydrologic Sciences, Meteorology, Natural Sciences, Oceanography, Physical Geography, Physical Science and Physics.

This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each transfer institution, courses used to complete this major should be selected with the assistance of a San Diego City College counselor.

Associate in Arts Degree: Liberal Arts and Sciences with an Emphasis in Scientific Studies Physical and Earth Sciences Specialization

Courses Required for the Major:

Students should complete a minimum of 18 units including both Physical and Earth Science courses:

AGRI 100	Principles of Sustainable Agriculture
ASTR 101	Descriptive Astronomy
ASTR 109	Practice in Observing
ASTR 111	Astronomy Laboratory
BIOL 200	Biological Statistics
MATH 119	Elementary Statistics
PSYC 258	Behavioral Science Statistics
CHEM 100	Fundamentals of Chemistry
CHEM 100L	Fundamentals of Chemistry Laboratory
CHEM 111	Chemistry in Society
CHEM 111L	Chemistry in Society Laboratory
CHEM 130	Introduction to Organic and Biological Chemistry
CHEM 130L	Introduction to Organic and Biological Chemistry Laboratory
CHEM 152	Introduction to General Chemistry
CHEM 152L	Introduction to General Chemistry Laboratory
CHEM 200	General Chemistry I - Lecture
CHEM 200L	General Chemistry I - Laboratory
CHEM 201	General Chemistry II - Lecture
CHEM 201L	General Chemistry II - Laboratory
CHEM 231	Organic Chemistry I - Lecture
CHEM 231L	Organic Chemistry I - Laboratory
CHEM 233	Organic Chemistry II - Lecture
CHEM 233L	Organic Chemistry II - Laboratory

CHEM 251	Analytical Chemistry
CISC 181	Principles of Information Systems
CISC 190	Java Programming
CISC 192	C/C++ Programming
GEOG 101	Physical Geography
GEOG 101L	Physical Geography Laboratory
GEOG 102	Cultural Geography
GEOG 104	World Regional Geography
GEOL 100	General Geology
GEOL 101	General Geology Laboratory
GEOL 104	Earth Science
GISG 104	Geographic Information Science and Spatial Reasoning
GISG 110	Introduction to Mapping and Geographic Information Systems
MATH 119	Elementary Statistics
MATH 150	Calculus with Analytic Geometry I
MATH 151	Calculus with Analytic Geometry II
MATH 252	Calculus with Analytic Geometry III
PHYN 100	Survey of Physical Science
PHYN 101	Survey of Physical Science Laboratory
PHYS 100	Introductory Physics
PHYS 181A	General Physics Laboratory I
PHYS 181B	General Physics Laboratory II
PHYS 125	General Physics
PHYS 126	General Physics II
PHYS 180A	General Physics I
PHYS 180B	General Physics II
PHYS 195	Mechanics
PHYS 196	Electricity and Magnetism
PHYS 197	Waves, Optics and Modern Physics
PSYC 258	Behavioral Science Statistics
SUST 101	Introduction to Sustainability

Area of Emphasis in Elementary (Multiple Subject) Teaching Preparation:

These courses are intended for students who plan to complete a bachelor's degree at a transfer institution in preparation for a California Multiple Subject Teaching Credential. Most students pursue this credential with the goal of becoming an elementary school or special education teacher.

Common university majors in this field

include: Liberal Studies, Human Development, Interdisciplinary Studies, and Teacher Preparation.

This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each

transfer institution, courses used to complete this major should be selected with the assistance of a San Diego City College counselor.

Associate in Arts Degree: Liberal Arts and Sciences with an Emphasis in Elementary (Multiple Subject) Teaching Preparation

Courses Required for the Major:

Students should complete a minimum of 33 units in Elementary (Multiple Subject) Teaching Preparation courses:

AMSL 116	American Sign Language Level II
ARAB 102	Second Course in Arabic
ARTF 100	Art Orientation
BIOL 107	General Biology-Lecture and Laboratory
BIOL 210A	Introduction to the Biological Sciences I
BLAS 106	Black Oral Expression and Interpretation
BLAS 140A	History of the U.S., Black Perspectives
BLAS 140B	History Of The U.S., Black Perspectives
CHEM 111	Chemistry in Society
CHEM 111L	Chemistry in Society Laboratory
CHIC 141A	United States History from a Chicano Perspective
CHIC 141B	United States History from a Chicano Perspective
CHIL 101	Human Growth and Development
COMS 103	Oral Communication
COMS 135	Interpersonal Communication
COMS 170	Small Group Communication
COMS 160	Argumentation
COMS 160	Argumentation
DANC 181	Introduction to Dance
DRAM 103	Acting for Non-majors
DRAM 105	Introduction to Dramatic Arts
EDUC 200	Teaching as a Profession
EDUC 203	Service Learning for Prospective Teachers
ENGL 101	Reading and Composition
ENGL 105	Composition and Literature
ENGL 205	Critical Thinking and Intermediate Composition
ENGL 208	Introduction to Literature
ENGL 220	Masterpieces of World Literature I: 1500 BCE - 1600 CE
ENGL 221	Masterpieces of World Literature II: 1600 - Present
FREN 102	Second Course in French
GEOG 104	World Regional Geography
GEOL 101	General Geology Laboratory
GEOL 104	Earth Science

GERM 102	Second Course in German
HEAL 190	Health Education For Teachers
HIST 100	World History I
HIST 101	World History II
HIST 109	History of the United States I
HIST 110	History of the United States II
HUMA 106	World Religions
ITAL 102	Second Course in Italian
LIBS 101	Information Literacy and Research Skills
MATH 210A	Concepts of Elementary School Mathematics I
MATH 210B	Concepts of Elementary School Mathematics II
MATH 212	Children's Mathematical Thinking
MUSI 100	Introduction to Music
MUSI 108	The Business of Music
MUSI 109	World Music
MUSI 110	Music for Elementary School Teachers
MUSI 111	Jazz - History and Development
PHIL 100	Logic and Critical Thinking
PHIL 102A	Introduction To Philosophy: Reality and Knowledge
PHIL 103	Historical Introduction To Philosophy
PHIL 205	Critical Thinking and Writing in Philosophy
PHYE 240	Physical Education in the Elementary Schools
PHIL 102B	Introduction To Philosophy: Values
PHIL 104A	History Of Western Philosophy
PHIL 104B	History of Western Philosophy
PHYN 100	Survey of Physical Science
PHYN 101	Survey of Physical Science Laboratory
POLI 102	The American Political System
PSYC 101	General Psychology
PSYC 230	Psychology of Lifespan Development
SPAN 101	First Course in Spanish
SPAN 102	Second Course in Spanish

Area of Emphasis in Social and Behavioral Sciences:

These courses emphasize a multidisciplinary approach to the understanding and study of human behavior. Students evaluate and interpret human societies; the institutions, organizations and groups that compose them; and the way individuals and groups relate to one another. Students develop an appreciation of the various approaches and methodologies of the disciplines.

The area of Social and Behavioral Science is intended for students who plan to complete a bachelor's degree at a transfer institution in a social and behavioral science-related major.

Common university majors in this field include:

Afro American Studies, Anthropology, Archeology, Behavioral Science, Black Studies, Chicano Studies, Child Development, Cognitive Science, Community Studies, Criminal Justice/Justice Studies, Cultural Geography, Developmental Studies, Ethnic Studies, Family and Consumer Studies, Gerontology, Global Studies, History, Human Services, International Relations, Law, Peace and Conflict Studies, Policy Analysis, Political Science, Psychobiology, Psychology, Public Administration, Social Work, Social Science, Sociology.

This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each transfer institution, courses used to complete this major should be selected with the assistance of a San Diego City College counselor.

Associate in Arts Degree: Liberal Arts and Sciences with an Emphasis in Social and Behavioral Sciences

Courses Required for the Major:

Students should complete a minimum of 18 units including both Social and Behavioral Science courses:

ADJU 101	Introduction to Administration of Justice
ADJU 102	Criminal Law I
ANTH 102	Introduction to Physical Anthropology
ANTH 103	Introduction to Cultural Anthropology
ANTH 104	Laboratory in Physical Anthropology
ANTH 107	Introduction to Archaeology
ANTH 115	Introduction to Archaeological Field Work
ANTH 210	Introduction to California Indians
ANTH 215	Cultures of Latin America
BIOL 200	Biological Statistics
BLAS 100	Introduction to Black Studies
BLAS 104	Black Psychology
BLAS 106	Black Oral Expression and Interpretation
BLAS 115	Sociology from a Black Perspective
BLAS 116	Contemporary Social Problems from a Black Perspective
BLAS 120	Black Music
BLAS 130	The Black Family
BLAS 135	Introduction to Black Politics
BLAS 140A	History of the U.S., Black Perspectives
BLAS 140B	History Of The U.S., Black Perspectives
BLAS 145A	Introduction to African History
BLAS 145B	Introduction to African History

BLAS 150	Black Women in Literature and the Media	HIST 121	Asian Civilizations in Modern Times
BLAS 155	Afro-American Literature	HIST 123	U.S. History from the Asian Pacific American Perspective
BLAS 165	Sexuality and Black Culture	HUMS 101	Introduction to Human Aging
CHIC 110A	Introduction to Chicano Studies	HUMS 110	Social Work Fields of Service
CHIC 110B	Introduction to Chicano Studies	HUMS 120	Introduction to Social Work
CHIC 130	Mexican Literature in Translation	LIBS 101	Information Literacy and Research Skills
CHIC 135	Chicana/o Literature	MATH 119	Elementary Statistics
CHIC 138	Literature of La Raza in Latin America in Translation	PEAC 101	Introduction to Peace Studies
CHIC 141A	United States History from a Chicano Perspective	PEAC 102	Nonviolence and Conflict Resolution
CHIC 141B	United States History from a Chicano Perspective	PEAC 201	Environmental Sustainability, Justice and Ethics
CHIC 150	History of Mexico	POLI 101	Introduction to Political Science
CHIC 170	La Chicana	POLI 102	The American Political System
CHIC 190	Chicano Images in Film	POLI 103	Comparative Politics
CHIC 201	Pre-Columbian Cultures of MesoAmerica	POLI 140	Contemporary International Politics
CHIC 210	Chicano Culture	PSYC 101	General Psychology
CHIL 101	Human Growth and Development	PSYC 135	Marriage and Family Relations
CHIL 121	Creative Art	PSYC 137	Human Sexual Behavior
CHIL 131	Curriculum: Language/Science	PSYC 155	Introduction to Personality
CHIL 141	The Child, Family and Community	PSYC 166	Introduction to Social Psychology
CHIL 151	Program Planning	PSYC 211	Learning
CHIL 152	School Age Program Planning	PSYC 230	Psychology of Lifespan Development
CHIL 160	Observing and Understanding Children	PSYC 245	Abnormal Psychology
CHIL 161	Observations and Issues in Child Development	PSYC 255	Introduction to Psychological Research
CHIL 162	Observing and Guiding Child Behavior	PSYC 258	Behavioral Science Statistics
CHIL 165	Children With Special Needs	PSYC 260	Introduction to Physiological Psychology
CHIL 175	Infant-Toddler Growth and Development	SOCO 101	Principles of Sociology
CHIL 176	Principles of Infant/Toddler Caregiving	SOCO 110	Contemporary Social Problems
CHIL 180	Nutrition, Health and Safety for Children	SOCO 125	Sociology of the Family
CHIL 202	Administration of Early Childhood Programs	SOCO 150	Sociology of Latinos/Latinas
CHIL 210	Supervision of Early Childhood Programs	SOCO 201	Advanced Principles of Sociology
CISC 181	Principles of Information Systems	SOCO 223	Globalization and Social Change
CISC 190	Java Programming	SPAN 201	Third Course in Spanish
FUTR 101	Introduction to Futures Studies		
GEND 101	Introduction to Gender Studies		
GEOG 102	Cultural Geography		
GEOG 104	World Regional Geography		
HIST 100	World History I		
HIST 101	World History II		
HIST 105	Introduction to Western Civilization I		
HIST 106	Introduction to Western Civilization II		
HIST 109	History of the United States I		
HIST 110	History of the United States II		
HIST 115A	History of the Americas I		
HIST 115B	History of the Americas II		
HIST 120	Introduction to Asian Civilizations		

Library Science

There is currently no program in Library Science. The following course is offered and may be used as an associate degree elective.

Courses

Library Science (LIBS)

101 Information Literacy and Research Skills 1 hour lecture, 1 unit Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; or English 37A, English 37B, or English 64 each with a grade of "C" or better, or equivalent.

This course is an overview of information resources and the skills required to use them effectively. Students learn how to use library resources such as electronic indexes and databases, online services, and the Internet, as well as learn to develop strategies for conducting research. This course is intended for students who wish to acquire skills that enable them to find information for academic research, career demands, and/or lifelong learning. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Machine and Manufacturing Technology "Engineering Technology" on page 263

Mathematics

Award Type	Units
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Associate in Arts Degree:	
Mathematics	22-23*
Applied Mathematics	27*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

Mathematics is the study of numbers, structures, and associated relationships using rigorously defined literal, numerical and operational symbols. Given certain conditions about systems of numbers or other structures mathematicians derive conclusions based on logical arguments. Basic mathematical skills enable a person to solve numerical problems encountered in daily life, and more advanced skills have numerous applications in the physical, social and life sciences.

Program Emphasis

The mathematics curriculum includes courses that range from basic skills through differential equations. The basic skills and associate degree level courses provide students with the mathematical preparation necessary for study in other disciplines, as well as for degree and transfer requirements. Successful completion of a mathematics degree will develop competence in mathematics through differential and integral calculus, providing an adequate background for employment in many technological and scientific areas. Furthermore, it provides a firm foundation for students planning to study mathematics, engineering, economics, computer science, physical, social or life sciences.

Faculty	Office	Telephone/Email
Misael Camarena	M-108	619-388-3637
Brenda Gaipa	M-207	(619)388-3185
Theresa Gallo	M-109	619-388-3350
Carlos de la Lama	M-211	619-388-3362
Lan Hong	M-110	619-388-3351
David Kater	M-106	619-388-3252
Miriam Keesey	SDSU	619-594-2696
Jenny Kimm	A-1B	619-388-4053
Karon Klipple	M-109	619-388-3638
Hoat Le	M-110	619-388-3639
Kirsten Lollis		

Faculty	Office	Telephone/Email
Jim Mahler	M-111	619-388-3640
Nick Slinglend	M-111	619-388-3178
Manfred C. Smith	M-111	619-388-3352
Carolyn R. Thomas	M-211	619-388-3363
Paul Young	M-108	619-388-3251
Mathematics Center	L-208	619-388-3580

Career Options

Most of these occupations require education beyond the associate degree, and some may require a graduate degree. The following list is not intended as a comprehensive list of career options in mathematics: actuary, appraiser, assessor, auditor, biometrician, budget analyst, controller, computer analyst, computer programmer, demographer, econometrician, engineering analyst, epidemiologist, financial analyst, investment analyst, management scientist, operations researcher, research mathematician, statistician, surveyor, systems analyst, teacher, technical writer, and urban planner.

Student Learning Outcomes

Math Developmental Program

Students who complete the program will be able to:

- Provide examples of on-campus resources for math support.
- Perform mathematical operations on various structures, including fractions, without the use of technology.
- Translate word problems into mathematical expressions or equations.
- Solve equations properly, logically and with written explanations.

Math Transfer Program

Students who complete the program will be able to:

- Analyze, model, and clearly and effectively communicate a solution to a math problem.
- Apply mathematical skills to solve real-world situations relevant to their major.
- Analyze functions by several means and incorporate these into the use of problem solving.
- Apply technology to enhance mathematical thinking and understanding and to solve mathematical problems.

Academic Programs

The associate degree in Mathematics requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. The associate degree requires a minimum of 60 units.

Associate in Arts Degree: Mathematics

Courses Required for the Major:		Units
MATH 150	Calculus & Analytical Geometry I	5
MATH 151	Calculus & Analytical Geometry II	4
MATH 245	Discrete Mathematics	3
MATH 252	Calculus & Analytical Geometry III	4
MATH 254	Introduction to Linear Algebra	3
Select three to four units from:		
MATH 107	Introduction to Scientific Programming	
MATH 107L	Introduction to Scientific Programming Lab	
MATH 119	Elementary Statistics	
MATH 255	Differential Equations (for University of California transfer)	
PHIL 101	Symbolic Logic	
		3-4
		Total Units = 22-23

Recommended electives: Mathematics 104, 108, 108L, 116, 118, 121, 122, 141, 150L, 210A,B, 237, 237L, 255.

Courses offered in Support of Other Majors:

Mathematics 42, 43, 46, 96.

Associate in Arts Degree: Mathematics

Applied Mathematics

Courses Required for the Major:		Units
MATH 107	Introduction to Scientific Programming	3
MATH 107L	Introduction to Scientific Programming Lab	1
MATH 108	Intermediate Scientific Programming	3
MATH 108L	Intermediate Scientific Programming Lab	1
MATH 150	Calculus & Analytical Geometry I	5
MATH 151	Calculus & Analytical Geometry II	4
MATH 245	Discrete Mathematics	3
MATH 252	Calculus & Analytical Geometry III	4
MATH 254	Introduction to Linear Algebra	3
		Total Units = 27

Recommended electives: Mathematics 104, 116, 118, 119, 121, 122, 141, 150L, 210A,B, 255, 290, 296.

Transfer Information

Common university majors related to the field of History include: Applied Mathematics, Cognitive Science, Liberal Studies, Mathematics, Statistics, Physics, Engineering.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Mathematics (MATH)

Basic Skills Courses

All courses at this level are offered for college credit. Credit for these courses will not apply toward the associate degree but will count toward the determination of a student's workload and eligibility for financial aid.

15A Prealgebra Refresher

**3 hours lab, 1 unit
Pass/No Pass Only**

This course is intended for those students who have completed the math assessment with a level of M20 (prealgebra) and wish to improve their placement level; those students who have successfully completed Mathematics 38 but need more review; or students who unsuccessfully attempted Mathematics 46 and need review of prealgebra skills. The course will consist of lecture classes and/or independent study using a computer program to refresh those concepts identified as needed for each student. Successful completion of this course

may serve as a basis for a petition to challenge Mathematics 38. This course will not replace a failing grade in Mathematics 38. Not Applicable to Associate Degree, pre-collegiate basic skills - reading, writing, computation.

15B Elementary Algebra and Geometry Refresher

**3 hours lab, 1 unit
Pass/No Pass Only**

This course is intended for those students who have completed the math assessment with a level of M30 (beginning algebra and geometry) and wish to improve their placement level; students who have successfully completed Math 15A; students who have successfully completed Math 46 but need more review; or students who unsuccessfully attempted Math 96 and need review of beginning algebra and geometry skills. The course will consist of personalized computer assisted instruction to refresh those concepts identified as needed for each student. Successful completion of this course may serve as a basis for a petition to challenge Math 46. This course will not replace a failing grade in Math 46. Not Applicable to Associate Degree, pre-collegiate basic skills - reading, writing, computation.

15C Intermediate Algebra and Geometry Refresher

**3 hours lab, 1 unit
Pass/No Pass Only**

This course is intended for those students who have completed the math assessment with a level of M40 (intermediate algebra and geometry) and wish to improve their placement level; students who have successfully completed Math 15B; students who have successfully completed Math 96 but need more review; or students who unsuccessfully attempted Math 104, 116, 141 or 210A and need review of intermediate algebra and geometry skills. The course will consist of personalized computer assisted instruction to refresh those concepts identified as needed for each student. Successful completion of this course may serve as a basis for a petition to challenge Math 96. This course will not replace a failing grade in Math 96. Not Applicable to Associate Degree, pre-collegiate basic skills - reading, writing, computation.

15D Geometry Refresher**3 hours lab, 1 unit
Pass/No Pass Only**

This course is intended for those students who have completed a high school geometry course or for those students who have completed Math 96 and need to review geometric principles prior to taking Math 210B or trigonometry. The course will consist of independent study using a computer program to refresh those concepts identified as needed for each student. (FT) Not Applicable to Associate Degree, pre-collegiate basic skills, English as a Second Language.

15E Trigonometry Refresher**3 hours lab, 1 unit
Pass/No Pass Only**

This course is intended for those students who have completed the math assessment with a level of M50 who need to review their trigonometry knowledge prior to taking precalculus or calculus. Students begin at the level of their original placement and, working at their own pace, may improve their placement up to M60 (precalculus level). This course consists of independent study using a computer program to refresh those concepts identified as needed for each student. (FT) Not Applicable to Associate Degree, pre-collegiate basic skills - reading, writing, computation.

15F College Algebra Refresher**3 hours lab, 1 unit
Pass/No Pass Only**

This course is intended for those students who have completed the math assessment with a level of M50 and need to review their college algebra knowledge prior to taking either calculus sequence. This course will consist of personalized computer assisted instruction to refresh those concepts identified as needed for each student. Students will begin at the level of their original placement and, working at their own pace, may improve their placement. Successful completion of this course may serve as a basis for a petition to challenge College Algebra. Students wishing to challenge Pre-calculus must also show competence in Trigonometry, which may be done by completing Math 15E. (FT) Not applicable to the Associate Degree.

34A Basic Mathematics and Study Skills**4 hours lecture, 4 units
Letter Grade or Pass/No Pass Option**

(Formerly Mathematics 32)
Advisory: English 42 or English for Speakers of Other Languages 31, with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 or L40.
Limitation on Enrollment: This course is not open to students with previous credit for Mathematics 32. This course is an introduction to fundamental concepts of arithmetic. Emphasis is placed on par addition, subtraction, multiplication, division and exponentiation on whole numbers, fractions, and decimals. Topics also include simple percents and ratios, systems of measurement, and applications of these topics. Students learn basic study skills necessary for success in mathematics courses. This course is intended for students preparing for Pre-algebra. (FT) Not applicable to the Associate Degree.

38 Pre-Algebra and Study Skills**4 hours lecture, 4 units
Letter Grade or Pass/No Pass Option**

(Formerly Mathematics 35)
Advisory: English 42 or English for Speakers of Other Languages 31 and Mathematics 34A, with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 or L40 and M20.
Limitation on Enrollment: This course is not open to students with previous credit for Mathematics 35. This course is a study of the fundamentals of arithmetic operations with signed numbers, including fractions and decimals as well as an introduction to some elementary topics in beginning algebra. Topics also include ratios and proportions, perfect squares and their square roots, elementary topics in geometry, systems of measurement, and monomial arithmetic. Students learn basic study skills necessary for success in mathematics courses. This course is intended for students preparing for Beginning Algebra. (FT) Not applicable to the Associate Degree.

42 Fundamentals of Mathematics**3 hours lecture, 3 units
Pass/No Pass Only**

Limitation on Enrollment: This course is not open to students with previous credit for Mathematics 54, 90, 91 or 95. This course is intended for students who have not passed the California State University Entry-Level Mathematics Examination (ELM). This course reviews arithmetic and geometric concepts, and covers

topics in elementary algebra including operations with polynomials, factoring, rational expressions, expressions involving radicals, solving non-linear equations, graphing linear equations, and solving linear systems of equations in two variables. Not Applicable to Associate Degree, pre-collegiate basic skills - reading, writing, computation.

43 Algebra for Math Placement

**3 hours lecture, 3 units
Pass/No Pass Only**

Advisory: Mathematics 42 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Mathematics 96, 100 or 91.

This course is a continuation of Mathematics 042 and is intended for those students who have not passed the California State University Entry-Level Mathematics Examination (ELM). This course is designed to prepare students for college algebra and consists of a review of intermediate algebra concepts. Topics for the class include set and function notation, simplifications and solutions to equations involving rational and radical expressions, quadratic equations and functions, complex numbers, exponential and logarithmic functions and applications. Not Applicable to Associate Degree, pre-collegiate basic skills - reading, writing, computation.

46 Elementary Algebra and Geometry

**5 hours lecture, 5 units
Letter Grade or Pass/No Pass Option**

(Formerly Mathematics 95)

Prerequisite: Mathematics 38 with a grade of "C" or better, or equivalent, or Assessment Skill Level M30.

Advisory: Completion of or concurrent enrollment in: English 43 and English 48, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R5.

Limitation on Enrollment: This course is not open to students with previous credit for Mathematics 95 with a grade of "C" or better.

Elementary algebra and geometry serves as the foundation for the other math courses and is the first of a two-course integrated sequence in algebra and geometry intended to prepare students for transfer level mathematics. This course covers the real number system; writing, simplifying, solving and graphing of linear equations in one variable; solving linear inequalities in one variable; solving systems of linear equations in two variables; algebraic

operations with polynomial expressions and factoring; functions; operations involving rational expressions and related equations; and geometric properties of lines, angles, and triangles. This course is intended for students preparing for higher-level geometry and algebra courses. (FT) Not Applicable to Associate Degree, basic skills.

Associate Degree Credit Courses

85 Practical Career Mathematics

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Mathematics 46 with a grade of "C" or better, or equivalent, or Assessment Skill Level M40.

Advisory: English 43 with a grade of "C" or better, or equivalent, or Assessment Skill Level W4.

This course is a study of the practical applications of linear, quadratic and exponential growth models. Topics also include statistical methods, geometry, right triangle trigonometry and finance math. This course will develop math literacy through the use of current events and real life applications. This course is designed for students who are earning an associate's degree and who are not planning to transfer to a four-year institution. (FT) Associate Degree Credit only and not Transferable.

96 Intermediate Algebra and Geometry

**5 hours lecture, 5 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Mathematics 46 with a grade of "C" or better, or equivalent, or Assessment Skill Level M40.

Advisory: English 43 and English 48, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R5.

Intermediate Algebra and Geometry is the second of a two-semester integrated sequence in algebra and geometry. This course covers systems of equations and inequalities; radical and quadratic equations; quadratic functions and their graphs; complex numbers; nonlinear inequalities; exponentials and logarithmic functions; conic sections; sequences and series; and solid geometry. The course will also include application problems involving the topics covered. This course is the prerequisite for numerous collegiate level/transfer level mathematics courses. (FT) Associate Degree Credit only and not Transferable.

98 Technical Intermediate Algebra and Geometry

**4 hours lecture, 4 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Mathematics 46 with a grade of "C" or better, or equivalent or Assessment Skill Level M40.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course introduces an applied technology approach to problem solving in Intermediate Algebra and Geometry, and it is intended to support the curriculum required in the Engineering and applied technologies majors. Students are expected to apply problem solving techniques to technology-based situations in their technical physics and applied technology courses. Topics include scientific notation, algebra of functions, linear systems of equations, graphing using log and semi-log paper, technology applications of quadratic, exponential and logarithmic functions, right triangle trigonometry, applications in electronics of vectors and phasors. Special emphasis will be placed on the use of the graphing calculator and mathematical software packages to solve application problems. (FT) Associate Degree Credit only and not Transferable.

Statistical Pathway

Math 47A, and Math 115 are a two-course sequence of courses that take a student with a Math skill level of 30 or placement into Math 46, from Beginning Algebra through a transfer level statistics course. Math 47A is a basic skills class, while Math 115 is a transfer level class that focus on statistics, data analysis, and quantitative reasoning. These are mathematics skills that are essential for a growing number of occupations and professions. This is the math that will help students understand the world around them and it is math you can use immediately. This path of courses is referred to as Statistics Pathway, (or Statway for short), and is designed for liberal arts, non-STEM social science majors (STEM= Science, Technology, Engineering and Mathematics). This pathway of courses will not satisfy any requirements for students that are planning on studying science or science related fields. Student need to make an appointment with their counselors to determine if this sequence is appropriate for them.

47A Beginning Algebra and Practical Descriptive Statistics

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Prerequisite: Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

Advisory: Completion of or concurrent enrollment in English 43 and English 48 each with a grade of "C" or better, or equivalent or Assessment Skill Levels W4 and R5.

This course is the first of a two course sequence in the study of statistical methods integrated with algebraic tools to prepare students to analyze processes encountered in society and the workplace. The course covers an introduction to algebra and descriptive statistics in an integrated approach. Topics include data collection, organizing and interpreting data graphically, qualitative and quantitative data sets, measures of central tendency and measures of dispersion, bivariate data and scatter plots, linear functions and their graphs, nonlinear functions and their graphs, and applying technology to calculate various types of regressions. Students are expected to implement technology to perform calculations to organize data in order to make statistical conclusions. This sequence of courses is intended for students that are not planning on majoring in a science, technology, engineering, or mathematics related disciplines. This course is only basic skills/remedial. (FT) Not applicable to the Associate Degree.

115 Gateway to Experimental Statistics

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Prerequisite: Mathematics 47A with a grade of "C" or better, or equivalent Statway I.

Advisory: Completion of or concurrent enrollment in English 43 and English 48, each with a grade of "C" or better, or equivalent or Assessment Skill Levels W4 and R5.

This course is a second in the study of statistical methods integrated with algebraic tools to prepare students to analyze these processes encountered in society and the workplace. The course covers a review of functions, their geometric properties, counting principles and probability rules, probability distribution functions, sampling, and inferential statistics of one and two variable data sets. Students are expected to implement technology to perform calculations to analyze data and make statistical conclusions. This sequence of courses is intended for students that are not planning on majoring in a

science, technology, engineering or mathematics related discipline. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Transfer Level Courses

104 Trigonometry

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50. This course is a study of the numerical, analytical, and geometric properties of right and oblique triangles, of trigonometric and inverse trigonometric functions, and their applications. The course content includes right angle trigonometry, radian measure, circular functions, graphs of circular functions and their inverses, trigonometric identities, equations involving trigonometric and inverse trigonometric functions, an introduction of the complex plane, vectors and their operations, and the trigonometric form of complex numbers. This course is designed as a preparation for calculus and it is intended for the transfer student planning to major in mathematics, engineering, economics, or disciplines included in the physical or life sciences. This course meets CSU general education requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

107 Introduction to Scientific Programming

**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50. *Corequisite:* Mathematics 107L. *Advisory:* English 48 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5. This course is an introduction to mathematical and scientific problem-solving on a computer; focusing on designing algorithms of a high level programming language. Extensive programming is required. Students are expected to plan and write programming projects with documentation. This course is recommended for students transferring to majors in Computer Science and/or mathematics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

107L Introduction to Scientific Programming Lab

**3 hours lab, 1 unit
Letter Grade or Pass/No Pass Option**

Corequisite: Mathematics 107. This is a lab course to be taken concurrently with Mathematics 107. Extensive programming is required. Students are expected to plan and write programming projects with documentation. This course is recommended for students transferring to majors in Computer Science and/or mathematics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

108 Intermediate Scientific Programming

**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Mathematics 107 with a grade of "C" or better, or equivalent.

Advisory: Concurrent enrollment in Mathematics 108L.

This course provides further training in program design and development, especially with regard to large projects. Advanced techniques in programming are studied along with basic data structures and algorithms. Problem-solving techniques in the fields of engineering, mathematics, and the sciences are covered. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

108L Intermediate Scientific Programming Lab

**3 hours lab, 1 unit
Letter Grade or Pass/No Pass Option**

Corequisite: Mathematics 108. This is a lab course open only to those concurrently enrolled in Mathematics 108. Extensive programming is required. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

116 College and Matrix Algebra

**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50. This course is designed to strengthen the algebra skills of students seeking Business or Natural Science degrees who are required to take an applied calculus course. Topics in the course include the theory of functions; graphing functions; exponential and logarithmic functions; solving equations involving

algebraic, exponential and logarithmic functions; solving systems of linear equations; matrix algebra; linear programming; modeling; and applications problems. Analytical reading and problem solving skills are required for success in this course. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Mathematics (MATH) 116 and 141 combined: maximum credit, one course.

118 A Survey of Modern Mathematics

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50.
Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6. This course covers topics in probability, statistics, logical reasoning, quantitative literacy, the history of mathematics, and applications of mathematics to the real world. This is a general education course designed for students who do not intend to prepare for a career in science or business. Analytical reading and problem solving are required for success in this course. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

119 Elementary Statistics

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50. This course covers descriptive and inferential statistics. The descriptive portion analyzes data through graphs, measures of central tendency and spread. Other statistical practices utilize basic probability, binomial and normal distributions, estimation of population parameters, hypothesis testing, linear regression and correlation. Analytical reading and problem solving are required for success in this course. This course meets district G.E. requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Mathematics (MATH) 119, Biology (BIOL) 200, or Psychology (PSYC) 258 combined: maximum credit, one course.

121 Basic Techniques of Applied Calculus I

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: Mathematics 116 with a grade of "C" or better, or equivalent.

This course examines the study of calculus using numerical, graphical, and analytical methods to analyze calculus problems encountered in real-world applications in business, natural/life sciences, and social sciences. Topics include limits, derivatives, and integrals of algebraic, exponential, and logarithmic functions, curve sketching, optimization, and areas under and between curves and partial derivatives and optimization of multivariable functions. This is the first course in a sequence of mathematics courses for students intending to major in business, economics, or natural and social sciences. This course does not fulfill a mathematics requirement for mathematics, chemistry, physics, or engineering majors at most universities. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Mathematics (MATH) 121 and 150 combined: maximum credit, one course.

122 Basic Techniques of Calculus II

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: Mathematics 121 with a grade of "C" or better, or equivalent.

This second course in a math sequence covers methods of integration, multivariable functions and optimization problems, differential equations, Taylor series development and application, derivatives and integrals of trigonometric functions, and their usage in solving problems encountered in real-world applications in business, life and social sciences and economics. It is intended for students majoring in business, natural science, social science and economics. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Mathematics (MATH) 122 and 151 combined: maximum credit, one course.

141 Precalculus

5 hours lecture, 5 units

Letter Grade or Pass/No Pass Option

Prerequisite: Mathematics 104 with a grade of "C" or better, or equivalent.

This course is a study of numerical, analytical, and graphical properties of functions. The course content includes polynomial, rational, irrational, exponential, logarithmic, and trigonometric functions. Additional topics include: inverse functions, complex numbers, polar coordinates, matrices, conic sections, sequences, series and the binomial theorem. This course is designed as a preparation for calculus and is intended for the transfer student planning to

major in mathematics, engineering, economics, or disciplines included in the physical or life sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Mathematics (MATH) 116 and 141 combined: maximum credit, one course.

150 Calculus with Analytic Geometry I
5 hours lecture, 5 units
Letter Grade or Pass/No Pass Option

Prerequisite: Mathematics 141 with a grade of "C" or better, or equivalent.

This course is a primary introduction to university level calculus. The topics of study include analytic geometry, limits, differentiation and integration of algebraic and transcendental functions. Emphasis is placed on calculus applications. Analytical reading and problem solving are required for success in this course. This course is intended for the transfer student planning to major in mathematics, computer science, physics, chemistry, engineering, or economics. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Mathematics (MATH) 121 and 150 combined: maximum credit, one course.

150L Calculus I Laboratory
3 hours lab, 1 unit
Letter Grade or Pass/No Pass Option

Prerequisite: Mathematics 141 with a grade of "C" or better, or equivalent.

Corequisite: Mathematics 150.

This course is a workshop, project-oriented course dealing with exploration and development of the calculus topics introduced in Calculus and Analytic Geometry I. This course directly supports the calculus lectures by having hands-on, collaborative assignments where technology is strongly incorporated throughout all the in-class assignments. Students work individually and in small groups on explorations and applications thus extending the material presented in Mathematics 150. Topics including geometric, analytic and numeric applications of limits, derivatives and integrals as well as calculus applications found in the physical and life sciences. This course is intended for all students currently enrolled in Mathematics 150. Instructor monitors and facilitates group and individual presentations and projects. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

151 Calculus with Analytic Geometry II
4 hours lecture, 4 units
Letter Grade or Pass/No Pass Option

Prerequisite: Mathematics 150 with a grade of "C" or better, or equivalent.

This is a continuation of Mathematics 150. This course covers more advanced topics in analytic geometry, differentiation and integration of algebraic and transcendental functions, infinite series, Taylor series, and parametric equations. This course also covers a general introduction to the theory and applications of power series, techniques of integration, and functions in polar coordinates, at it serves as a basis for multivariable calculus and differential equations, as well as most upper division courses in mathematics and engineering. It is intended for the transfer student planning to major in mathematics, computer science, physics, chemistry, engineering and economics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Mathematics (MATH) 122 and 151 combined: maximum credit, one course.

181 Mecomtronics College Algebra and Trigonometry I
3 hours lecture, 3 units
Grade Only

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50.

Advisory: This course is intended for students enrolled in the first semester Engineering Technology/Mecomtronics program.

This course is the first semester of a four-semester sequence in applied college algebra and trigonometry, and applied technical calculus. Students are expected to apply the mathematical problem solving techniques developed in this course in the real world situations presented and discussed in the program's technology and science courses. Topics include the algebra of functions, graphing algebraic functions, exponential and logarithmic functions, linear systems of equations, matrices and matrix operations, trigonometric functions and their graphs, trigonometric identities, complex numbers, vector algebra, descriptive statistics, an introduction to series and summation notation, an introduction to Boolean algebra and symbolic logic, and the use of the graphing calculator to solve application problems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

182 Mecomtronics College Algebra and Trigonometry II

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Mathematics 181 with a grade of "C" or better, or equivalent.

Advisory: This course is intended for students enrolled in the second semester Engineering Technology/Mecomtronics program.

This course is the second semester of a four-semester sequence in applied college algebra and trigonometry, and applied technical calculus. Students are expected to implement the mathematical problem solving techniques developed in this course in the real world situations presented and discussed in the Mecomtronics technology and science courses. Topics covered are a continuation of those introduced in Mathematics 181. Topics include applications of exponential and logarithmic functions, graphs of trigonometric functions, inverse trigonometric functions, Riemann sums, polynomial approximations of special transcendental functions, vector algebra, spherical and cylindrical coordinates, conic sections, the binomial theorem, an introduction to Boolean algebra and symbolic logic, and the use of the graphing calculator to solve application problems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

183 Mecomtronics Calculus I

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Mathematics 182 with a grade of "C" or better, or equivalent.

Advisory: This course is intended for students enrolled in the third semester Engineering Technology/Mecomtronics program.

This course is the third semester of a four-semester sequence in applied college algebra and trigonometry, and applied technical calculus. Students are expected to implement the mathematical problem solving techniques developed in this course in the real world situations presented and discussed in the Engineering Technology/Mecomtronics program's technology and science courses. Topics include limits, continuity, differentiation of algebraic and transcendental functions, an introduction to multivariable functions and their partial derivatives, Riemann sums, integration by substitution and by parts, separable and linear first order differential equations, applications in technology and physics, and the

use of the graphing calculator to solve application problems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

184 Mecomtronics Calculus II

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Mathematics 183 with a grade of "C" or better, or equivalent.

Advisory: This course is intended for students enrolled in the fourth semester Engineering Technology/Mecomtronics program.

This course is the fourth semester of a four-semester sequence in applied college algebra and trigonometry, and applied technical calculus. Students are expected to apply analytical reading and mathematical problem solving techniques developed in this course in real world situations presented and discussed in the Engineering Technology/Mecomtronics program's technology and science courses. Topics include Taylor series, Fourier series, techniques of multivariable calculus including partial derivatives, multiple integrals, line and surface integrals, applications in physics and technology of vector calculus theorems, first and second order differential equations, variation of parameters, and Laplace transforms. A strong emphasis is placed on calculus applications in the engineering technology field. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

210A Concepts of Elementary School Mathematics I

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent or Assessment Skill Level M50.

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6 or English 105 with a grade of "C" or better, or equivalent.

This course is a study of the mathematical concepts needed for teaching elementary school mathematics with emphasis on number and function. This course promotes an appreciation of the importance of logical thinking and applications of mathematics in problem solving and critical thinking. It studies the basic computational skills, but also requires the understanding and explanation of the basic mathematical concepts and the connections between them. It is designed especially for students preparing for credentials in elementary education.

Analytical reading and problem solving are required for success in this course. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Mathematics (MATH) 210A and 210B combined: maximum credit, one course.

210B Concepts of Elementary School Mathematics II

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Mathematics 210A with a grade of "C" or better, or equivalent.

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Level R6 and W6 or English 105 with a grade of "C" or better, or equivalent.

This course is the second course in a one-year sequence in the study of the mathematical concepts needed for teaching elementary school mathematics with emphasis on geometry, transformational geometry, and measurement. This course also promotes an appreciation of the importance of logical thinking and applications of mathematics in problem solving and critical thinking. It studies the understanding and explanation of the basic mathematical concepts and the connections between them. It is designed especially for students preparing for credentials in elementary education. Analytical reading and problem solving are required for success in this course. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course Limitation: UC Transfer Limitation: Mathematics (MATH) 210A and 210B combined: maximum credit, one course.

212 Children's Mathematical Thinking

**1 hour lecture, 1 unit
Grade Only**

Corequisite: Completion of or concurrent enrollment in: Mathematics 210A with a grade of "C" or better, or equivalent.

Advisory: English 101 or English 105, with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6.

This course focuses on children's mathematical thinking and includes an in-depth study of place-value, fractions and how children solve mathematical problems. Students observe children and evaluate the problem strategies that are used. This course is intended for students pursuing a Multiple Subject Credential. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

245 Discrete Mathematics

**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Mathematics 122 or 151 with a grade of "C" or better, or equivalent.

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Level R6 and W6.

This course is an introduction to the theory of discrete mathematics and introduces elementary concepts in logic, set theory, number theory, and combinatorics. The topics covered include propositional and predicate logic, methods of proof, set theory, Boolean algebra, number theory, equivalence and order relations, counting techniques, and recursion. This course forms a basis for upper division courses in mathematics and computer science and it is intended for the transfer student planning to major in these disciplines. Associate Degree Credit & transfer to CSU and/or Private colleges and universities. UC Transfer Course List.

252 Calculus with Analytic Geometry III

**4 hours lecture, 4 units
Grade Only**

Prerequisite: Mathematics 151 with a grade of "C" or better, or equivalent.

The content of this course includes the algebra and geometry of 2 and 3 dimensional Euclidean vectors, limits, continuity, partial differentiation, extremes of vector-valued and multivariable functions, higher order derivatives, the chain rule, Lagrange's theorem, multiple integrals, integrals over paths and surfaces, and integral theorems of vector analysis. This course is intended as a general introduction to the theory and applications of multivariable calculus. It is essential for most upper division courses in mathematics and forms part of the foundation for engineering and physics. It is intended for the transfer student planning to major in mathematics, physics, engineering, computer science, physical chemistry, operational research, or economics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

254 Introduction to Linear Algebra

**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Mathematics 151 with a grade of "C" or better, or equivalent.

This course serves as an introduction to the theory and applications of elementary linear algebra,

and is the basis for most upper division courses in mathematics. The topics covered in this course include matrix algebra, Gaussian Elimination, systems of equations, determinants, Euclidean and general vector spaces, linear transformations, orthogonality and inner product spaces, bases of vector spaces, the change of basis theorem, eigenvalues and eigenvectors, the rank and nullity of matrices and of linear transformations. This course is intended for the transfer student planning to major in mathematics, physics, engineering, computer science, operational research, economics, or other sciences. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

255 Differential Equations

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Mathematics 252 and 254, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Mathematics 253.

This course covers first order and higher order equations and their applications. Topics include linear first order and higher order equations, homogeneous and nonhomogeneous equations with constant or variable coefficients, and systems of ordinary differential equations. Methods used to solve equations include substitution methods, integrating factors, reduction of order, variation of parameters, power series solutions, and Laplace Transforms. This course is intended as an introduction to the theory and applications of differential equations and is the basis for many upper division courses in engineering, physics, and mathematics. It is intended for the transfer student planning to major in mathematics, engineering, operational research, physics, or other physical science. This course meets CSU general education requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

290 Independent Study

**Hours by Arrangement, 1-3 units
Letter Grade or Pass/No Pass Option**

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

This course is for advanced students who wish to pursue special investigations. This course may be taken four times with different content for a

maximum of six units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Music

See "Visual and Performing Arts" on page 422.

Multimedia

See "Communications" on page 197.

Nursing Education

Award Type	Units
LVN - Thirty Unit Option	29
Certificate of Achievement:	
Vocational Nursing	42.5
Associate in Science Degree:	
Registered Nurse Program (Generic)	72*
Licensed Vocational Nurse to Registered Nurse Program	71*
*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.	

Description

Nursing is a profession which provides health care to individuals of all ages. Nursing encompasses many activities including health promotion, health maintenance, health care during illness and injury and rehabilitation. Nurses apply knowledge from the biological, physical, behavioral and nursing sciences to care for clients in varied settings. The purpose of the San Diego City College Nursing program is to provide an educational opportunity for qualified individuals interested in a career in nursing. Upon successful completion of program requirements, graduates are eligible to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN). Admission to the program is by special application. Informational packets and applications for the program are available from the Nursing

Admissions Advisor, in the Admissions Office. Prospective students are responsible for obtaining these materials in order to acquaint themselves with the admission procedure. The San Diego City College Nursing Education program is fully accredited by the California Board of Registered Nursing (BRN) and the National League for Nursing Accrediting Commission (NLNAC).

Inquiries regarding accreditation may be made by contacting the BRN at 400 R Street, Suite 4030, Sacramento, CA 94244, (916) 322-3350 or NLNAC at 3343 Peachtree Rd. NE, Suite 500 Atlanta, GA 30326.

Directed Clinical Practice Requirement

Students accepted into this program will be required to successfully complete Directed Clinical Practice/clinically-based courses held in health care facilities. These facilities require background checks and urine drug screening as a condition of placement.

Refusal to submit to a background check, or failure to meet clearance criteria established by the health care facility, may prevent placement in the Directed Clinical Practice/clinically-based course and thus, it may not be possible to successfully progress or complete the program.

Health care facilities also require adherence to strict standards of conduct. Facilities may refuse educational access to any person who does not adhere to the facility's standards of safety, health and ethical behavior. This may be cause for removal from the program.

Faculty	Office	Telephone/Email
Nursing Admissions Advisor	A-112	619-388-3471
Nursing Department Secretary		
Susan Chandler	V-312N	619-388-3441
Associate Dean & Director, Nursing Education		
Debbie Berg	V-312C	619-388-3439
Vocational Nursing Program Assistant		
Ruby White	V-312N	619-388-3822
Director Vocational Nursing Program		
Catherine Shafer	V-312M	619-388-3894
Faculty		
Dometrives Armstrong	V-312H	619-388-3762
Sherry Cooper	V-312i	619-388-3039
Dinnah Didulo Masangkay	V-312J	619-388-3897
Kris Hale	V-312B	619-388-3340

Faculty	Office	Telephone/Email
Catherine Howell	V-312G	619-388-3882
Pam Kersey	V-312E	619-388-3894
Susan Korsedal	V-312F	619-388-3896
Linda Ocen-Odoge	V-312A	619-388-3886
Rhonna Porch	V-312D	619-388-3811

Career Options

Some careers in nursing require education beyond the associate degree. The Registered Nurse cares for clients of all ages in a variety of clinical areas. Registered Nurses may be employed at the entry level in a variety of settings such as hospitals, skilled nursing facilities, clinics and home health agencies.

Student Learning Outcomes

Students who complete the program will be able to:

- Apply concepts and skills to successfully pass the NCLEX-RN (National Council Licensure Exam for Registered Nurses)
- Make clinical judgments and management decisions to ensure accurate and safe client care.
- Practice within the ethical, legal and regulatory frameworks of professional nursing practice.
- Use standards of nursing practice to perform and evaluate client care in entry-level practice.
- Participate in life-long learning.

Academic Programs

The Associate in Science degree in Nursing requires completion of the nursing courses. Additional general education and graduation requirements for the associate degree are listed on page 73 in the catalog.

Associate in Science Degree: Nursing Education

Registered Nurse Program (Generic)

Program Prerequisites

Prerequisites in this program will be enforced. All program prerequisites must be completed with a grade of "C" or better. In addition, the combined grade-point average for prerequisites must be 2.5 or higher.

Prerequisites	Units
**BIOL 205 General Microbiology	5
BIOL 230 Human Anatomy	4
**BIOL 235 Human Physiology	4

**Must be completed within a seven-year period preceding qualifying date of eligibility. Eligibility refers to the date completed application materials, including official transcripts, are filed with the Nursing Admissions Advisor. Students may also be required to complete Biology 107 and Chemistry 100 and 100L. Refer to Biology course descriptions for specific information.

Recommended electives: Nursing Education 108, 206, 290, 296.

*It is strongly recommended that all of the general education requirements be completed prior to admission to the nursing education program or during summer sessions.

Associate in Science Degree: Nursing Education

Licensed Vocational Nurse to Registered Nurse (Advanced Placement)

Program Prerequisites

All program prerequisites must be completed with a grade of "C" or better. In addition, the combined grade-point average for prerequisites must be 2.5 or higher. A copy of a current and active California Vocational Nursing License must also be submitted with application materials.

Prerequisites	Units
**BIOL 205 General Microbiology	5
BIOL 230 Human Anatomy	4
**BIOL 235 Human Physiology	4

**Must be completed within a seven-year period preceding qualifying date of eligibility. Eligibility refers to the date completed application materials, including official transcripts, are filed with the Nursing Admissions Advisor. Students may also be required to complete Biology 107 and Chemistry 100 and 100L. Refer to Biology course descriptions for specific information.

Recommended electives: Nursing Education 108, 206, 290, 296.

*It is strongly recommended that all of the general education requirements be completed prior to admission to the nursing education program or during summer sessions.

Nursing Education

Registered Nurse Program, LVN Thirty-Unit Option

Program Prerequisites

All program prerequisites must be completed with a grade of "C" or better. A copy of a current and active California Vocational Nursing License must also be submitted with application materials.

Prerequisites	Units
**BIOL 205 General Microbiology	5
**BIOL 235 Human Physiology	4

**Must be completed within a seven-year period preceding qualifying date of eligibility. Eligibility refers to the date completed application materials, including official transcripts, are filed with the Nursing Admissions Advisor. Students may also be required to complete Biology 107 and Chemistry 100 and 100L. Refer to Biology course descriptions for specific information.

Note: Other states may not recognize the LVN Thirty-Unit Option as a method to satisfy the requirements for licensure as a Registered Nurse. Interested candidates are urged to contact the respective Boards of Nursing for additional information.

Transfer Information

Common university majors related to the field of History include: Nursing

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Nursing Education (NRSE)

The hours listed in the catalog are based on an 18 week session. Nursing courses are scheduled in 9 week blocks, doubling weekly lecture and lab hours listed.

108 Nursing Skills Laboratory I .5 hour lecture, 1.5 hours lab, 1 unit Pass/No Pass Only

Corequisite: Current enrollment in the Nursing Education program.

This course is intended for first year students pursuing an Associate of Science Degree in Nursing. It provides students an additional opportunity for practice and mastery of designated psychomotor skills. There is a review of related theoretical concepts and supervised practice of basic client care skills that are concurrently presented in the regular program. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

140 Foundations of Nursing 2 hours lecture, 7.5 hours lab, 4.5 units Grade Only

Prerequisite: Biology 205, 230 and 235, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in: Nursing Education 141 with a grade of "C" or better, or equivalent.

Advisory: English 101 and Mathematics 96, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6, W6 and M50.

Limitation on Enrollment: Special Admission - must be admitted to program.

This course provides an introduction to nursing and the roles of the associate degree nurse, the nursing process, critical thinking, knowledge and foundational skills necessary for beginning level assessment and interventions (procedures) for adults. It also introduces the learner to the philosophy and conceptual framework of the nursing program. The emphasis is on meeting the client's basic needs throughout the life cycle. Introductory skills of client care are practiced in the skills and simulation laboratories with supervised clinical experiences in a variety of health settings.

This course is offered to students enrolled in the first semester of the Associate of Science Degree in Nursing program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

141 Pharmacology for Nursing 1 hour lecture, 1 unit Grade Only

Corequisite: Completion of or concurrent enrollment in: Nursing Education 140 with a grade of "C" or better, or equivalent.

Advisory: English 101 and Mathematics 96, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6, W6 and M50.

Limitation on Enrollment: Special Admission - must be admitted to program.

This course introduces basic concepts of pharmacology. Legal, ethical, psychological, cultural and age-specific aspects of drug therapy are presented. A nursing process approach to the principles of medication administration and dosage calculation is included. This course is offered to students enrolled in the first semester of the Associate of Science Degree in Nursing program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

142 Medical Surgical Nursing I 2 hours lecture, 7.5 hours lab, 4.5 units Grade Only

Prerequisite: Nursing Education 140 and 141, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Special Admission - must be admitted to program.

The course is an introduction to nursing concepts and practices as they relate to the young adult through geriatric adult in the medical surgical environment. Through utilization of the nursing process, the student begins to recognize alterations in physical and physiological functioning or illness and formulates age-appropriate nursing interventions. Selected psychomotor skills associated with the basic human needs, medication administration and intravenous therapy are studied and practiced. This course is offered to students enrolled in the first semester of the Associate of Science Degree in Nursing program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

143 Pharmacology for Nursing II**1 hour lecture, 1 unit
Pass/No Pass**

Corequisite: Completion of or concurrent enrollment in: Nursing Education 142.

This course provides supplementary instruction on pharmacologic intervention for medical surgical disorders. Emphasis is placed on drug categories and medications used in medical surgical nursing care environments. A nursing process approach to the principles of medication administration and dosage calculation is included. This course is offered to students enrolled in the Associate of Science Degree in Nursing program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

144 Medical Surgical Nursing II**2 hours lecture, 7.5 hours lab, 4.5 units
Grade Only**

Prerequisite: Nursing Education 142 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Special Admission - must be admitted to program.

This course develops the first year nursing student's knowledge and skills as they relate to the adult non-critical moderately complex medical-surgical client. Through utilization of the nursing process, the student recognizes alterations in functioning or illness and formulates age-appropriate nursing interventions. Psychomotor skills associated with moderately complex needs, medication administration and intravenous therapy are studied and practiced. The impact of multiple nursing diagnoses on client outcomes is introduced. This course is offered to nursing students enrolled in the second semester of the Associate of Science Degree in Nursing program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

145 Pharmacology for Nursing III**1 hour lecture, 1 unit
Pass/No Pass**

Corequisite: Completion of or concurrent enrollment in: Nursing Education 144.

This course emphasizes drug categories and medications used in acute medical/surgical environments. A nursing process approach to the principles of medication administration and dosage calculation is included. This course is offered to students enrolled in the Associate of Science

Degree in Nursing program. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

146 Maternal-Child Health Nursing**2.25 hours lecture, 6.75 hours lab, 4.5 units
Grade Only**

Prerequisite: Nursing Education 142 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Special Admission - must be admitted to program.

This course focuses on integration and application of the nursing process as it relates to the nursing care of the childbearing family, children and their families. Emphasis is on the concepts and skills related to age-appropriate, family centered care. Clinical experiences provide opportunities for students to participate in therapeutic activities in a variety of pediatric and obstetrical settings. This course is offered to nursing students enrolled in the second semester of the Associate of Science Degree in Nursing program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

147 Pharmacology for Nursing IV**1 hour lecture, 1 unit
Pass/No Pass**

Corequisite: Completion of or concurrent enrollment in: Nursing Education 146.

This course emphasizes drug categories and medications used in Reproductive Health, Obstetrics and Pediatrics. A nursing process approach to the principles of medication administration and dosage calculation is included. This course is offered to students enrolled in the Associate of Science Degree in Nursing program. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

206 Nursing Skills Laboratory II**.5 hour lecture, 1.5 hours lab, 1 unit
Pass/No Pass Only**

Corequisite: Current enrollment in the Nursing Education program.

This course is intended for first year students pursuing an Associate of Science Degree in Nursing. It provides students an additional opportunity for practice and mastery of designated psychomotor skills. There is a review of related theoretical concepts and supervised practice of advanced client care skills that are concurrently presented in the

regular program. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

235 LVN to RN Transition

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Prerequisite: Biology 205, 230, and 235, each with a grade of "C" or better, or equivalent.

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6. Mathematics 96 with a grade of "C" or better, or equivalent or Assessment Skill Level M50.

Limitation on Enrollment: This course is not open to students with previous credit for Nurse Education 201. Special Admission - must be admitted to program.

This course focuses on the theory and application of the concepts of physical assessment, nursing process, critical thinking, disease processes and nursing competencies in the professional roles of clinician, teacher, leader and advocate. Emphasis is on assisting the Licensed Vocational Nurse (LVN) to integrate into the Associate Degree Nursing program. This course is offered to students accepted into the LVN to Registered Nurse (RN) step up program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

240 Medical/Surgical Nursing III

**2 hours lecture, 7.5 hours lab, 4.5 units
Grade Only**

Prerequisite: Nursing Education 144, 146 and 235, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Special Admission - must be admitted to program.

This course assists the learner to synthesize and correlate nursing knowledge and skills in providing care to multiple clients who have complex, multi-system illnesses. Focus is for the learner to predict client needs and priorities, and evaluate outcomes of care. Associated psychomotor skills are integrated and practiced. This course is offered to students enrolled in the second year of the Associate of Science Degree in Nursing program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

241 Pharmacology for Nursing V

**1 hour lecture, 1 unit
Pass/No Pass**

Corequisite: Completion of or concurrent enrollment in Nursing Education 240.

Limitation on Enrollment: Special Admission - must be admitted to program.

This course is an elective supplement to NRSE 240, Medical Surgical Nursing III. Emphasis is placed on drug categories and medications introduced in NRSE 240, used in treatment of acute Medical/Surgical pathologies. A nursing process approach to the principles of medication administration and dosage calculation is included. This course is offered to students enrolled in the Associate of Science Degree in Nursing program. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

242 Mental Health & Gerontological Nursing

**2.25 hours lecture, 6.75 hours lab, 4.5 units
Grade Only**

Prerequisite: Nursing Education 144 or Nursing Education 146 or Nursing Education 235 each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Nursing Education 203. Special Admission - must be admitted to program.

This course is an introduction to Mental Health/Psychiatric and Gerontological Nursing using the nursing process to promote psychosocial and physiological integrity. Emphasis is on therapeutic interaction and communication, bio-psychosocial rehabilitation and therapeutic use of self. Clinical experiences provide opportunities for students to participate in therapeutic activities in a variety of settings. The student also explores interventions to increase the client's functional abilities with emphasis on lifestyle and physical changes. This course is offered to students enrolled in the second year of the Associate of Science Degree in Nursing program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

243 Pharmacology for Nursing VI

**1 hour lecture, 1 unit
Pass/No Pass**

Corequisite: Completion of or current enrollment in Nursing Education 242.

Limitation on Enrollment: Special Admission - must be admitted to program.

This course is an elective supplement to NRSE 242, Mental Health and Gerontological Nursing. Emphasis is placed on drug categories and medications introduced in NRSE 242, used in psychiatric/mental health and gerontological environments. A nursing process approach to the principles of medication

administration and dosage calculation is included. This course is offered to students enrolled in the Associate of Science Degree in Nursing program. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

244 Medical Surgical Nursing IV
2.25 hours lecture, 6.75 hours lab, 4.5 units
Grade Only

Prerequisite: Nursing Education 240 with a grade of "C" or better, or equivalent; Nursing Education 242 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Special Admission - must be admitted to program.

Medical Surgical Nursing IV focuses on advanced application of the nursing process in the care of critically ill adult and geriatric clients. The student organizes and discriminates data to establish priorities of care. Correlated clinical experiences emphasize refinement of clinical decision-making, psychomotor skills and management of client care in professional nursing practice. This course is offered to students in the final semester of the Associate of Science Degree in Nursing program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

245 Pharmacology for Nursing VII
1 hour lecture, 1 unit
Pass/No Pass

Corequisite: Completion of or concurrent enrollment in: Nursing Education 242 with a grade of "C" or better, or equivalent; Nursing Education 244.

Limitation on Enrollment: Special Admission - must be admitted to program.

This course is an elective supplement to Nursing Education 244, Medical Surgical Nursing IV. Emphasis is placed on drug categories and medications introduced in Nursing Education 244, used in critical care environments. A nursing process approach to the principles of medication administration and dosage calculation is included. This course is offered to students enrolled in the Associate of Science Degree in Nursing program. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

246 Leadership in Nursing
2.25 hours lecture, 6.75 hours lab, 4.5 units
Grade Only

Prerequisite: Nursing Education 240 with a grade of "C" or better, or equivalent; Nursing Education 242 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Nursing Education 205. Special Admission - must be admitted to program.

The course focuses on the transition from student to staff nurse, emphasizing the responsibilities of planning, organizing, directing, and coordinating client care. Principles of leadership, delegation, time management, decision-making, collegial communication, group dynamics, conflict resolution, and change are included. The clinical preceptorship experience requires the application of all previously learned concepts and skills. Acute care, long-term care or community settings are utilized. This course is offered to the students in the final semester of the Associate of Science Degree in Nursing program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

270 Occupational Work Experience in Nursing Education
60 - 300 hours other, 1-4 units
Grade Only

Prerequisite: Nursing Education 144 and Nursing Education 146, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Special Admission - must be admitted to program.

A work-experience course authorized by the Board of Registered Nursing whereby a student is employed by or volunteers at a clinical site with which the Nursing Education Program has a current affiliation agreement. The clinical site supports the objectives of the course and provides direct supervision of students through RN mentors and preceptors. The student applies previously learned nursing theory and clinical skills to the performance of client care. The combined maximum credit for all Work Experience courses from all disciplines may not exceed 16 units. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

290 Independent Study
Hours by Arrangement, 1-3 Units
Pass/No Pass Only

Limitation on Enrollment: Must obtain an Add Code from Program Director for registration.

This course provides students with an opportunity for additional research and academic or clinical experience in a particular area of nursing. This course may be taken four times with different content

for a maximum of six units. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Vocational Nursing

Description

Nursing is a profession which provides health care to individuals of all ages. Nursing encompasses many activities including health promotion, health maintenance, health care during illness and injury, and rehabilitation. Nurses apply knowledge from the biological, physical, behavioral and nursing sciences to care for clients in varied settings. The purpose of the San Diego City College Vocational Nursing program is to provide an educational opportunity for qualified individuals interested in a career in nursing. Upon successful completion of program requirements, graduates are eligible to take the National Council Licensure Examination for Practical Nurses (NCLEX-PN). Inquiries regarding program approval may be made by contacting the Board of Vocational Nursing at 2535 Capitol Oaks Rd., Sacramento, CA 95833, 916-263-7800.

Clinically Based Course Requirements

Students accepted into this program will be required to successfully complete clinically based courses held in health care facilities. These facilities may require background checks, including fingerprinting, as a condition of placement. Refusal to submit to a background check, or failure to meet clearance criteria established by the health care facility, may prevent placement in the clinically-based course, and thus, it may not be possible to successfully progress or complete the program. Health care facilities also require adherence to strict standards of conduct. Facilities may refuse educational access to any person who does not adhere to the facility's standard of safety, health and ethical behavior. This may be cause for removal from the program.

Career Options

Licensed Vocational Nurse

Student Learning Outcomes

Students who complete the program will be able to:

- Be eligible to sit for the National Council Licensure Exam for Practical Nurses (NCLEX-PN).
- Utilize the nursing process to provide care to clients throughout the life span.
- Demonstrate caring behavior, an understanding of client physical and psychosocial needs, and cultural sensitivity.
- Collaborate with members of the health care team to implement comprehensive patient care while demonstrating ethical and professional practice within the scope of practice of a Licensed Vocational Nurse (LVN).

Certificate of Achievement: Vocational Nursing

Program Prerequisites

Admission to this program requires a High School Diploma or GED, successful completion of ROP Health Care Essentials with grade of 75% or higher, or equivalent, and current, valid Certified Nurse Assistant certification by the California Department of Health Services.

Courses Required for the Major:		Units
VNUR 60	Pharmacology for Vocational Nurses I	1.5
VNUR 61	Fundamentals of Vocational Nursing	9.5
VNUR 62	Pharmacology for Vocational Nurses II	1.5
VNUR 64	Nutrition for Vocational Nurses	1.5
VNUR 65	Medical Surgical Vocational Nursing I	10.5
VNUR 66	Vocational Nursing Leadership	1.5
VNUR 67	Maternal/Child and Mental Health Vocational Nursing	12
VNUR 69	Medical Surgical Vocational Nursing II	4.5
Total Units = 42.5		

Courses

Vocational Nursing (VNUR)

50 Healthcare Essentials

**5.5 hours lecture, 5.5 units
Grade Only**

Limitation on Enrollment: This course is not open to students with previous credit for Vocational Nursing 40.

This course is designed for students interested in entering a nursing or other health career program. Topics include strategies for success, interpersonal dynamics, medical terminology, safety issues, computer literacy, body structure and function, growth and development, ethical and legal responsibilities, and employment readiness. (FT) Associate Degree Credit only and not Transferable.

60 Pharmacology for Vocational Nurses I

**1.5 hours lecture, 1.5 units
Grade Only**

Prerequisite: Vocational Nursing 50 with a grade of "C" or better, or equivalent.

Corequisite: Vocational Nursing 61.

Limitation on Enrollment: Special Admission - must be admitted to program. This course is not open to students with previous credit for Vocational Nursing 42.

Pharmacology for Vocational Nursing I is the first of two pharmacology courses in the Vocational Nursing program. It provides a solid foundation for the nursing student including a basic understanding of the nurse's role in medication administration and the uses of medications to treat and prevent illnesses. Drug actions, interactions, side effects, therapeutic monitoring, and adverse reactions are discussed and related to pathophysiology. (FT) Associate Degree Credit only and not Transferable.

61 Fundamentals of Vocational Nursing

**4.5 hours lecture, 16 hours lab, 9.5 units
Grade Only**

Prerequisite: Vocational Nursing 50 with a grade of "C" or better, or equivalent.

Corequisite: Vocational Nursing 60 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Special Admission - must be admitted to program. This course is not open to students with previous credit for Vocational Nursing 41.

The Fundamentals of Vocational Nursing course is the introductory theory course in the Vocational Nursing program. It provides a solid foundation for the nursing student to learn the background, basic skills, legal aspects, ethics, and processes of nursing. (FT) Associate Degree Credit only and not Transferable.

62 Pharmacology for Vocational Nurses II

**1.5 hours lecture, 1.5 units
Grade Only**

Prerequisite: Vocational Nursing 60 and Vocational Nursing 61, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in: Vocational Nursing 65 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Special Admission - must be admitted to program. This course is not open to students with previous credit for Vocational Nursing 48.

Pharmacology for Vocational Nurses II is the second of two pharmacology courses in the Vocational Nursing program. It builds on the basic pharmacology course to enable the nursing student to develop a broader understanding of the nurse's role in medication administration and how medications are used to treat and prevent illnesses. Drug actions, interactions, side effects, therapeutic monitoring, and adverse reactions are discussed and related to pathophysiology. Drug categories not studied in the introductory course are explored to complete the study of pharmacology in healthcare. The course is designed for the student progressing through the Vocational Nursing Program with a base knowledge obtained in prerequisite courses. (FT) Associate Degree Credit only and not Transferable.

64 Nutrition for Vocational Nurses

**1.5 hours lecture, 1.5 units
Grade Only**

Prerequisite: Vocational Nursing 60 and Vocational Nursing 61, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in: Vocational Nursing 69 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Special Admission - must be admitted to program. This course is not open to students with previous credit for Vocational Nursing 43.

The Nutrition for Vocational Nurses course provides an introductory study of nutrition in health care to the Vocational Nursing student. Nutrition is considered a vital component of the care of the whole person. The nursing student needs to have a basic understanding of the importance of nutrition to be able to assist and teach clients about making good choices according to their healthcare needs. The course is designed for the student progressing through the Vocational Nursing program. (FT) Associate Degree Credit only and not Transferable.

65 Medical Surgical Vocational Nursing I **5.5 hours lecture, 15 hours lab, 10.5 units** **Grade Only**

Prerequisite: Vocational Nursing 60 and 61, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in: Vocational Nursing 64 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Special Admission - must be admitted to program.

Limitation on Enrollment: This course is not open to students with previous credit for Vocational Nursing 45.

The Medical Surgical Vocational Nursing course is the first of two courses in the Vocational Nursing program covering nursing care of medical/surgical patients. The course includes a clinical component and focuses on each body system with related disorders, the pathophysiology, assessment findings, medical, surgical and nursing management of these specific disorders. The course covers related nutritional, pharmacological, growth and development, and psychosocial issues as appropriate. In addition, the special needs of older adults are explored. The course is designed to build upon knowledge and skills set obtained in prerequisite courses that comprise the Vocational Nursing program. (FT) Associate Degree Credit only and not Transferable.

66 Vocational Nursing Leadership **1.5 hours lecture, 1.5 units** **Grade Only**

Prerequisite: Vocational Nursing 65 and 69, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Special Admission - must be admitted to program. This course is not open to students with previous credit for Vocational Nursing 49.

This Vocational Nursing Leadership course prepares the student for professional practice and leadership as a licensed vocational nurse. It builds on the foundations of basic and advanced medical surgical nursing and provides an opportunity to learn the critical path to leadership development in the transition from nursing student to nursing leader. Students explore such areas as paradigm thinking, theoretical frameworks for management, searching for the perfect job, mentoring, the application process, becoming a change agent, conflict resolution, employee motivation, team building, assignments, coaching, and performance analysis within the context of the 21st Century healthcare system. The course is designed for the student in the final portion of the Vocational Nursing program. (FT) Associate Degree Credit only and not Transferable.

67 Maternal/Child and Mental Health Vocational Nursing **7 hours lecture, 16 hours lab, 12 units** **Grade Only**

Prerequisite: Vocational Nursing 60 and Vocational Nursing 65 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Special Admission - must be admitted to program. This course is not open to students with previous credit for Vocational Nursing 46.

The Maternal/Child and Mental Health Vocational Nursing course enables the student to participate in the nursing care of the maternity client, newborn and family throughout pregnancy, labor, delivery, pediatric and the postpartum period in both normal and high-risk circumstances. It also provides a solid foundation in mental health nursing. The clinical component provides practical applications of the course objectives. The course is designed for the student progressing through the Vocational Nursing program. (FT) Associate Degree Credit only and not Transferable.

69 Medical Surgical Vocational Nursing II **3.5 hours lecture, 3 hours lab, 4.5 units** **Grade Only**

Prerequisite: Vocational Nursing 64, 65 and 67, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in: Vocational Nursing 62 and 66, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Special Admission - must be admitted to program.

Limitation on Enrollment: This course is not open to students with previous credit for Vocational Nursing 47.

The Advanced Medical Surgical Vocational Nursing course is the second of two medical/surgical courses in the Vocational Nursing program. This course builds on the skills and knowledge base developed during Medical/Surgical Vocational Nursing I and continues to cover nursing care of medical surgical patients. The course focuses on body systems with related disorders, and the pathophysiology, assessment findings, medical, surgical and nursing management of these specific disorders. The course covers related nutritional, pharmacological, growth and development, and psychosocial issues as appropriate. In addition, the special needs of young and middle adults are also explored. This course is designed for the student in the last portion of the Vocational Nursing Program. (FT) Associate Degree Credit only and not Transferable.

Office Information Systems

See "Computer Business Technology" on page 214.

Peace Studies

Award Type	Units
Certificate of Performance:	
Peace Studies	16
Associate in Art Degree:	
Peace Studies	25*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

The Peace Studies Certificate and Associate Degree offer an interdisciplinary, theoretical, and practical approach for students to enter into the academic and/or professional field of Peace Studies. Students gain skills to critically analyze current affairs related to peace and conflict. Students evaluate global consequences of events leading to violent conflict to offer alternative solutions to create more peaceful, just and equitable societies. The Peace Studies

program allows students to gain professional experience with an organization working within a related field through participation in the required one-unit capstone course in field experience.

Program Goals

To provide the opportunity for the student to contemplate, analyze, and discuss issues related to peace and conflict on all levels; to apply theory in academic disciplines such as literature, anthropology, environmental science and philosophy to the field of peace studies; to critically think about their role in the world and their possible contributions to a more peaceful world; to demonstrate theories related to both positive and negative peace; to gain an understanding of the role of human rights and other moral and ethical concepts.

Program Emphasis

The four main pillars of the Peace Studies program are human rights, conflict studies, peace processes and the concept of justice in relation to peace. The program explores issues related to these four pillars on an inter/intra personal, communal, and global level. An emphasis is placed upon 1) the interdisciplinary nature of addressing issues related to peace and conflict, 2) active participation and involvement in the service learning component of the required capstone course, and 3) affective and analytical responses to concepts related to the four pillars.

Faculty	Office	Telephone/Email
Stephen J. Bouscaren	A-1S	619-388-3260
Nancy Cary	C-216	619-388-3278
Catherine Harlow	C-224A	619-388-3013
Gary Wisehart	A-227	619-388-3278

Career Options:

This Associate Degree prepares students to enter into academic and professional fields related to peace studies. Available career tracks include working for non-profit agencies, international organizations, governmental agencies, public institutions and educational institutions. Students may select a professional or academic focus such as peace building, conflict management, mediation, international law, international relations, political science, history, environmental science, anthropology, comparative literature, peace psychology or philosophy. Most career options directly related to Peace Studies require a four year degree; however, some examples of career options

may include: Program Coordinator, Human Rights Advocate, Community Liaison, Relief / Aid Worker, Peace Activist, Mediator, Resource Developer, Educator, Philanthropist, Environmentalist, Anthropologist, Event Coordinator, and Board Member for a Non-Profit Organization.

Student Learning Outcomes

- Define and discuss positive peace, negative peace and structural violence.
- Identify, apply and critically analyze, from an interdisciplinary perspective, theories related to Peace Studies per current events on a personal, communal, national and/or global level.
- Propose specific strategies to achieve positive peace appropriate to a current event on a person, communal, national and/or global scale.
- Identify, discuss and critically analyze non violent movements as a method of conflict resolution.

Certificate of Performance: Peace Studies*

This certificate will provide students the tools to critically analyze issues related to peace, justice, and conflict.

Courses:	Units
PEAC 101 Introduction to Peace Studies	3
BIOL 101 Issues in Environmental Biology	4
ANTH 103 Introduction to Cultural Anthropology	3
PHIL 102B Introduction To Philosophy: Values	3
ENGL 101 Reading and Composition or	
ENGL 105 Composition and Literature	3
PEAC 250 Field Experience In Peace Studies	1
Total Units = 17	

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Associate in Arts: Peace Studies

This Associate Degree provides students the tools to critically analyze issues related to peace, justice, and conflict.

Courses Required for the Major:	Units
PEAC 101 Introduction to Peace Studies	3
PEAC 102 Nonviolence and Conflict Resolution	3
BIOL 101 Issues in Environmental Biology	4
PHIL 102B Introduction To Philosophy: Values	3

ANTH 103 Introduction to Cultural Anthropology	3
POLI 140 Contemporary International Politics	3
PEAC 201 Environmental Sustainability, Justice and Ethics	3
ENGL 208 Introduction to Literature	3
PEAC 250 Field Experience In Peace Studies	1 - 3
Total Units = 26-28	

The following groups are recommended electives and will not lead to an individual certificate or emphasis but may meet the required 60 units for the Associate Degree in Peace Studies.

Recommended electives for students interested in Gender Studies: Gender Studies 101, History 141, 142, Philosophy 125, 126 and English 237.

Recommended electives for students interested in a Cultural Perspective: Anthropology 210, 215, Black Studies 145A, 145B, Chicano Studies 141A, 141B, Geography 102, 104 and Communication Studies 180.

Recommended electives for students interested in a Historical Perspective: History 100, 101, 120, 130, 132, 151.

Recommended electives for students interested in Philosophy and Ethics: Humanities 106, 202, Philosophy 107, 108.

Recommended electives for students interested in Environmental Science and Sustainability: Biology 120, 180, Geographic Information Systems 104, 110, Sociology 223 and Futures Studies 101.

Recommended electives for students interested in English: English 205, 220, 221 and 245.

Courses

Peace Studies (PEAC)

101 Introduction to Peace Studies

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Level R6 and W6. This course provides an overview of the field of peace studies and offers an in-depth look into theories related to peace, conflict studies and non-violence. Students gain an understanding

of the various tools and processes that are used internationally in working towards a more equitable, just and peaceful world. Contemporary case studies are explored offering students an interdisciplinary approach to the field in order to address the four main pillars of the Peace Studies program which are human rights, conflict studies, peace processes and the concept of justice in relation to peace. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities UC Transfer Course List.

102 Nonviolence and Conflict Resolution
3 hours lecture, 3 units
Grade Only

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6. This course explores nonviolence and conflict resolution through an analysis of theory and application of both strategies. Students are able to contemplate the relationship between nonviolence and conflict resolution and how these techniques may be applied. Emphasis is placed on the history of nonviolent leaders and social movements nationally and internationally which have resulted in the promotion of peace, the application of justice and the preservation of human rights. This course is intended for all students interested in peace studies, conflict resolution and international relations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

201 Environmental Sustainability, Justice and Ethics
3 hours lecture, 3 units
Grade Only

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; Philosophy 102B and Biology 101, each with a grade of "C" or better, or equivalent.

Advisory: Completion of or concurrent enrollment in: English 205 with a grade of "C" or better, or equivalent.

This course analyzes environmental issues related to sustainability, justice and ethics. Environmental sustainability theories are examined by addressing economic, cultural, social, political and ecological issues. The philosophical basis of environmental ethics provides a framework of the various worldviews and theoretical orientations. Students apply theories learned to assess international and national environmental justice case studies. This

course is intended for students interested in Peace Studies, Sustainability and Environmental Ethics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

250 Field Experience In Peace Studies
16-54 total hours lecture,
32-108 total other hours, 1-3 units
Grade Only

Prerequisite: Peace Studies 101 with a grade of "C" or better, or equivalent.

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6.

Students in this course develop and implement field experience projects under the supervision of college faculty. In cooperation with the staff of community organizations and agencies, students design these projects to assist the college's neighborhood communities. Students gain hands-on experience in project planning, development, implementation and evaluation. Students meet regularly with faculty and peers to receive feedback, support and guidance in their community projects. This course may be repeated up to two times, but the total units earned may not exceed three units. This course is intended for students interested in Peace Studies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Personal Growth

Description

The Personal Growth program is designed for the first-time student at San Diego City College. The primary focus of the program is to help students develop critical thinking skills in relation to career, academic and life-planning goals.

Program Emphasis

Students are exposed to a variety of career assessment instruments which lead to greater self-understanding in relation to the decision making process in career and educational planning. Students become well versed in learning styles and theories, multicultural issues, and academic, community and campus resources.

Faculty	Office	Telephone/Email
Catherine Lopez		619-388-3775
Rigo Reyes	ECC	619-388-4910
John Rivera	L-117	619-388-3176

Courses

Personal Growth (PERG)

25 Student Government

**1 hour lecture, 3 hours lab, 2 units
Letter Grade or Pass/No Pass Option**

Limitation on Enrollment: This course is not open to students with credit for Speech Communications 126A, B, or C.

The fundamentals of Student Government with emphasis on technique or democratic action among groups. Actual practice in various phases of Student Government will be provided. (FT) Associate Degree Credit only and not Transferable.

30 Career Planning

**1-3 hours lecture, 1-3 units
Letter Grade or Pass/No Pass Option**

This course is designed to assist students in making career choices. Topics include self-concept, values, interests, skills assessment, understanding the data/people/things orientation of work, job satisfiers, exploration of career information, and the decision-making process. (FT) Associate Degree Credit only and not Transferable.

32 Academic and Financial Planning

**.44 - .5 hours lecture, 0 units
Pass/No Pass Only**

Limitation on Enrollment: This course is open only to students who have completed the Mathematics and English Assessment Skill Level tests.

This course is designed to familiarize students with financial aid resources available to help them meet educational expenses. These resources include college and financial aid satisfactory academic progress policies; federal/state regulations for determining and maintaining eligibility for financial aid; student rights and responsibilities in receiving aid; strategies on becoming responsible consumers; money management; and accessing outside student aid resources. Emphasis is placed on effective use of all available on-campus resources and the development and implementation of a Student Educational Plan to meet educational objectives. (FT) Credit does not apply to the associate degree.

120 College Success and Lifelong Learning 3 hours lecture, 3 units Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Personal Growth 127.

This course teaches success strategies to enhance academic and lifelong learning skills. Students explore topics such as motivation and attitudes, values, goal setting, decision-making processes, critical and creative thinking, personal health topics, interpersonal communication, developmental psychology, and learning and personality theories, as well as other techniques for maximizing their abilities to succeed as lifelong learners. Students apply these topics as they relate to their self-development as integrated physiological and psychological entities and acquire strategies to effectively deal with issues in their personal lives and educational and career plans. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

127 College Success Skills

**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 48 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5; and completion of or concurrent enrollment in English 49 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5.

This course examines the techniques used to enhance academic skills in order to achieve subject matter mastery and develop strategies for success in a diverse society. Critical thinking skills are interwoven throughout the course by exploring areas such as motivation and attitudes, stress management, creativity, interpersonal communication, and personal health. Topics from developmental psychology, learning theory and personality theory are presented as a foundation for this course. The course is designed for new or re-entry students and others who can benefit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

130 Career - Life Planning**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: Completion of or concurrent enrollment in: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Personal Growth 30. This course is designed to assist students with self-exploration, career transitions and career-life planning in order to achieve success in a diverse society. Critical thinking skills will be utilized through a systematic approach to career development by examining values, interests, skills, life roles, personality type, personal self-management, decision-making and goal-setting throughout the life span. The course is designed for new and re-entry students and others who can benefit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

140 Life Skills and Personal Adjustment**1-3 hours lecture, 1 - 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is designed for students who want to learn and acquire effective ways for developing their emotional, social, educational, and professional life skills. This course is a practical study of the principles and application of strategies that assist in the development of coping and life skills. Topics include self-esteem and compassion, self-discipline, self-responsibility, self-assertion, and living a consciously balanced life in pursuit of defined educational, career, and life goals. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Philosophy

Award Type **Units****Associate in Art Degree:**

Philosophy	18*
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*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

The first objective of the philosophy program is to teach students how to think critically emphasizing analytic reasoning. In addition, students are prepared for university-level philosophy courses. The study of philosophy acquaints students with the nature of philosophical activity and helps them increase critical thinking skills about fundamental philosophic concerns such as the nature of correct reasoning, the scope and limits of human knowledge, characteristics of reality and questions of value and obligation. Philosophy relates to many other academic disciplines and stresses systematic and abstract thought.

Program Emphasis

The Philosophy curriculum meets general education Humanities requirements for both the associate degree and universities, and prepares for transfer to university majors

Faculty	Office	Telephone/Email
Catherine Harlow	C-224A	619-388-3013
William Stewart	T-309A	619-388-3602

Career Options:

Most careers in this list require education beyond the associate degree. A sample list of careers in which background knowledge of philosophy is appropriate include: education, human service vocations, law, management, medicine, publishing, scientific research, teaching, and theology.

Academic Programs

The associate degree in philosophy requires completion of the courses listed for the degree. Additional general education and graduation requirements for the associate degree are listed in the catalog. The associate degree requires a minimum of 60 units.

Student Learning Outcomes

- To increase the student's critical thinking skills in considering fundamental philosophical

concerns such as the nature of correct reasoning, the scope and limits of human knowledge, characteristics of reality and questions of value and obligation.

Associate in Arts: Philosophy

Courses Required for the Major:		Units
PHIL 100	Logic and Critical Thinking	3
PHIL 101	Symbolic Logic	3

Select one of the two-semester sequences:

PHIL 102A	Introduction To Philosophy: Reality and Knowledge and	
PHIL 102B	Introduction To Philosophy: Values or	
PHIL 104A	History Of Western Philosophy and	
PHIL 104B	History of Western Philosophy	
		6

Select six units from:

PHIL 102A	Introduction To Philosophy: Reality and Knowledge	3
PHIL 102B	Introduction To Philosophy: Values	3
PHIL 104A	History Of Western Philosophy	3
PHIL 104B	History of Western Philosophy	3
PHIL 106	Asian Philosophy	3
PHIL 107	Reflections on Human Nature	3
PHIL 110	Philosophy of Religion	3
PHIL 111	Philosophy In Literature	3
PHIL 125	Philosophy of Women	3
PHIL 290	Independent Study	1-3
PHIL 296	Individualized Instruction in Philosophy	0.5 - 2

Total Units = 18

Recommended electives: Humanities 106, Philosophy 205.

Transfer Information

Common university majors related to the field of Philosophy include: Human Communication, Liberal Studies, Philosophy, Religious Studies, Pre-Law.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may

be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Philosophy (PHIL)

100 Logic and Critical Thinking

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of "C" or better, or equivalent.

This course explores the relationship of communications and critical thinking with a focus on good reasoning and the impediments to its mastery. This course emphasizes the development of skills in logical processes including familiarity with the more common fallacies. This course is designed for students learning to apply principles of critical thinking to the practical problems of everyday life. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

101 Symbolic Logic

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: Philosophy 100 with a grade of "C" or better, or equivalent..

Advisory: English 101 or English 105, each with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6 and Mathematics 96 with a grade of "C" or better, or equivalent or Assessment Skill Level M50.

This course is a study of the elements of symbolic logic, sentential calculus and quantification theory. Topics include identity, definite descriptions, natural deduction and structure of language. This course is intended for philosophy majors and students pursuing studies in computer science. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

102A Introduction To Philosophy: Reality and Knowledge

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 or English 105, with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6.

This course is an introductory study of the aims, methods, types and problems of philosophy and philosophical inquiry. Emphasis is placed on the nature of reality and knowledge. Materials for this survey of philosophy may draw from classical and contemporary thinkers. Students are encouraged to articulate, analyze, and evaluate their own beliefs/positions in the context of meaningful philosophical inquiry. This course is intended for anyone concerned with human existence and humanity's place in the universe. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

102B Introduction to Philosophy: Values

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of "C" or better, or equivalent.

This course provides an introductory study of the aims, methods, types and problems of philosophy and philosophical inquiry focusing on values and their place in an individual's daily life. Materials for this survey of philosophical activity, orientations and views of philosophers may be drawn from classical and contemporary thinkers. Students are encouraged to articulate, analyze and evaluate their own beliefs/positions in the context of meaningful philosophical inquiry regarding value theory. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

104A History of Western Philosophy

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of "C" or better, or equivalent.

This course explores the issues and problems associated with philosophy and philosophical activity as they are illustrated in the history of Western philosophy. Studies in this course focus

on representative thinkers of the Classical and/or Medieval periods, their cultural milieu, and their attempts to resolve perennial philosophical issues and problems. This course may be of interest to students pursuing studies in History and Humanities. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

104B History of Western Philosophy

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of "C" or better, or equivalent.

This course explores the problems associated with philosophy and philosophical activity as they are illustrated in the history of Western philosophy from the Renaissance period through the 19th Century. Studies in this course focus on representative thinkers of the Renaissance and/or Modern periods, their cultural milieu, and their attempts to resolve perennial philosophical issues and problems. This course may be of interest to students pursuing studies in History and Humanities. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

105 Contemporary Philosophy

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of "C" or better, or equivalent.

This course explores the issues and problems associated with philosophy in the 20th and 21st centuries. Emphasis is placed on the representative thinkers of the modern and post-modern eras. Students are encouraged to engage in independent research, analysis and formulation. This course is designed for students interested in contemporary society and current events. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

106 Asian Philosophy

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of "C" or better, or equivalent.

This course explores the aims, methods, issues and problems exemplified in Asian philosophy and philosophical activity. Studies in this course survey significant inquiries, orientations and perspectives exemplified in Asian philosophy as well as Asian perspectives on perennial questions relating to the nature of the universe, the status and meaning of mankind, and the qualities characterizing the good life. Students are encouraged to engage in independent research, analysis and formulation. This course may be of special interest to students pursuing Pacific Rim or International Studies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

107 Reflections on Human Nature

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of "C" or better, or equivalent.

This course explores the issues and problems exemplified in process of meaningful philosophical activity relating to the topic of human nature. Studies in this course survey representative theories and philosophical reflections relating to the notions of human nature, the individual person, and human characteristics in general. Material for this survey may be drawn from classical and contemporary thinkers, scientific and religious orientations. Students are encouraged to engage in independent research, analysis and formulation. This course may interest students pursuing studies in behavioral and/or social sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

108 Perspectives on Human Nature and Society

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of "C" or better, or equivalent.

This course explores the topics of human nature and human societal configurations. Material for study may be selected from classical and contemporary thinkers. Studies in this course survey representative theories and philosophical reflections that explore the relation between theories regarding human

nature and the nature of society, the state, and government with an emphasis on experiential elements of meaningful human existence and notions of ideal society. This course may be of particular interest to students pursuing studies in behavioral, social or political science. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

111 Philosophy in Literature

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of "C" or better, or equivalent.

This course is designed to provide an introduction to the aims, methods, issues and problems associated with philosophy and philosophical activity. In this course students read and analyze selected classical and/or contemporary literature which portrays or dramatizes perennial philosophical questions, issues and themes relating to such topics as the nature of reality, the notion of the self, the issue of choice and determinism, the problem of good and evil, and characteristics of the good life. This offering may be of interest to students pursuing studies in literature or in the behavioral and/or social sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

125 Philosophy of Women

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of "C" or better, or equivalent.

This general education course is of interest to students wishing to explore the philosophical study of questions relating to women. It provides an introductory study of concepts of womanhood and feminism as they have found expression in mythic, classic, medieval and major modern philosophical traditions. Images, roles, and beliefs about women are explored with respect to their historical and global impact and philosophical relevance. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

126 Introduction to Philosophy of Contemporary Gender Issues

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Level R6 and W6. This lower division course provides an introduction to the concepts of gender and gender relations for the student interested in the development of contemporary gender issues as they relate to philosophy. The images, roles, and beliefs about gender and gender relations as they vary across cultures will be explored with respect to their impact in our everyday lives and the larger societies within which we live. This course may be of special interest to students going into gender studies and women's studies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities UC Transfer Course List.

130 Philosophy of Art and Music

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of "C" or better, or equivalent.

This course employs philosophical methods to explore the concepts, principles, and criteria used in the creation and evaluation of art and music. In addition to students interested in philosophy, this course is designed for any student seeking to gain a better understanding of why we appreciate art and music and how we develop standards for evaluating them. A variety of arts may be discussed including painting, sculpture, architecture, design, music, dance, theatre, and literature. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

205 Critical Thinking and Writing in Philosophy

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of "C" or better, or equivalent.

This critical thinking and writing seminar in Philosophy is designed to enhance the student's critical thinking, writing, and research skills in preparation for upper division academic activity. Issues addressed in this class may involve various

areas of human experience and aspiration: metaphysical, cosmological, scientific, political, ethical, aesthetic, and religious. Together with the application of basic principles of deduction and induction, special attention is given to identifying and avoiding fallacies in reasoning and to techniques and aids to research, reasoning, and writing. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

290 Independent Study

Hours by Arrangement, 1-3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

For students who wish to study special problems. This course may be taken four times with different content for a maximum of six units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

296 Individual Instruction in Philosophy

1.5 - 6 hours lab, .5 - 2 units

Pass/No Pass Only

Limitation on Enrollment: Enrollment in an approved related course; Must obtain an Add code from instructor for registration.

This course employs self-paced multimedia systems to assist students to reach specific learning objectives, and is intended to be supplementary to designated courses. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Photography

See "Visual and Performing Arts" on page 422.

Physical and Earth Sciences

Astronomy, Chemistry, Geography, Geographic Information Systems, Geology, Physics

Award Type	Units
Associate in Science Degree:	
Astronomy	32*
Chemistry	48*
Geography	21*
Geology	33-38*
Physics	38*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

Earth and physical sciences, including astronomy, chemistry, geography, geographic information systems, geology, and physics are disciplines classified as natural sciences. They generally involve nonliving materials and the principles of fundamental relationships and laws in the universe.

Program Emphasis

These programs are designed to prepare students with basic concepts in astronomy, chemistry, geography, geographic information systems, geology and physics which provide the foundation for upper division study in a baccalaureate institution and also satisfy general education requirements.

Faculty	Office	Telephone
James Covalt	M-208	619-388-3355
Nancy Crispen	M-207	619-388-3612
Ram Gurumurthy	M-210	619-388-3641
Gerardo Scappaticci	M-209	619-388-3356
Lisa Will	M-207	619-388-3364

Career Options

Most careers in earth and physical sciences fields require education beyond the associate degree and many require a graduate degree. A brief list of career options in the physical sciences includes: astronomer, biophysicist, biochemist, chemist, earth scientist, environmentalist, geographer, geologist,

geophysicist, meteorologist, oceanographer, paleontologist, physicist and physical science instructor.

Student Learning Outcomes

Upon successful completion students will be able to:

- Demonstrate an understanding and appreciation of the scientific method.
- Communicate an understanding of the connections between science and other human activities.
- Examine the universe in a variety of courses.
- Utilize critical thinking skills in a variety of scientific applications.

Academic Programs

The associate degrees in Physical and Earth Sciences, Astronomy, Chemistry, Geography, Geology and Physics, require completion of the courses listed for each degree. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Transfer Information

Common university majors related to the field of Physical and Earth Studies include: Astronomy, Biochemistry, Chemical Engineering, Chemical Physics, Chemistry, Earth Studies and Sciences, Environmental Chemistry, Geographic Information Systems, Geography, Geology, Hydrologic Science, Meteorology and Oceanography, Physical Sciences, Physics.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Associate in Science Degree: Physical and Earth Sciences

Astronomy

Courses Required for the Major:		Units
ASTR 101	Descriptive Astronomy	3
ASTR 109	Practice in Observing	1
MATH 150	Calculus with Analytic Geometry I	5
MATH 151	Calculus with Analytic Geometry II	4
MATH 252	Calculus with Analytic Geometry III	4
PHYS 195	Mechanics	5
PHYS 196	Electricity & Magnetism	5
PHYS 197	Waves, Optics & Modern Physics	5
Total Units = 32		

Recommended electives: Chemistry 200, 200L.

Associate in Science Degree: Physical and Earth Sciences

Chemistry

Courses Required for the Major:		Units
CHEM 200	General Chemistry I - Lecture	3
CHEM 200L	General Chemistry I - Laboratory	2
CHEM 201	General Chemistry II - Lecture	3
CHEM 201L	General Chemistry II - Laboratory	2
CHEM 231	Organic Chemistry I - Lecture	3
CHEM 231L	Organic Chemistry I - Laboratory	2
CHEM 251	Analytical Chemistry	5
MATH 150	Calculus with Analytic Geometry I	5
MATH 151	Calculus with Analytic Geometry II	4
MATH 252	Calculus with Analytic Geometry III	4
PHYS 195	Mechanics	5
PHYS 196	Electricity and Magnetism	5
PHYS 197	Waves, Optics and Modern Physics	5
Total Units = 48		

Recommended electives: Chemistry 233, 233L, 290, 296; Physics 125, 126.

Associate in Science Degree: Physical and Earth Sciences

Geography

Courses Required for the Major:		Units
GEOG 101	Physical Geography	3
GEOG 101L	Physical Geography Laboratory	1
GEOG 102	Cultural Geography	3
ECON 120	Principles of Macroeconomics	3
ECON 121	Principles of Microeconomics	3

Select eight units from:

BIOL 107	General Biology-Lecture and Laboratory	4
CHEM 100	Fundamentals of Chemistry	3
CHEM 100L	Fundamentals of Chemistry Laboratory	1
CHEM 200	General Chemistry I - Lecture	3
CHEM 200L	General Chemistry I - Laboratory	2
MATH 107	Introduction to Scientific Programming	3
MATH 107L	Introduction to Scientific Programming Lab	1
MATH 119	Elementary Statistics	3
MATH 121	Basic Techniques of Applied Calculus I	3
MATH 150	Calculus with Analytic Geometry I	5
POLI 102	The American Political System	3
PSYC 258	Behavioral Science Statistics	3
Total Units = 21		

Recommended electives: Geography 290, 296; Physical Science 100, 101.

Associate in Science Degree: Physical and Earth Sciences

Geology

Courses Required for the Major:		Units
GEOL 100	General Geology	3
GEOL 101	General Geology Laboratory	1
BIOL 107	General Biology-Lecture and Laboratory	4
CHEM 200	General Chemistry I - Lecture	3
CHEM 200L	General Chemistry I - Laboratory	2
CHEM 201	General Chemistry II - Lecture	3
CHEM 201L	General Chemistry II - Laboratory	2
MATH 150	Calculus with Analytic Geometry I	5
PHYS 180A	General Physics I and	
PHYS 181A	General Physics Lab I and	
PHYS 180B	General Physics II and	
PHYS 181B	General Physics Lab II or	
PHYS 195	Mechanics and	
PHYS 196	Electricity and Magnetism and	
PHYS 197	Waves, Optics and Modern Physics	
10-15		
Total Units = 33 - 38		

Recommended electives: Geology 290; Mathematics 107, 107L, 151, 252; a foreign language; and a course in mechanical drawing.

Associate in Science Degree: Physical and Earth Sciences

Physics

Courses Required for the Major:		Units
CHEM 200	General Chemistry I - Lecture	3
CHEM 200L	General Chemistry I - Laboratory	2
CHEM 201	General Chemistry II - Lecture	3
CHEM 201L	General Chemistry II - Laboratory	2
MATH 150	Calculus with Analytic Geometry I	5
MATH 151	Calculus with Analytic Geometry II	4
MATH 252	Calculus with Analytic Geometry III	4
PHYS 195	Mechanics	5
PHYS 196	Electricity and Magnetism	5
PHYS 197	Waves, Optics, and Modern Physics	5
Total Units = 38		

Recommended electives: Physics 125, 126, 290;
Astronomy 101 and 109.

Courses

Astronomy (ASTR)

101 Descriptive Astronomy

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

This course is an introductory survey of contemporary astronomy. Topics covered include the solar system, stars and stellar evolution, the Milky Way galaxy and cosmology. This course is designed for students planning to take advanced courses in the Physical and Earth Sciences and for transfer students planning to major in astronomy. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

109 Practice in Observing

3 hours lab, 1 unit

Letter Grade or Pass/No Pass Option

Corequisite: Completion of or concurrent enrollment in Astronomy 101 with a grade of "C" or better, or equivalent.

This laboratory course, emphasizing field experience, includes constellation study, interpretation of celestial cycles, and descriptive observations (with and without telescopes) of a wide variety of astronomical objects and events. The course

is designed to supplement Astronomy 101 as a general education laboratory course in the natural science area. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Astronomy (ASTR) 109 and 111 combined: maximum credit, one course.

111 Astronomy Laboratory

3 hours lab, 1 unit

Letter Grade or Pass/No Pass Option

Corequisite: Completion of or concurrent enrollment in: Astronomy 101 with a grade of "C" or better, or equivalent.

This laboratory course features exercises and experiments covering topics ranging across the spectrum of astronomy. The course deals with the foundations of astronomy, and may include telescopes, planetary astronomy, stellar astronomy and galactic astronomy. Indoor exercises may involve computer simulations. Outdoor exercises may be required. The course is designed to supplement Astronomy 101 as a general education laboratory course in the natural science area. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Astronomy (ASTR) 109 and 111 combined: maximum credit, one course.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Chemistry (CHEM)

100 Fundamentals of Chemistry

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: Mathematics 46 with a grade of "C" or better, or equivalent, or Assessment Skill Level M40.

Corequisite: Completion of or concurrent enrollment in: Chemistry 100L with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for or concurrent enrollment in Chemistry 152 and 200.

This course is an introductory study of the language and tools of chemistry. Basic concepts of the structure, properties, interactions of matter and energy are studied, both qualitatively and quantitatively. Emphasis is placed on matter, chemical changes, chemical conversions, chemical bonding, and acid-base chemistry. This course is taken by students majoring in nursing, nutrition, or animal health technology and provides a foundation for further coursework in chemistry, in particular for introductory organic chemistry. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Chemistry (CHEM) 100, 100L and 152, 152L combined: maximum credit, four units. No credit will be given for 100, 100L or 152, 152L if taken after CHEM 200. Engineering Technology (ENGN) 110, Chemistry (CHEM) 100 and Physics (PHYS) 100 combined: maximum credit, one course.

100L Fundamentals of Chemistry Laboratory
3 hours lab, 1 unit
Letter Grade or Pass/No Pass Option

Corequisite: Chemistry 100.

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40.

This laboratory course is designed to illustrate the principles of inorganic and physical chemistry as presented in Chemistry 100 and to familiarize students with common laboratory equipment and data collection methods. Along with Chemistry 100, this course is taken by students majoring in nursing or allied health sciences and provides a foundation for further lab work in chemistry. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Chemistry (CHEM) 100, 100L and 152, 152L combined: maximum credit, four units. No credit will be given for 100, 100L or 152, 152L if taken after CHEM 200.

111 Chemistry in Society
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; Chemistry 111L with a grade of "C" or better, or equivalent.

This is an introductory chemistry course for non-science majors. The course emphasizes conceptual topics in chemistry and scientific thinking. Students learn to understand how society uses chemistry-based technologies and how to analyze current trends or news involving chemistry. Topics include a basic understanding of matter and energy, physical and chemical changes, the atom, nuclear chemistry, bonding, acids and bases, organic chemistry, and biochemistry. Current issues in environmental chemistry such as energy resources, air and water pollution are explored. Students discuss the effects and controversy surrounding the use of different forms of energy. In addition, current issues in organic and biochemistry are examined including trends in diets, certain medicines and drugs, and personal care items. Students planning on taking further courses in chemistry should take Chemistry 100 or Chemistry 152. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

111L Chemistry in Society Laboratory
3 hours lab, 1 unit
Grade Only

Corequisite: Completion of or concurrent enrollment in: Chemistry 111 with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This laboratory course is intended for non-science majors. It is designed to illustrate the principles of chemistry presented in Chemistry 111 in order for the student to understand how chemistry is used in our society. Experiments explore not only basic concepts in chemistry such as matter, energy, and the atom, but also explore real world applications of chemistry. This includes performing experiments related to the chemistry of the environment, household products, and biochemistry. Students learn how to work safely within the laboratory. Students who need to take further chemistry courses should enroll in Chemistry 152L or Chemistry 100L. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

130 Introduction to Organic and Biological Chemistry**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Prerequisite: Chemistry 100 and 100L, or Chemistry 152 and 152L, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Chemistry 130L with a grade of "C" or better, or equivalent.

This is a one-semester course that introduces the basic physical, chemical and structural features of organic and biological compounds. Topics such as bonding, saturated and unsaturated hydrocarbons, the chemistry of organic functional groups, and the properties of important biological compounds such as carbohydrates, fats, and proteins are covered. The importance of these compounds in our daily lives is emphasized. This course is designed for nursing, nutrition, and allied health majors. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Chemistry (CHEM) 130, 130L and 231, 231L combined: maximum credit, one course (with lab).

130L Introduction to Organic and Biological Chemistry Laboratory**3 hours lab, 1 unit****Letter Grade or Pass/No Pass Option**

Prerequisite: Chemistry 100 and 100L, or Chemistry 152 and 152L, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Chemistry 130 with a grade of "C" or better, or equivalent

This is a one-semester laboratory course that illustrates the principles presented in Chemistry 130. Students are introduced to common organic chemistry laboratory equipment, fundamental organic and biochemical reactions, tests and techniques. Techniques covered include chromatography, recrystallization, and distillation. Tests and reactions of common organic functional groups, carbohydrates, fats, and amino acids are covered. Synthesis of a medicinal compound such as aspirin or a nitrogen-based analgesic is also covered. This course is designed for nursing, nutrition, and allied health majors. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Chemistry (CHEM) 130, 130L and 231, 231L combined: maximum credit, one course (with lab).

152 Introduction to General Chemistry**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50.

Corequisite: Chemistry 152L.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Chemistry 151.

This is a one-semester preparatory course in chemistry consisting of an intensive study of some of the principles of inorganic and physical chemistry that are needed before taking Chemistry 200. Topics include but are not limited to atomic structure, chemical nomenclature, periodicity, chemical equations, stoichiometry, solutions, intermolecular forces, and gas laws. The course emphasizes problem solving and chemical calculations. It is intended for those students majoring in one of the natural sciences, engineering, or related curricula who do not meet the entrance requirements of Chemistry 200. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course Limitation: Chemistry (CHEM) 100, 100L and 152, 152L combined: maximum credit, four units. No credit will be given for 100, 100L or 152, 152L if taken after CHEM 200.

152L Introduction to General Chemistry Laboratory**3 hours lab, 1 unit****Letter Grade or Pass/No Pass Option**

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50.

Corequisite: Completion of or concurrent enrollment in Chemistry 152 with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Chemistry 151L.

Chemistry 152L is a one-semester laboratory course intended as the companion course for Chemistry 152. Topics include chemical measurement, significant figures, laboratory safety, laboratory techniques, chemical reactions and stoichiometry. An emphasis is placed on problem solving, data analysis and chemical calculations. It is intended for those students majoring in one of the natural sciences, engineering or related curricula who do

not meet entrance requirements of Chemistry 200. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course Limitation: Chemistry (CHEM) 100, 100L and 152, 152L combined: maximum credit, four units. No credit will be given for 100, 100L or 152, 152L if taken after CHEM 200.

200 General Chemistry I - Lecture
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Prerequisite: Chemistry 152 and 152L, each with a grade of "C" or better, or equivalent and Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50.

Corequisite: Completion of or concurrent enrollment in Chemistry 200L with a grade of "C" or better, or equivalent.

This is the first course in a two course sequence in general chemistry. Emphasis is placed on the principles and laws of inorganic chemistry, including quantitative, mathematical problem-solving. Topics include chemical equations, stoichiometry, atomic theory, and its relationship to periodicity of the elements, bonding theories, molecular geometry, solution chemistry, liquids, solids, and the gas laws. This course is intended for science majors and all students interested in chemistry. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

200L General Chemistry I - Laboratory
6 hours lab, 2 units
Letter Grade or Pass/No Pass Option

Corequisite: Completion of or concurrent enrollment in Chemistry 200 with a grade of "C" or better, or equivalent.

This is the first semester laboratory course in a two course sequence in general chemistry. Emphasis is placed on laboratory experiments that illustrate the fundamental principles and laws of chemical behavior and the properties of matter, including quantitative, mathematical problem-solving. Topics include techniques of data analysis, chemical formulas, equations, stoichiometry and maintenance of a laboratory notebook. This course is intended for science majors and all students interested in chemistry. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

201 General Chemistry II Lecture
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Prerequisite: Chemistry 200 and Chemistry 200L, each with a grade of "C" or better, or equivalent.

Corequisite: Chemistry 201L.

This is the second course in a two-course sequence in general chemistry and is intended for students majoring in science or satisfying prerequisites for professional schools. The course covers the principles and laws of physical and inorganic chemistry with emphasis on quantitative, mathematical problem solving. Topics include chemical kinetics, chemical equilibrium, acid-base theory, thermochemistry, thermodynamics, electrochemistry, coordination chemistry, and nuclear chemistry. The course also includes an introduction to organic and biochemistry. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

201L General Chemistry II Laboratory
6 hours lab, 2 units
Letter Grade or Pass/No Pass Option

Corequisite: Chemistry 201.

This is the second semester laboratory course in a two-course sequence in general chemistry and is intended for students majoring in science or satisfying prerequisites for professional schools. The course illustrates the fundamental principles of physical and inorganic chemistry with some organic chemistry in terms of laboratory experiments. Topics include techniques of data analysis, chemical kinetics, chemical equilibrium, acids, bases, and salts, thermochemistry, electrochemistry, coordination chemistry and organic chemistry. Wherever appropriate and whenever possible, computer skills are introduced and applied to data analysis, laboratory simulations, and computer interfacing with laboratory equipment. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

231 Organic Chemistry I - Lecture
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Prerequisite: Chemistry 201 and Chemistry 201L, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Chemistry 231L with a grade of "C" or better, or equivalent.

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of "C" or better, or equivalent.

This course is the first semester of a one-year course in Organic Chemistry. Major themes include, but are not limited to, bonding and molecular structure, nomenclature, reaction mechanisms, synthesis, and an introduction to conjugated and aromatic carbon based compounds. An emphasis is placed on the reactions of aliphatic compounds such as alkanes, cycloalkanes, alkenes, alkynes, and alkyl halides. The organic chemistry literature, and spectral interpretation using techniques such as infrared and nuclear magnetic resonance spectroscopies, are introduced to support the above topics. This course is designed for undergraduates pursuing a degree in the chemical sciences, training in chemical technology, and other transfer students who need organic chemistry as part of the formal preparation for their major; for example, molecular biology, premedical, pre dental, and pharmacy. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Chemistry (CHEM) 130, 130L and 231, 231L combined: maximum credit, one course (with lab).

231L Organic Chemistry I - Laboratory **6 hours lab, 2 units** **Letter Grade or Pass/No Pass Option**

Prerequisite: Chemistry 201 and Chemistry 201L, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Chemistry 231 with a grade of "C" or better, or equivalent.

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of "C" or better, or equivalent.

This is a laboratory course designed to illustrate the principles presented in Chemistry 231. The emphasis is on the determination of physical properties and the separation, purification and identification of organic compounds. The course acquaints students with the equipment, glassware, techniques and safe practices specific to the organic chemistry laboratory. Techniques such as measurements of physical constants, recrystallization, extraction, distillation and chromatography are used in the synthesis and/or characterization of selected classes of organic compounds. These classes include, but are not limited to, alkanes, alkenes, alkynes, alkyl halides, and alcohols. The organic chemistry literature,

and spectral interpretation using techniques such as infrared and nuclear spectroscopies, are introduced to support the above topics. This course is designed for undergraduates pursuing a degree in the chemical sciences, training in chemical technology, and those students who need organic chemistry as part of the formal preparation for their major; for example, molecular biology, premedical, pre dental, and pharmacy. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Chemistry (CHEM) 130, 130L and 231, 231L combined: maximum credit, one course (with lab).

233 Organic Chemistry II - Lecture **3 hours lecture, 3 units** **Letter Grade or Pass/No Pass Option**

Prerequisite: Chemistry 231 and Chemistry 231L, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Chemistry 233L with a grade of "C" or better, or equivalent.

This course is the second semester of a one-year sequence in Organic Chemistry. It is designed for students pursuing a baccalaureate degree in the chemical sciences or in majors such as premedical, pre dental or pharmacy; and for students training for careers in some chemical technology fields. The topics covered include, but are not limited to, molecular structure, nomenclature, reaction mechanisms, and synthesis. An emphasis is placed on the reactions of selected classes of organic compounds, such as alcohols, ethers, aldehydes, ketones, carboxylic acids and their derivatives, amines, benzenoid and heterocyclic aromatics and their derivatives, carbohydrates, lipids, amino acids and peptides, and nucleic acids. The study of these molecules provides a backdrop for exploring the factors that govern particular transformations within a synthetic sequence. The use of print and electronic media and the interpretation of spectroscopic information (such as infrared, nuclear magnetic resonance, and ultraviolet-visible spectroscopies, and mass spectrometry) for the analysis and differentiation of molecular structures is continued. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

233L Organic Chemistry II - Laboratory
6 hours lab, 2 units
Letter Grade or Pass/No Pass Option

Prerequisite: Chemistry 231 and Chemistry 231L, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Chemistry 233 with a grade of "C" or better, or equivalent.

This course is the second semester of a one-year sequence in Organic Chemistry Laboratory and is designed to illustrate the principles presented in Chemistry 233. It is intended for students pursuing a baccalaureate degree in the chemical sciences or in majors such as premedical, pre dental or pharmacy; and for students training for careers in some chemical technology fields. The emphasis is on synthesis, purification and/or characterization of selected classes of organic compounds, including but not limited to aromatics, alcohols, aldehydes and ketones, carboxylic acids, amines, and simple examples of bio-organic molecules. Additional emphasis is placed on multi-step synthetic pathways and product identification using selected methods of qualitative organic analysis such as wet chemical and advanced spectroscopic techniques. Variation of scale from micro- to macro-quantities, and more advanced separation and analytical techniques, distinguish the level of this course from Organic Chemistry I Laboratory. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

251 Analytical Chemistry
3 hours lecture, 6 hours lab, 5 units
Letter Grade or Pass/No Pass Option

Prerequisite: Chemistry 201 and Chemistry 201L and Mathematics 150, each with a grade of "C" or better, or equivalent.

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of "C" or better, or equivalent.

This is a course in quantitative analysis. Major topics include theory and practice of gravimetric and volumetric methods of chemical analysis and introduction to instrumental methods of analysis with a focus on precision and accuracy of experimental data. The target audience for Chemistry 251 is students majoring in chemistry or biochemistry and others who need the course for career advancement. It is recommended that students who plan to enroll in this course do so the semester following completion of Chemistry 201.

(FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Geography (GEOG)

101 Physical Geography
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course examines the major world patterns of the physical environment. The course covers the fundamental information and processes dealing with the earth's atmosphere, climate, landforms, natural vegetation, water, and soils, along with the appropriate use of maps and charts. This course is of interest to anyone seeking an understanding of the Earth's physical processes and mechanisms or Social Science majors. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

101L Physical Geography Laboratory
3 hours lab, 1 unit
Grade Only

Corequisite: Completion of or concurrent enrollment in Geography 101 with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 and M20.

This course requires practical observations and applications of the geographic grid, atlases and topographic maps, weather and climate, natural vegetation and soils, and landforms. Exercises are designed to supplement Physical Geography 101. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

102 Cultural Geography**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of "C" or better, or equivalent.

This course is an introduction to thematic cultural geography. The elements covered include population, race, language, religion, settlement patterns, political organization, economic activities, industry, and the regional distribution of these elements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

104 World Regional Geography**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 101 or English 105, with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6.

This course provides students with a survey of the physical, cultural, political, and economic characteristics of the world's major geographical regions. These regions include Europe, North America, Latin America, Africa, Australia, Oceania, and South, East, and Southeast Asia. The course focuses on historical, environmental, cultural, economic, and technological factors that impact the world's main geographical areas. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Geology (GEOL)**100 General Geology****3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 48 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5.

This course investigates the physical characteristics of the earth as a whole, and the past, present, and future evolutionary processes affecting it. Primary topics include earth materials, geologic time, uniformitarianism, the fossil record, and plate tectonics. The course is designed for those students with a general interest in geology or earth science. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

101 General Geology Laboratory**3 hours lab, 1 unit****Letter Grade or Pass/No Pass Option**

Corequisite: Completion of or concurrent enrollment in Geology 100 with a grade of "C" or better, or equivalent.

Advisory: English 48 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5.

This laboratory course covers mineral and rock identification, landforms, topographic/geologic map interpretation, and geologic structures. The course is designed to supplement Geology 100 with laboratory experience. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

104 Earth Science**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course investigates Earth's major physical systems, including the lithosphere, hydrosphere, and atmosphere, as well as Earth's place in the solar system. As such, this course provides a brief synthesis of pertinent topics in geology, physical geography, oceanography, meteorology, and astronomy. It is intended for those with a general interest in the Earth sciences and those wishing to satisfy requirements for a California Multiple Subject Teaching Credential. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

290 Independent Study**Hours by Arrangement, 1-3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 48 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5. Geology 100 and 101, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Must obtain an Add Code from instructor for registration. For students who wish to study special problems. This course may be taken four times with different content for a maximum of six units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Geographic Information Systems (GISG)

104 Geographic Information Science and Spatial Reasoning

**2.5 hours lecture, 1.5 hours lab, 3 units
Grade Only**

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50. This is a survey course designed to provide an introductory overview of geographic information systems (GIS), cartography, remote sensing, spatial analysis, and global positioning systems (GPS). Students will learn how these critical technologies are used in addressing human and environmental problems. The lectures and lab exercises will provide an introductory knowledge of GIS including map interpretation, georeferencing, and spatial data management. Topics will include how to use spatial data to visualize information and identify spatial patterns. Topics include basic GIS concepts such as query and map overlay. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

110 Introduction to Mapping and Geographic Information Systems

**2.5 hours lecture, 1.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 101 or English 105, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; Computer Business Technology 101, 114 and 161, each with a grade of "C" or better, or equivalent.

This course covers the origins and fundamentals of Geographic Information Systems (GIS), an essential tool in government and business. GIS uses spatial information and software to map, analyze, and model real world problems, in many fields such as forestry, homeland security, economics, cartography, city planning, and health. Labs include hands-on experience with ArcGIS software. Subjects are map making, GIS data creation and management, and map projections and coordinate systems. GIS mapping is a skill needed by many who work in both the public and private sector. This course will provide the skills and knowledge to create basic spatial data and GIS maps. It also lays the foundation for students who want to be employed as a GIS Technician or who want to pursue a degree or certificate and it prepares students for entry-level careers. This course is required for the GIS certificate and the AS degree. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Physical Science (PHYN)

100 Survey of Physical Science

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 42 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Level R4 and M20; and concurrent enrollment in Physical Science 101 with a grade of "C" or better, or equivalent.

This course is an introductory survey of the fundamental concepts of astronomy, geology, chemistry and physics and the interrelationships among these disciplines. Emphasis is placed on the ways in which the physical sciences affect life on the planet and the role the discipline plays in addressing issues and problems related to energy, ecology and environmental sustainability. This course is recommended for students planning to major in geography and/or planning to transfer to a four-year institution. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: No credit if taken after a college level course in Chemistry or Physics.

101 Survey of Physical Science Laboratory
3 hours lab, 1 unit
Letter Grade or Pass/No Pass Option

Corequisite: Completion of or concurrent enrollment in Physical Science 100 with a grade of "C" or better, or equivalent.

Advisory: Completion of or concurrent enrollment in English 48 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and M40.

This course introduces students to the science laboratory and is designed to demonstrate the fundamental concepts of astronomy, geology, chemistry and/or physics as presented in Physical Science 100. Emphasis is placed on the application of the scientific method and collaborative learning. This course is recommended for students planning to major in geography and/or planning to transfer to a four-year institution. (FT) Associate Degree Credit and transfer to CSU and/or private colleges and universities. UC Transfer Limitation: No credit if taken after a college level course in Chemistry or Physics.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Physics (PHYS)

100 Introductory Physics
3 hours lecture, 3 hours lab, 4 units
Letter Grade or Pass/No Pass Option

Advisory: Mathematics 46 with a grade of "C" or better, or equivalent, or Assessment Skill Level M40. This course is designed for transfer-level students or for those wanting to acquire basic knowledge in physics with a minimum preparation in mathematics. A comprehensive coverage of subject matter in physics is presented, including mechanics, wave motions, thermodynamics, optics, electromagnetism, atomic and nuclear physics. Emphasis is on the conceptual aspects, including explanation of natural phenomena. The learning of concepts is reinforced through laboratory work. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: No credit

for Physics (PHYS) 100 if taken after a college level course in Physics. Engineering Technology (ENGN) 110, Chemistry (CHEM) 100, and Physics (PHYS) 100 combined: maximum credit, one course.

125 General Physics
4 hours lecture, 3 hours lab, 5 units
Letter Grade or Pass/No Pass Option

Prerequisite: Mathematics 104 or Mathematics 116, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Physics 120A, 181A, 124A, 125A, or 195.

This course is an introductory survey of the concepts and principles of physics. Emphasis is placed on developing an understanding of the properties of matter, mechanics, heat and sound. This course is intended for students taking liberal arts and/or pre-professional courses that do not require physics with calculus. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Physics (PHYS) 120A-120B, 121A-121B, 124A-124B, 125-126, 180A-180B, 181A-181B, 195A-195B-195C and 195-196-197 combined: maximum credit, one series.

126 General Physics II
4 hours lecture, 3 hours lab, 5 units
Letter Grade or Pass/No Pass Option

Prerequisite: Physics 125 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Physics 120B, 181B, 124B, 125B, 195B or 196.

This second course in a two-part introductory survey explores the concepts and principles of physics. Topics include electricity, magnetism, light, and modern physics. This course is intended for students taking liberal arts and/or pre-professional courses that do not require physics with calculus. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations: Physics (PHYS) 120A-120B, 121A-121B, 124A-124B, 125-126, 180A-180B, 181A-181B, 195A-195B-195C and 195-196-197, combined: maximum credit, one series.

180A General Physics I
4 hours lecture, 4 units
Letter Grade or Pass/No Pass Option

Prerequisite: Mathematics 116 with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Mathematics 121 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Physics 120A and Physics 125A, or credit or concurrent enrollment in Physics 124A.

This course is an introductory survey of the concepts and principles of physics. Emphasis is placed on developing an understanding of the properties of matter, mechanics, heat and sound in order to make calculations and solve fundamental physics problems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations: Physics (PHYS) 120A-120B, 121A-121B, 124A-124B, 125-126, 180A-180B, 181A-181B, 195A-195B-195C and 195-196-197 combined: maximum credit, one series.

180B General Physics II

4 hours lecture, 4 units

Letter Grade or Pass/No Pass Option

Prerequisite: Physics 180A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Physics 120B and Physics 125B, or credit or concurrent enrollment in Physics 124B.

This course is an introductory survey of the concepts and principles of physics. Emphasis is placed on developing an understanding of the properties of electricity, magnetism, light and modern physics in order to make calculations and solve fundamental physics problems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations: Physics (PHYS) 120A-120B, 121A-121B, 124A-124B, 125-126, 180A-180B, 181A-181B, 195A, 195B, 195C and 195-196-197 combined: maximum credit, one series.

181A General Physics Laboratory I

3 hours lab, 1 unit

Letter Grade or Pass/No Pass Option

Corequisite: Completion of or concurrent enrollment in: Physics 180A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Physics 121A.

This laboratory course is a hands-on study of the properties of matter, mechanics, heat and sound through laboratory experiments. This course is designed for students interested in the physical sciences. (FT) Associate Degree Credit & transfer to

CSU and/or private colleges and universities.

UC Transfer Limitation: Physics (PHYS) 120A-120B, 121A-121B, 124A-124B, 125-126, 180A-180B, 181A-181B, 195A-195B-195C and 195-196-197 combined: maximum credit, one series.

181B General Physics Laboratory II

3 hours lab, 1 unit

Letter Grade or Pass/No Pass Option

Prerequisite: Physics 180A with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in: Physics 180B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Physics 121B.

This laboratory course is a hands-on study of the principles of electricity, magnetism, light and modern physics through laboratory experiments.

This course is designed for students interested in the physical sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Physics (PHYS) 120A-120B, 121A-121B, 124A-124B, 125-126, 180A-180B, 181A-181B, 195A-195B-195C and 195-196-197 combined: maximum credit, one series.

195 Mechanics

4 hours lecture, 3 hours lab, 5 units

Letter Grade or Pass/No Pass Option

Prerequisite: Mathematics 150 with a grade of "C" or better, or equivalent.

Corequisite: Mathematics 151

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Physics 195A and Physics 196A.

The Physics 195, 196, 197 sequence is designed to give a foundation in calculus-based physics for engineering and science majors. Physics 195 deals primarily with the description of motion, Newton's Laws, energy, momentum, rotation, gravity, oscillatory motion, and thermodynamics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations: Physics (PHYS) 120A-120B, 121A-121B, 124A-124B, 125-126, 180A-180B, 181A-181B, 195A-195B-195C and 195-196-197 combined: maximum credit, one series.

196 Electricity and Magnetism

4 hours lecture, 3 hours lab, 5 units
Grade Only

Prerequisite: Physics 195 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Physics 195B and 196B.

This is the second of a three-semester calculus-based general physics sequence, intended to satisfy the transfer requirements of students planning to major in the physical sciences and in engineering. The topics of study include the basic principles and applications of electrostatics, magnetostatics, time-varying electric and magnetic phenomena, direct and alternating current circuits, elementary electronics and electromagnetic waves. Emphasis is placed on the mathematical analysis of physical problems. Laboratory work on various aspects of electric and magnetic phenomena emphasizing direct current and alternating current circuits is included. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations: Physics (PHYS) 120A-120B, 121A-121B, 124A-124B, 125-126, 180A-180B, 181A-181B, 195A-195B-195C and 195-196-197 combined: maximum credit, one series.

197 Waves, Optics and Modern Physics

4 hours lecture, 3 hours lab, 5 units
Letter Grade or Pass/No Pass Option

Prerequisite: Physics 195 with a grade of "C" or better, or equivalent.

Advisory: Completion of or concurrent enrollment in Physics 196 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Physics 195C and Physics 196C.

Physics 197 is the third semester of a three semester calculus-based course designed for prospective scientists and engineers. Topics include the fundamental principles of physics of waves, the behavior of light, and an introduction to relativity, quantum physics and the atomic and nuclear properties of matter. PHYS 196 and 197 may be taken concurrently only if PHYS 195 was completed with a grade of "B" or better or with approval of the department. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations: Physics (PHYS) 120A-120B, 121A-121B, 124A-124B, 125-126, 180A-180B,

181A-181B, 195A-195B-195C and 195-196-197 combined: maximum credit, one series.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Physical Education

Health Education, Exercise Science, Fitness Specialist and Athletics

Award Type	Units
Certificate of Achievement:	
Fitness Specialist	18
Associate in Arts Degree:	
Transfer Option	18*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

Physical Education/Exercise Science is a discipline which focuses on the process through which individuals develop optimal physical, mental and social skills through regular physical activity. Exposure to varieties of movement experiences nurtures the development of active lifestyles necessary to achieve wellness objectives which improve the quality of life.

Program Emphasis

The Health & Exercise Science department offers a diverse curriculum which includes lower division theory courses designed for those who want to complete their Associate in Arts degree in the discipline and transfer to an institution of higher learning. An additional component includes a basic instruction program which provides students a wide variety of movement experiences for the development of physical activity skills and knowledge necessary for lifetime wellness. A third program focuses on a Certificate program for fitness specialist. Finally, an intercollegiate program, offers performance-oriented students opportunities for competition.

Faculty	Office	Telephone
Jennifer Aase	P3-106	619-388-3485
Dede Bodnar	P3-203	619-388-3544
Christopher Brown	PM-13	619-388-3705
Mitch Charlens	P3-106	619-388-3703
James Colbert	PM-13	619-388-3706
Paul Greer	P2-02	619-388-3704
Andrea Milburn	PM-13	619-388-3121
LeeAnn Taylor	PM-13	619-388-3890
Ellen Turkel	P2-02	619-388-3127

Career Options

Career options in physical education include: athletic administrator; athletic trainer; coach; health/sport club manager; health and safety director; personal trainer, public, private or nonprofit organization recreation director; resort activities director; sports journalist and teacher. Students earning the Associate in Arts degree in Physical Education may find employment at assistant level positions in the K-12 school system, the fitness industry or recreational settings.

Student Learning Outcomes

ATHLETICS

Upon successful completion the student/athlete will be able to:

- Create an Educational Plan with the Athletic Counselor
- Develop a greater skill level in their sport
- Exhibit the qualities of teamwork as it relates to their sport
- Develop a player profile to be used as a recruiting tool for four year institutions
- Increase their levels of physical fitness

HEALTH

Upon successful completion the student will be able to:

- Learn that life is a balancing act and identify how the following components of wellness will aid in successfully navigating one's life.
 - Physical
 - Spiritual
 - Emotional
 - Cognitive

- Social
- Environmental

EXERCISE SCIENCE

Upon successful completion the student will improve in one or more of the following fitness components:

- Cardio-respiratory endurance
- Muscular endurance
- Muscular strength
- Flexibility
- Body composition

FITNESS SPECIALIST

Upon successful completion the student will be able to:

- Demonstrate the ability to prescribe safe and effective exercise
- Develop and implement group and individual exercise programs
- Possess an applied understanding of human anatomy, physiology and nutrition as it applies to physical fitness
- Develop specialized fitness programs to meet the needs of the targeted individual.

Associate in Arts Degree: Physical Education

Transfer Option

Courses Required for the Major:		Units
PHYE 166	Weight Training	1
PHYE 241	Introduction to Exercise Science/ Physical Education	2

Select four units from:

PHYE 103-167	(See catalog for course titles and descriptions)	4
BIOL 107	General Biology, Lecture & Lab	4
BIOL 230	Human Anatomy	4
SOCO 101	Principles of Sociology	3

Total Units = 18

Recommended electives: Physical Education 240, 243 or any activity course; Psychology 101, 258.

Transfer Information

Common university majors related to the field of Physical Education include: Athletic Administration, Athletic Training, Exercise

Science, Health Administration, Health Education, Health Sciences, Kinesiology, Physical Education, Pre-Physical Therapy, Recreation, Sports Management.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Fitness Specialist

Certificate Program Description

Students in this program will be trained to be group exercise leaders and personal trainers. Students will learn the principles of exercise and physical conditioning, techniques of leading individual and group exercise classes, appropriate methods to establishing healthy behavior and the designing of personalized exercise prescriptions. They will be able to develop safe, effective exercise plans for a variety of clients.

Program Emphasis

The Fitness Specialist certificate program trains students for positions, entry-level or higher, in the growing fitness industry.

Career Options

Graduates will be qualified to be exercise testing technicians, fitness instructors, strength training instructors, aerobic instructors, and personal fitness trainers.

The fitness industry continued to experience growth and has an ongoing need for trained instructors and trainers in health clubs, fitness centers, and sports medicine clinics.

Please note that students enrolled in an occupational program must earn a grade of "C" or better in courses required for the major.

Certificate of Achievement: Physical Education

Fitness Specialist

Courses Required for the Major:		Units
PHYE 242	Care and Prevention of Injuries	2
PHYE 280	Applied Exercise Physiology	2
PHYE 281	Applied Kinesiology	2
PHYE 282	Techniques of Weight Training	2
PHYE 283	Exercise and Fitness Assessment	2
PHYE 284	Fitness and Sports Nutrition	2
PHYE 285	Exercise for Special Populations	2
PHYE 286	Techniques of Exercise Leadership	2
PHYE 287	Fitness Specialist Internship	2

Total Units = 18

This program prepares candidates for American College of Sports Medicine (ACSM) or American Council of Exercise (ACE) certification exams.

Physical Education Classes/Intercollegiate Sports Disclaimer

Participation in all sports and physical education activities involves certain inherent risks. Risks may include, but are not limited to, neck and spinal injuries that may result in paralysis or brain injury, injury to bones, joints, ligaments, muscles, tendons and other aspects of the muscular skeleton system, and serious injury, or impairment, to other aspects of the body and general health, including death. The San Diego Community College District, its officers, agents and employees are not responsible for the inherent risks associated with participation in physical education classes/intercollegiate sports.

Students are strongly advised to consult a physician prior to participating in any physical education activity.

Courses

Health Education (HEAL)

101 Health and Life-Style

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course studies aspects of mental, emotional, and physical health. Emphasis is placed on knowledge for development of attitude, understanding, and practice of a preventive life style for healthy living and optimal wellness. Specific instructional areas include chronic diseases, physical activity, nutrition, weight management, birth control methods, human sexuality, alcohol, tobacco, and illicit chemical use, stress, and factors that contribute to wellness and longevity. Experience in personal health assessment and the changing of health behaviors is stressed. Satisfies State of California Health Education requirement for teaching credential. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

190 Health Education For Teachers

**1 hour lecture, 1 unit
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course overviews health-related issues and problems in the kindergarten through 12th grade. Topic areas include behavior modification, stress symptoms and management, physical activity, nutrition, cardiovascular disease, pregnancy and sexually transmitted diseases, illicit substance abuse, alcohol and nicotine use and misuse, violence and gang issues, school and home safety issues. This course satisfies the State of California Health Education requirement for the K-12 Teaching Credential. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Physical Education (PHYE)

Physical Education classes are offered at the beginning, intermediate and advanced levels.

Aquatic Activities

A program which offers the student a choice from a variety of courses. Instruction and conditioning in all aspects of aquatics to provide a carry-over value for leisure life.

155 Swimming

2-3 hours lab, .5 -1 unit

Letter Grade or Pass/No Pass Option

This course emphasizes instruction and practice in the fundamental to advanced swimming strokes including water safety skills. Stroke analysis, conditioning and endurance are stressed in the progression of classes. Beginning and intermediate levels are available. This course may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer limitations. See a Counselor.

156 Water Exercise

2-3 hours lab, .5 -1 unit

Letter Grade or Pass/No Pass Option

Instruction in the development of the fundamental elements of fitness through the application of water resistance and buoyancy. Progressive instruction includes the development of increasingly more strenuous exercises for cardiorespiratory fitness, muscular strength, endurance and flexibility. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer limitations. See a Counselor.

181A Adapted Swimming

2-3 hours lab, .5 -1 unit

Letter Grade or Pass/No Pass Option

Limitation on Enrollment: A physician's medical release form is required. This course is not open to students with credit for Physical Education 181, 181C, or 181D.

This course is designed for students with disabilities to learn how to swim through modified swimming strokes based on their abilities. Emphasis is placed on practice in the fundamental swimming strokes, including water safety skills. Stroke analysis, conditioning and endurance is stressed in the progression of the class. This course meets the SDCCD graduation requirements. This course may be taken four times for credit. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer limitations. See a Counselor.

Dance

Dance courses may be used to fulfill the Physical Education graduation requirement. See page 75 in the Academic Requirements section of this catalog.

103 Aerobic Dance

**2 - 3 hours lab, .5-1 unit
Letter Grade or Pass/No Pass Option**

This rigorous aerobic dance course is designed to increase both fitness levels and awareness of what constitutes a safe and effective exercise program. Instruction includes a balanced program of aerobics, toning, stretching, relaxation and related health topics. This course may be taken four times for credit. Students must demonstrate increased proficiency and skill attainment with each repetition. When this course is offered for three hours per week, the additional time is utilized for skill development and enhanced cardio-vascular fitness. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer limitations. See a Counselor.

Individual Activities

A basic program which offers the student a choice of vigorous, competitive activity in individual sports and activities designed to provide carry-over value for leisure life. Instruction is in fundamental skills knowledge of rules and strategy, with emphasis on physical fitness.

47 Physical Activities for Youth

**3 hours lab, 1 unit
Pass/No Pass Only**

This course is the physical activity component for youth participating in the National Youth Sports Program. Students are introduced to a variety of physical activities, which provide the student with skills necessary to practice an active lifestyle. This course offers opportunities to engage in physical activities for health benefits, to study simple physical skill mechanics for efficiency of movement, to learn about the rules and regulations of physical activities for safety and participation strategies, and to recognize the health implications of an active lifestyle. Credit does not apply to the associate degree.

104 Step Aerobics

**3 hours lab, 1 unit
Letter Grade or Pass/No Pass Option**

Step Aerobics is a rigorous exercise course designed to increase both the fitness levels of

participating students and their understanding of what constitutes a safe and effective exercise program. Instruction includes a balanced exercise program of step aerobics, toning, stretching, and relaxation along with discussion of related health topics. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer limitations. See a Counselor.

108 Badminton

**2-3 hours lab, .5 - 1 units
Letter Grade or Pass/No Pass Option**

This course provides instruction and on-court experience in the skills, strategies, rules and behaviors necessary to play badminton at the beginning, intermediate or advanced level and is intended for novices and students currently playing at any of these levels. This course may be taken four times for credit. Students must demonstrate increased proficiency and skill attainment with each repetition. When this course is offered for three hours per week, the additional time is utilized for stroke development drills and application of strategies in playing situations. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer limitations. See a Counselor.

115 Bowling

**2 - 3 hours lab, .5-1 unit
Letter Grade or Pass/No Pass Option**

This course is designed to develop bowling skills. Emphasis is placed on stance, point of origin, approach, back swing, release and follow through. Topics include rules, scoring and etiquette in the game of bowling. This course may be taken four times for credit. Students must demonstrate increased proficiency and skill attainment with each repetition. When this course offered for three hours per week, the additional time is utilized for spot bowling and participation in league bowling situations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer limitations. See a Counselor.

123 Fitness Activities

**2 - 3 hours lab, .5 - 1 unit
Letter Grade or Pass/No Pass Option**

This course includes instruction in the skills necessary to improve aerobic fitness and cardiovascular health. Through fitness topics covered, students will develop an individual fitness program. Aerobic exercise focuses primarily jogging, progressing to running for the development of

comprehensive fitness. This course may be taken four times for credit. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer limitations. See a Counselor.

126 Golf

**2 - 3 hours lab, .5 - 1 unit
Letter Grade or Pass/No Pass Option**

This course provides golf instruction and practice in the fundamentals of grip, stance, alignment, backswing, and downswing. Topics also include stretching and principles of warm-up, golf club selection and use, player guidelines, scoring, game etiquette, and safety procedures. The course emphasizes the "one basic golf swing" theory and includes extensive practice and play at local courses. This course may be taken four times for credit. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer limitations. See a Counselor.

132 Individual Conditioning

**2 - 3 hours lab, .5 - 1 unit
Letter Grade or Pass/No Pass Option**

This course provides individually programmed instruction in the fundamental skills and techniques of weight training and aerobic activity. The positive impact of physical education on health and wellness is explored and emphasized. Through progressive inquiry and practice, students demonstrate more advanced levels of weight training and comprehensive aerobic development. This course is of particular interest to students wishing to enter the fields of sports medicine and athletics, as well as to students seeking to improve overall fitness. Students must demonstrate increased proficiency and skill attainment with each repetition. This course may be taken four times for credit. When this course is offered for three hours per week, the additional time is utilized for the practice of weight training skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer limitations. See a Counselor.

133 Cardio Kickboxing

**2 - 3 hours lab, .5 - 1 unit
Letter Grade or Pass/No Pass Option**

This course is an introduction to cardiorespiratory fitness combined with basic kickboxing techniques, practices and principles. Instruction includes upper body punching functions, kick techniques and combination series of both upper body and lower body kickboxing routines. The benefits of kickboxing

include increased strength, flexibility, and balance as well as stress reduction. The class will have a pre-designed format along with choreographed music. Cardio Kickboxing is a unique form of non-contact cardiovascular exercise. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. See a Counselor.

142 Racquetball

**1.5 - 3 hours lab, .5-1 unit
Letter Grade or Pass/No Pass Option**

This course offers instruction and practice in racquetball at the beginning, intermediate and advanced recreational levels. Emphasis is placed on the skills of grip, strokes, footwork, court coverage and rules of the game. Singles and doubles strategies, offensive and defensive positioning and tournament play are incorporated at the intermediate and advanced levels. This course is intended for novices and students currently playing at any of these levels. This course may be taken four times for credit. Students must demonstrate increased proficiency and skill attainment with each repetition. When this course is offered for three hours per week, the additional time is utilized for skill development and court strategy. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer limitations. See a Counselor.

150 Lifelong Fitness Behaviors

**1 hour lecture, 1 unit
Grade Only**

This is a lecture course designed for students with limited knowledge or experience with physical fitness. Weekly lecture sessions will address the relationship between exercise and wellness. Lecture topics will include the value of exercise, health related physical fitness, nutrition, weight control, stress management, behavior modification, and hypokinetic disease prevention. Students will learn how to self-manage fitness behavior modifications. This class must be taken concurrently with Physical Education 153. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

153 Lifelong Fitness Lab

**2 - 3 hours lab, .5 - 1 unit
Pass/No Pass Only**

This course is designed to provide students with the knowledge and practice to develop the attitudes and habits required for attaining and maintaining appropriate, individual physical fitness levels.

Emphasis is placed on developing and maintaining cardiovascular efficiency as well as muscular strength, endurance and flexibility through circuit and/or strength training. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a Counselor.

157 Fitness Applications

**2 - 3 hours lab, .5 - 1 unit
Pass/No Pass Only**

Advisory: Completion of or concurrent enrollment in Physical Education 153 with a grade of "C" or better, or equivalent.

This course is designed to provide students with the opportunity to increase their fitness levels by use of a longer and more demanding aerobic circuit. Each student is assessed in the areas of cardiovascular efficiency, flexibility, muscular endurance and body composition. An individualized fitness program is prescribed utilizing goals established jointly by the student and instructor. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

159 Tennis

**2 - 3 hours lab, .5 - 1 unit
Grade Only**

This course provides instruction and on-court experience in the skills, strategies, rules and behaviors necessary to play tennis at the beginning, intermediate or advanced recreational level and is intended for novices and students currently playing at any of these levels. This course may be taken four times for credit. Students must demonstrate increased proficiency and skill attainment with each repetition. When this course is offered for three hours per week, the additional time is utilized for stroke development drills and application of strategies in playing situations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a Counselor.

166 Weight Training

**2 - 3 hours lab, .5 - 1 unit
Letter Grade or Pass/No Pass Option**

This course is an introduction to progressive resistance training. It is designed for the student interested in developing strength, muscle endurance, and muscle tone. Instruction includes learning proper methods of weight training, various types of weight training programs, and safety factors. This course may be taken four times for credit. Associate Degree Credit & transfer to CSU

and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

168 Yoga

**2 - 3 hours lab, .5 - 1 unit
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is an introduction to basic yoga practices and principles. Instruction includes yoga postures, guided relaxations, and breathing practices. The benefits of yoga include increased flexibility, strength, balance, and body awareness as well as stress reduction. This course is designed for students interested in health and longevity. This course may be taken four times for credit. Students must demonstrate increased proficiency and skill attainment with each repetition. When this course is offered for three hours per week, the additional time is utilized for the practice of postures. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a Counselor.

182 Adapted Weight Training

**2 - 3 hours lab, .5 - 1 unit
Letter Grade or Pass/No Pass Option**

Limitation on Enrollment: A physician's medical release form is required.

This course is designed for students with disabilities as an introduction to progressive resistance training. Emphasis is placed on developing cardiorespiratory and muscle endurance, muscle strength and flexibility and a healthy body composition through individualized safe and beneficial exercise programming. The course includes exercises that focus on relaxation, joint mobility, body maintenance, and activities for daily living. This course may be taken four times for credit. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a Counselor.

184 Adapted Physical Fitness

**2-3 hours lab, .5 - 1 unit
Letter Grade or Pass/No Pass Option**

Limitation on Enrollment: A physician's medical release form is required.

This course is designed for students with disabilities to provide opportunities for exercise and activities to improve cardiorespiratory endurance, flexibility, muscular endurance, strength, stress management

and coordination. Activities can include walking, dance, rhythm activities, wheelchair pushing, jogging, relaxation training and exercises for joint mobility. This course may be repeated three times. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a Counselor.

187 Outdoor Cycling

**1.5-6 hours lab, .5-2 units
Grade Only**

This course provides instruction in the skills required for outdoor cycling. Emphasis is placed on proper warm-up and warm down, cycling form and bicycle maintenance. Students design a personal fitness plan around outdoor cycling. This course is intended for all students interested in cycling and personal fitness. Students must demonstrate increased proficiency and skill attainment with each repetition. When this course is offered for two units, the additional time is utilized for skill development in the area of on-road group cycling leadership. This course may be taken four times. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

188 Hiking for Fitness

**1.5-6 hours lab, .5-2 units
Grade Only**

This course provides instruction in the skills required for hiking. Emphasis is placed on proper warm-up and warm down, walking form and injury prevention and treatment. Students design a personal fitness plan around hiking. This course is intended for all students interested in hiking and personal fitness. Students must demonstrate increases proficiency and skill attainment with each repetition. When this course is offered for one or two units, the additional time is utilized for skill development in the group hiking leadership. This course may be taken four times. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

232 Martial Arts

**3 hours lab, 1 unit
Grade Only**

This course is designed for students with an interest in martial arts. It is geared toward the International Okanawan Goju-Ryu Karate-Do Federation (IOGKF) and the Tae Kwon Do Federation, with phrases and terms from other styles for general informational usage. Emphasis is placed on the fundamentals of martial arts including martial arts safety skills and

etiquette, punches, blocks, strikes, kicks, stances, vital points, tournament terminology, numbers and Kata and Forms. Kick/strike analysis, flexibility, conditioning and endurance are stressed in the progression of the class. This course may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

233 Kickboxing

**2-3 hours lab, .5 - 1 unit
Grade Only**

This course is designed for students to learn kickboxing. This course includes solo training, partner training, equipment training, and controlled sparring as practiced by the Kali/Jeet Kune Do family, including JKD kickboxing, the arts of Muay Thai training, Savate, and Panantukan styles of kickboxing. Emphasis is placed on practice in the fundamentals of kickboxing, including kickboxing safety skills and etiquette. Kick/strike analysis, balance, flexibility, conditioning, muscular strengths and endurance are stressed in the progression of the class. This course meets the SDCCD graduation requirements. This course may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

Intercollegiate Athletics

200 Intercollegiate Badminton I

**10 hours lab, 2 units
Grade Only**

Advisory: Physical Education 108 with a grade of "C" or better, or equivalent, or previous competitive badminton experience.

This is a course for students competing in their first intercollegiate badminton season. The course is offered in the spring semester and may be taken two times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

201 Intercollegiate Badminton II

**10 hours lab, 2 units
Grade Only**

Advisory: Physical Education 200 with a grade of "C" or better, or equivalent.

This is a course for students competing in their second intercollegiate badminton season. The course is offered in the spring semester and may be taken two times for credit. (FT) Associate Degree

Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

202 Intercollegiate Baseball I

Spring, 10 hours, 2 units
Letter Grade or Pass/No Pass Option

Intercollegiate varsity baseball competition. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

203 Intercollegiate Baseball II

Spring, 10 hours, 2 units
Letter Grade or Pass/No Pass Option

Intercollegiate varsity baseball. Second season of competition. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

204 Intercollegiate Basketball I

Spring/Fall
5 - 7.5 hours lab, 1 - 1.5 units
10 hours, 2 units
Letter Grade or Pass/No Pass Option

This course is intended for the first season of intercollegiate competition. Basketball skills and game strategies are at a more advanced level of participation than those of the Basketball 112 class. This course may be taken two times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

205 Intercollegiate Basketball II

5-10 hours lab, 1-2 units
Letter Grade or Pass/No Pass Option

This course is intended for the second season of intercollegiate competition. Basketball skills and game strategies are at the advanced levels of participation. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

206 Intercollegiate Cross-Country I

10 hours lab, 2 units
Letter Grade or Pass/No Pass Option

This course is for students participating in their first season of intercollegiate varsity cross-country competition. This course may be taken two times for credit. Students must demonstrate increased proficiency and skill attainment with each repetition. (FT) Associate Degree Credit & transfer to CSU and/or

private colleges and universities. UC Transfer Limitations. See a Counselor.

207 Intercollegiate Cross-Country II

10 hours, 2 units
Letter Grade or Pass/No Pass Option

Intercollegiate varsity cross-country competition. Second season of competition. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

214 Intercollegiate Soccer I

10 hours, 2 units
Letter Grade or Pass/No Pass Option

Advisory: Physical Education 149 with a grade of "C" or better, or equivalent, or previous competitive soccer experience.

This is the first course of intercollegiate soccer competition. This course is offered separately for men and women. This course may be taken two times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

215 Intercollegiate Soccer II

Fall, 10 hours, 2 units
Letter Grade or Pass/No Pass Option

Advisory: Physical Education 149 with a grade of "C" or better, or equivalent, or previous competitive soccer experience.

Advisory: Concurrent Enrollment in: Physical Education 257B

This is the second course of intercollegiate soccer competition. This course is offered separately for men and women in the fall semester. This course may be taken two times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

216 Intercollegiate Softball I

Spring 10 hours, 2 units
Letter Grade or Pass/No Pass Option

This is a course in which students competing in their first intercollegiate softball season learn and practice the techniques and strategies necessary for successful participation. Those topics covered are fundamental through advanced skills and offensive and defensive strategies. This course is offered in the spring semester and may be taken two times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

217 Intercollegiate Softball II**Spring, 10 hours, 2 units****Letter Grade or Pass/No Pass Option**

This is a course in which students competing in their second intercollegiate softball competition learn and practice the techniques and strategies necessary for successful participation. Those topics covered are fundamental through advanced softball skills and offensive and defensive strategies. This course is offered in the spring semester and may be taken two times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

220 Intercollegiate Tennis I**Spring, 10 hours lab, 2 units****Letter Grade or Pass/No Pass Option**

This is a course for students competing in their first intercollegiate tennis season. This course is offered in the spring semester for men and women and may be taken two times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

221 Intercollegiate Tennis II**Spring, 10 hours lab, 2 units****Letter Grade or Pass/No Pass Option**

This is a course for students competing in their second semester of intercollegiate tennis season. This course is offered in the spring semester for men and women and may be taken two times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

222 Intercollegiate Track and Field I**10 hours lab, 2 units****Letter Grade or Pass/No Pass Option**

This course is for students competing in their first season of intercollegiate track and field. This course may be taken two times for credit. Students must demonstrate increased proficiency and skill attainment with each repetition. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

223 Intercollegiate Track and Field II**10 hours lab, 2 units****Letter Grade or Pass/No Pass Option**

This course is for students competing in their second season of intercollegiate track and field. This course may be taken two times for credit. Students

must demonstrate increased proficiency and skill attainment with each repetition. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

224 Intercollegiate Volleyball I**Fall, Spring, 10 hours lab, 2 units****Letter Grade or Pass/No Pass Option**

Advisory: Physical Education 161 with a grade of "C" or better, or equivalent, or previous competitive volleyball experience.

This is the first course in intercollegiate volleyball competition. This course is offered in the fall semester for women and the spring semester for men and may be taken two times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

225 Intercollegiate Volleyball II**Fall, Spring, 10 hours lab, 2 units****Letter Grade or Pass/No Pass Option**

Advisory: Physical Education 224 with a grade of "C" or better, or equivalent.

This is the second course in intercollegiate volleyball competition. This course is offered in the fall semester for women and the spring semester for men and may be taken two times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

Team Sports**111 Baseball****2 - 3 hours lab, .5 unit - 1 unit****Letter Grade or Pass/No Pass Option**

Instruction to develop the fundamental skills of throwing, catching, running, hitting, rules of play and strategy. Intermediate and advanced levels emphasize both individual and team skill development and strategies involved in competitive game situations. This course may be taken four times for credit. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

112 Basketball**2 - 3 hours lab, .5 unit - 1 unit****Letter Grade or Pass/No Pass Option**

This course offers basic instruction in the fundamental skills of basketball and team offense

and defense. Instruction includes terminology, rules and strategy of the game. This course may be taken four times for credit. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

149 Soccer

**2 - 3 hours lab, .5 - 1 unit
Letter Grade or Pass/No Pass Option**

This course emphasizes progressive instruction and practice of basic fundamentals through advanced soccer skills. The topics covered include soccer techniques and skills, offensive and defensive strategies, rules, and officiating. This course may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

151 Softball

**2 - 3 hours lab, .5 - 1 unit
Letter Grade or Pass/No Pass Option**

This course provides instruction in the fundamental skills of throwing, catching, running, hitting, and rules of play of softball as well as individual and team skill development and strategies involved in competitive game situations. This course may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

161 Volleyball

**2 - 3 hours lab, .5 - 1 unit
Letter Grade or Pass/No Pass Option**

This course provides instruction and on-court experience in the skills, strategies, rules and behaviors necessary to play volleyball at the recreation level. This course may be taken four times for credit. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

165 Pre-season Volleyball Conditioning for Elite Athletic Performance

**2 - 3 hours lab, .5 - 1 unit
Letter Grade or Pass/No Pass Option**

This course provides individually programmed coaching in the fundamental skills of volleyball specific training and aerobic conditioning. Through progressive inquiry and practice, students demonstrate more advanced levels of athletic performance. This course is of particular interest to students who want to improve their athletic performance through comprehensive sport specific

strength and conditioning. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor. Physical Education Theory Classes

240 Physical Education in the Elementary Schools

**3 hours lecture, 1 hour lab, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: Completion of or concurrent enrollment in English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course includes a brief study of the growth, development and characteristics of the elementary school child. The elements of written lesson plans, units, evaluations and various forms of testing are covered. The teaching of fundamental skills, rhythms, dance and games based on sound physiological principles for this age group is emphasized. The positive impact of physical education on health and wellness in addition to academic achievement is explored. Actual teaching situations are experienced in the lab sessions. This course is designed to fulfill lower division preparation for the major for students interested in elementary education. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

241 Introduction to Exercise Science/Physical Education

**2 hours lecture, 2 units
Grade Only**

Advisory: English 48 and English 49, each with grades of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is the introductory course for students majoring in Physical Education and is required for the Associate in Arts degree in Physical Education. It provides the student an opportunity to study the history, basic philosophy, basic principles, and professional career options of exercise science. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

242 Care and Prevention of Injuries

**Fall, Spring, 2 hours lecture, 1 hour lab, 2 units
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Prevention and care of common athletic injuries is discussed. This course covers the theory and practice of emergency field care and basic athletic first aid. Bandaging and/or taping techniques are included. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

243 Fitness for Life Concepts
2 hours lecture, 2 hours lab, 3 units
Grade Only

This course will provide students with the necessary knowledge to make educated decisions about lifetime fitness and wellness activities. Students will learn concepts in cardiovascular fitness, strength training, flexibility, weight control and dietary habits. Through lecture/laboratory presentations, and Health Services directed sessions, students will apply learned concepts to the design of individualized fitness and nutritional programs. For optimal benefits, it is recommended that students register concurrently with a physical education activity class to implement their personal fitness plan. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

248A Professional Activities/ Tennis
1 hour lecture, 3 hours lab, 2 units
Letter Grade or Pass/No Pass Option

Corequisite: Physical Education 220.
 This course covers the theoretical concepts necessary for students to compete successfully in their first intercollegiate tennis season. Topics covered include mechanical analysis of fundamental through advanced tennis skills, offensive and defensive strategies, statistics, and rules. This course is offered separately for men and women who are interested in competing at the intercollegiate level. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

248B Professional Activities / Tennis II
1.5 hours lecture, 1.5 hours lab, 2 units
Letter Grade or Pass/No Pass Option

Advisory: Physical Education 248A with a grade of "C" or better, or equivalent.

This course further develops the theoretical and practical skills necessary for students to compete successfully in their second intercollegiate tennis season. Emphasis is placed on advanced offensive and defensive tennis skills and strategies. This course is offered separately for men and women who are

interested in competing at the intercollegiate level. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

249A Professional Activities/Badminton
1.5 hours lecture, 1.5 hours lab, 2 units
Letter Grade or Pass/No Pass Option

Corequisite: Physical Education 200.

This is a course in which students competing in their first intercollegiate badminton season learn the theoretical concepts necessary for successful participation. Topics covered include mechanical analysis of fundamentals through advanced badminton skills, offensive/defensive strategies, statistics, rules and officiating. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

249B Professional Activities / Badminton II
1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only

Prerequisite: Physical Education 201 with a grade of "C" or better, or equivalent.

This is a course in which students competing in their second intercollegiate badminton season learn advanced theoretical concepts for successful participation. Topics covered include mechanical analysis of fundamentals through advanced badminton skills, offensive/defensive strategies, statistics, rules and officiating. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

251A Professional Activities/Basketball I
Fall, 1.5 hours lecture, 1.5 hours lab, 2 units
Letter Grade or Pass/No Pass Option

This lecture/lab course includes discussion of rules, game strategies, history, and game preparation. The physiological requirements for the intercollegiate athlete and importance of nutritional components for optimal performance are emphasized. This course benefits students who are enrolled in PHYE 204, Intercollegiate Basketball I. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

251B Professional Activities/Basketball II
Fall, 1.5 hours lecture, 1.5 hours lab, 2 units
Letter Grade or Pass/No Pass Option

This lecture/lab course includes activities and discussion of advanced team strategies, efficient basketball conditioning techniques, goals for game

preparation and leadership qualities for basketball. Concepts for team building and social skills necessary for success at the intercollegiate level are also emphasized. This course benefits students who are enrolled in PHYE 205, Intercollegiate Basketball II. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

252A Professional Activities/Baseball I

**1.5 hours lecture, 1.5 hours lab, 2 units
Letter Grade or Pass/No Pass Option**

Competency development with emphasis on skills, strategy, tactics, rules, officiating, facilities film review, and organizational procedures as it relates to school or college baseball. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

252B Professional Activities/Baseball II

**1.5 hours lecture, 1.5 hours lab, 2 units
Letter Grade or Pass/No Pass Option**

Sophomore athletic eligibility status required. A continuation of Physical Education 252A with emphasis on advanced skills, strategy, tactics, rules officiating, and organizational procedures in baseball. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

253A Professional Activities/Softball I

**1.5 hours lecture, 1.5 hours lab, 2 units
Letter Grade or Pass/No Pass Option**

Corequisite: Physical Education 216. This is a course which explores a variety of softball strategies and tactics focusing on the development of offensive and defensive strategies, rules, officiating, video review, and mechanical analysis of fundamentals through intermediate softball skills. The course is open to those interested in participating in the sport of softball at an intermediate level. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

253B Professional Activities/Softball II

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Corequisite: Physical Education 217. This course develops both mental and physical competency with emphasis on advanced skill, tactics, rules, both offensive and defensive strategies, officiating, facilities, video review, organizational

procedures and physiological aspects of the game as they relate to college softball. The course is open to students interested in the sport of softball at the advanced level. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

255A Professional Activities/Volleyball I

**Fall, Spring
1.5 hours lecture, 1.5 hours lab, 2 units
Letter Grade or Pass/No Pass Option**

Advisory: Concurrent enrollment in Physical Education 224 or Physical Education 225. This is a course in which students competing in their first intercollegiate volleyball season learn the theoretical concepts necessary for successful participation. Topics covered include mechanical analysis of fundamentals through advanced volleyball skills, offensive/defensive strategies, statistics, rules and officiating. The course is offered in the fall semester for women and the spring semester for men. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

255B Professional Activities/Volleyball II

**Fall, Spring
1.5 hours lecture, 1.5 hours lab, 2 units
Letter Grade or Pass/No Pass Option**

Advisory: Physical Education 255A with a grade of "C" or better, or equivalent; and concurrent enrollment in Physical Education 224. This is a course on which students competing in their second intercollegiate volleyball season learn the theoretical concepts necessary for successful participation. Topics covered include officiating, statistics, concepts for team building, goals for game preparation, leadership and social skills for success at the intercollegiate level. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

257A Professional Activities/Soccer I

**Fall, 1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

This course covers the theoretical concepts necessary for students to compete successfully in their first intercollegiate soccer season. Topics covered include mechanical analysis of fundamental through advanced soccer skills, offensive and defensive strategies, statistics, rules, and officiating. This course is offered separately for men and women. (FT) Associate Degree Credit & transfer to CSU and/

or private colleges and universities. UC Transfer Limitations. See a Counselor.

257B Professional Activities/Soccer II
Fall, 1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only

This is a lecture/lab course including activities and discussion of advanced team strategies, efficient conditioning techniques, goals for game preparation, and leadership qualities. Concepts for team building and social skills necessary for success at the intercollegiate level are emphasized. This course is offered separately for men and women in the fall semester. This course benefits students who are enrolled in PHYE 215, Intercollegiate Soccer II. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

258A Professional Activities/Cross Country I
1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only

This course introduces students to the development of skills for cross country running as well as biomechanics, exercise physiology, workout design, scouting, and procedures for administering a college cross country meet. The course is designed for students who are participating in this sport and for those who may be interested in coaching cross country teams. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a counselor.

258B Professional Activities/Cross Country II
1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only

Prerequisite: Physical Education 258A with a grade of "C" or better, or equivalent.

This course covers the development of advanced skills in cross country running, including techniques of biomechanics, exercise physiology, workout design, and scouting. The course also focuses on procedures for administering college cross country meets and coaching techniques. The course is designed for second-year students who are participating in this sport and for those who are interested in coaching cross-country teams. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

296 Individual Instruction in Physical Education

1.5 - 6 hours lab, .5 - 2 units
Pass/No Pass Only

Limitation on Enrollment: Concurrent enrollment in an approved course of the same discipline is required. The instructor of the related course will supply Add Code to the student, which permits registration in the course.

This course provides supplemental instruction to reinforce achievement of the learning objectives of a course in the same discipline under the supervision of the instructor of the designated course. Learning activities may employ a variety of self-paced multimedia learning systems, language labs, print and electronic resources, laboratory, or field research arrangements, to assist student in reaching specific learning objectives. This open entry/open exit course is offered concurrently with designated courses. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Fitness Specialist Courses

280 Applied Exercise Physiology
2 hours lecture, 2 units
Grade Only

Advisory: Mathematics 46 with a grade of "C" or better, or equivalent or Assessment Skill Level M40. This course is designed for the student in the Fitness Specialist Certificate Program planning to study how the body functions under conditions of exercise stress and how fitness behaviors affect health and wellness. Emphasis is placed on muscular, cardiorespiratory, and other physiological processes that occur as a result of exercise conditioning, and the effect of disease. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

281 Applied Kinesiology**2 hours lecture, 2 units
Grade Only**

This course is designed for the student in the Fitness Specialist Certificate Program planning to study movement as it relates to exercise under both normal and injury conditions. Students learn the practical implications of bones, joints, nerves, and muscle actions. Emphasis is placed on applying body alignment, range of motion, stabilization, and acceleration principles to the development of exercise programs. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

282 Techniques of Weight Training**2 hours lecture, 2 units
Grade Only**

This course is designed for the student in the Fitness Specialist Certificate Program intending to teach weight training. Topics include anatomy, physiology, training sequences, equipment options, safety factors, and contraindications. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

283 Exercise and Fitness Assessment**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

This course is designed for the student in the Fitness Specialist Certificate Program to develop the skills necessary to assess and evaluate exercise and fitness parameters. Topics include cardiorespiratory endurance, muscular strength and endurance, flexibility, body fat, pulmonary function, and blood pressure and evaluate the results. Emphasis is placed on determining the appropriate test, conducting the test, evaluating the results, and creating an exercise program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

284 Fitness and Sports Nutrition**2 hours lecture, 2 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course is designed for the student in the Fitness Specialist Certification Program. Students study the basic principles of nutrition and the ramifications of nutrition on sports activities. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

285 Exercise for Special Populations**2 hours lecture, 2 units
Grade Only**

This course is designed for the student in the Fitness Specialist Certificate Program planning to study the exercise implications for special populations related to age, medical condition and level of fitness. Emphasis is placed on cardiac conditions, diabetes, obesity, physical disabilities, Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS), asthma, sensory impairments. Issues and barriers to exercise are included for each of the following groups: seniors, children, athletes, mentally impaired and pregnant and post partum women. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

286 Techniques of Exercise Leadership**1.75 hours lecture, .75 hours lab, 2 units
Grade Only**

This course is designed for the student in the Fitness Specialist Certificate Program planning to study the principles and techniques involved in teaching group exercise and developing a personal trainer/client relationship. Emphasis is placed on client assessment, communication skills, program design, exercise adherence, teaching strategies, and professional responsibility and liability. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

287 Fitness Specialist Internship**1 hour lecture, 6 hours lab, 2 units
Grade Only**

Prerequisite: Physical Education 280, 281, and 283, each with a grade of "C" or better, or equivalent. This course is designed to provide students in the Fitness Specialist Certificate Program with practical experience in the field of exercise and fitness. Emphasis is placed on participant screening, evaluation, and exercise program design, self marketing, fitness specialist/client relationships and professional responsibility in a fitness setting. (FT) Associate Degree Credit only and not Transferable.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Physics

See "Physical and Earth Sciences" on page 387.

Physical Science

See "Physical and Earth Sciences" on page 387.

Political Science

Award Type	Units
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Associate in Arts Degree:

Political Science	18*
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*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

The primary objectives of the Political Science program are to meet general education requirements for American Institutions and Social Sciences for the associate degree and to complete general education requirements for baccalaureate degrees. Political science is the study of human behavior as it relates to political situations. It involves the examination of institutions, processes, people, ideas and policies. The study of political science develops cultural literacy, critical thinking and other useful skills.

Program Emphasis

San Diego City College offers four courses in Political Science: Political Science 101, 102, 103 and 140. Completion of Political Science 101, 102 and 103 provides the student with lower division preparation for a baccalaureate degree in Political Science at San Diego State University.

Faculty	Office	Telephone
Peter Haro	R-120	619-388-3095

Career Options

Most careers in political science require education beyond the associate degree and some require a graduate degree. This is not a comprehensive list but some of the most common career options with political science preparation include: public administrator, budget analyst, city planner, diplomatic corps member, elected official, legislative aide, journalist, lawyer, lobbyist, political scientist, public opinion surveyor, teacher and writer.

Student Learning Outcomes

Upon successful completion the student will be able to:

- Critically analyze the study of human behavior as it relates to political situations in college-level essays, written assignments, and research papers.
- Identify and describe main concepts in the study of political science including, but not limited to, political power, sovereignty, nation-state; legitimacy; authority, political culture, political socialization, political ideology; social contract; separation of powers; federalism; unitary system; rule of law and globalization.

Academic Programs

The associate degree in Political Science requires completion of courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Associate in Arts Degree: Political Science

Courses Required for the Major:		Units
HIST 100	World History I and	
HIST 101	World History II or	
HIST 105	Introduction to Western Civilization I and	
HIST 106	Introduction to Western Civilization II	6
POLI 101	Introduction to Political Science	3
POLI 102	The American Political System	3
POLI 103	Comparative Politics	3
MATH 119	Elementary Statistics or	
PSYC 258	Behavioral Science Statistics	3
Total Units = 18		

Recommended electives: Political Science 140, 290, 296.

Transfer Information

Common university majors related to the field of Radio and Television include:

Developmental Studies, International Relations, Law, Peace and Conflict Studies, Policy Analysis, Political Science, Public Administration.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer

institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Political Science (POLI)

101 Introduction to Political Science

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is an introductory study of the fundamental concepts and methods of Political Science. Emphasis is placed on historical and contemporary political theories, ideologies and cultures as well as on political institutions, parties and interest groups and the international political system. This course may be required for students planning to major in Political Science and is highly recommended for students transferring to four-year institutions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

102 The American Political System

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This comprehensive survey course, designed for students intending to transfer to a four-year college or university, provides an in depth study of the American political system. Both national and California experiences are studied from the perspective of constitutional frameworks, institutions, issues, and policies. Political Science 102 is required for completion of the major in political science. Political Science 102 may be offered in a self-

paced format. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

103 Comparative Politics

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6.

Limitation on Enrollment: This course is not open to students with previous credit for Political Science 130.

This course is an introduction to comparative politics. Emphasis is placed on analyses of various political systems using the fundamental concepts and methodologies of comparative politics. This course is designed for political science majors and anyone interested in comparative and/or international politics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

140 Contemporary International Politics

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is a study of world politics including the various approaches to international relations and international political economy. Emphasis is placed on the roles of nationalism, nation-states, transnationalism and international organizations in the making of contemporary world politics as well as on issues of national security, power and diplomacy, economic competition, international law and the environment. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Psychology

See "Behavioral Sciences" on page 125

Radio and Television

See "Communications" on page 197.

Real Estate

See "Business Studies" on page 156.

Russian

See "Languages" on page 334.

Selected Studies

Description

Designed for students who are interested in a program of studies that will allow them to attain educational or career goals that are not satisfied by associate degrees offered in Programs of Instructions listed in this catalog.

Associate in Arts Degree: Selected Studies

Courses Required for the Major:

The student must earn a minimum of 18 required semester units in a single discipline or related disciplines. The approved course of study represents a cohesive and rigorous program of instruction related to a specific goal not met by other Programs of Instruction as found in this catalog. The student and a counselor will develop a Selected Studies program to be submitted to an academic standards committee for review and approval. The student is encouraged to meet with the counselor early in his or her educational career to review the student's statement of justification for the Associate in Arts Degree: Selected Studies and to develop an education plan.

Only one course from the approved pattern for the Selected Studies major may be used to satisfy SDCCD general education requirements. Students must fulfill additional requirements for the Associate Degree as listed in this catalog.

For graduation requirements see **Requirements for the Associate Degree** on page 73.

Electives as needed to meet minimum of 60 units required for the degree:

Recommended Electives: Electives are particularly important in this program. They may be used by the student to strengthen the major, explore new fields of interest, and satisfy graduation requirements at a four-year institute.

The student who plans carefully may fulfill the requirements for the A.A. Degree and also complete most lower division requirements at the four-year institution of his/her choice in the major area and in general education. See generalized guide for transfer student located in this catalog.

Shipbuilding Technology

Award Type	Units
Certificate of Achievement: Shipbuilding Technology	24
Associate in Science Degree: Shipbuilding Technology	24*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

Shipbuilding Technology, a specific concentration within the broad range of today's industrial manufacturing, was created as a cooperative effort between San Diego City College School of Math, Engineering & Technologies and National Steel and Shipbuilding's Training and Organizational Development Department. Shipbuilding Technology represents a technological field requiring the application of a variety of applied skills in support of manufacturing in large shipyards and in smaller shipbuilding companies. The education of technologists tends to be less theoretical and less mathematical than that of engineers, but more hardware, process and application oriented.

Statement of Goals:

The primary goals of the program are: 1. Occupational: To prepare students for the changing technology associated with shipbuilding by giving them a fundamental understanding of the trade, skill and management technologies and how they apply to a globally competitive industry. To help students enhance skills so they can advance as technologists and managers of technologists in the shipbuilding industry. 2. Transfer: To enable students to transfer to a four-year baccalaureate degree program in industrial technology. The objectives of the program are: 1. To provide students with a strong foundation in the practical and academic skills necessary for success in upper division study at a four-year

college. 2. To give students a strong foundation in the skills necessary for success in current job positions or for promotional opportunities in the shipbuilding industry. 3. To develop students' productivity, efficiency and creativity in the field of shipbuilding technology. 4. To provide students with the knowledge and ability to apply problem solving skills to real shipbuilding issues. 5. To offer students and local employers a complete certification program that can be used as a criterion in hiring processes. 6. To offer local shipbuilding employers and students a sequence of courses leading to a certificate that will improve the skill and abilities of their employees.

Program Emphasis

The program offers instruction in the specific trades, tools, techniques and processes involved in shipbuilding. Teamwork is emphasized, reflecting the interdisciplinary work environment emerging in the shipbuilding industry. The curriculum is project based and emphasizes the integration of technical knowledge with leadership skills to help shipyards achieve desired goals associated with global competition. An associate in science degree will be awarded upon completion of the common core courses and the San Diego City College graduation and general education requirements. In addition, a certificate of achievement may be awarded upon the completion of the courses required for the major.

Faculty	Office	Telephone
Fred Julian	A-107D	619-388-3720

Career Options

Sheetmetal mechanic, Welder, Electrician, Machinist, Pipefitter, Multi-skilled technician/mechanic, Manufacturing Engineer, Quality Systems Engineer, Supervisor, Shipyard Administrator, CAD/CAM Operator, Vocational Trainer.

Student Learning Outcomes

Through a process of engagement with organizational management and technical shipbuilding curriculum, the student will be equipped to:

- Explain all facets of shipbuilding technology from supply chain management through final testing the delivery of a completed ship.
- Read, comprehend and apply best practices in trade design and incorporation of manufacturing techniques to meet specialty requirements in shipbuilding.

- Identify, explain and utilize methods and best trade practices to maximize safety in shipbuilding technologist worksites and effective management and implementation of trade safety processes.
- Apply and incorporate principles of effective organizational leadership, including management techniques to supervise technologists in milestone program staging to support standardized and timely manufacturing outcomes.

Academic Programs

The associate degree in Shipbuilding Technology requires completion of courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Certificate of Achievement: Shipbuilding Technology

The Certificate of Achievement in Shipbuilding Technology prepares for entry-level employment as a shipyard multi-trade technician. Additionally, it is designed to give technical, trade-specific knowledge to those working in other jobs in a shipyard, such as finance or supervision. The sequence of courses provides the basis for skills necessary to manage technicians in a globally competitive arena.

Courses Required for the Major:		Units
SHIP 101	Introduction to Shipbuilding Technology I	3
SHIP 103	Introduction to Shipbuilding Technology II	3
SHIP 110	Shipyard Safety and Safety Management	3
SHIP 115	Shipbuilding Processes	3
SHIP 115L	Shipbuilding Processes Lab	1
SHIP 201	Technological Issues: Organization and Effective Leadership in Shipbuilding	3
SHIP 205	Culminating Project	3
ELCT 111	Electrical Theory I	3
ELCT 111L	Electrical Laboratory I	2
Total Units = 24		

Associate in Science Degree: Shipbuilding Technology

The Associate in Science Degree in Shipbuilding Technology requires completion of courses listed

below (24 units total). Additional general education and graduation requirements for the associate degree are listed in the Academic Requirement section of the catalog. The associate degree requires a minimum of 60 units.

Courses Required for the Major:		Units
SHIP 101	Introduction to Shipbuilding Technology I	3
SHIP 103	Introduction to Shipbuilding Technology II	3
SHIP 110	Shipyards Safety and Safety Management	3
SHIP 115	Shipbuilding Processes	3
SHIP 115L	Shipbuilding Processes Lab	1
SHIP 201	Technological Issues: Organization and Effective Leadership in Shipbuilding	3
SHIP 205	Culminating Project	3
ELCT 111	Electrical Theory I	3
ELCT 111L	Electrical Laboratory I	2

Total Units = 24

Recommended electives: Electricity 121, 121L; Electronic Systems 124, 124L; Mathematics 46, 096, 118, 119; Communication Studies 103. Additional recommended electives -- Chemistry and Physics courses. Shipbuilding Technology recommended electives include major preparation transfer units for the Fresno State Industrial technology Bachelor of Science Degree as well as lower division transfer preparation for San Diego State and other colleges and universities. See TRANSFER INFORMATION for more information.

Transfer Information

Common university majors related to the field of Shipbuilding include:

Industrial Engineering, Industrial Technology.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Shipbuilding Technology (SHIP)

50 Orientation to the Maritime Professions **3 hours lecture, 3 units** **Letter Grade or Pass/No Pass Option**

This survey course provides students with an overview of the maritime industry. It provides a broad understanding of the waterfront community, its functions, terminology, and occupational choices in the various fields in maritime as well as the place of the industry in the American economy as a whole. (FT) Associate Degree Credit only and not Transferable.

101 Introduction to Shipbuilding Technology I

3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This is a survey course that covers the history, standard business models, and current concepts, theories and methods related to manufacturing in the shipbuilding industry. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

103 Introduction to Shipbuilding Technology II

3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This is a survey course designed to acquaint the student with the shipbuilding industry. The course will focus on essential products and processes required in strategic departments and organizations throughout the shipyard. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

110 Shipyard Safety and Safety Management
3 hours lecture, 3 units
Grade Only

Advisory: Completion of or concurrent enrollment in English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course focuses on the principles of behavior-based safety as it relates to: safety legislations and organizations, management and employee responsibilities and attitudes, management systems, philosophy and issues, and the physical hazards associated with the shipyard environment. (FT) Associate Degree Credit and transfer to CSU and/or private colleges and universities.

115 Shipbuilding Processes
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course will investigate how ships are built; focusing on how raw materials (primarily steel) are changed into a finished product. The course provides an overview of the theory behind the manufacturing and construction processes required in shipbuilding including forming (heating, cutting, bending), separating (burning, cutting, drilling), assembling (mechanical, welding) and corrosion control. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

115L Shipbuilding Processes Lab
3 hours lab, 1 unit
Grade Only

Corequisite: Completion of or concurrent enrollment in Shipbuilding Technology 115 with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course involves laboratory practice in basic metal processes. Emphasis is placed on safety, measurements, common formulas, machine, tool and equipment applications, and project work. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

201 Technological Issues: Organization and Effective Leadership in Shipbuilding
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course introduces shipbuilding technology students to the unique issues, problems and challenges encountered in a rapidly changing manufacturing environment. The course will analyze internal and external factors such as environment, size, technology, politics, strategy, human resources, job design and organization culture as they relate to the technologist or manager of technology. The course focuses on the basic tools and techniques for the planning and scheduling of projects, as well as the techniques for effective communication. The course will also address leadership theories, including building and motivating effective teams and the application of those theories to the shipyard environment. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

205 Culminating Project
3 hours lecture, 3 units
Grade Only

Advisory: Completion of or concurrent enrollment in English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

The Shipbuilding Technology final project is intended to be the culminating scholastic effort or capstone experience providing the student with the opportunity to use knowledge and skills acquired in previous courses in problem solving, research, teamwork, and communication in a shipbuilding environment. The student, with the approval of the assigned faculty advisor, selects a topic, develops a problem statement and outlines the approach. Then the student - by investigating and recommending a solution to a topic typical of problems graduates must solve in their field of employment - completes the project under the guidance of the faculty advisor. Project results are presented in a formal report in both written and oral format. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Social Work

See "Behavioral Sciences" on page 125.

Sociology

See "Behavioral Sciences" on page 125.

Spanish

See "Languages" on page 334.

Speech

See "Communications" on page 197.

Sustainability

Award Type	Units
Certificate of Performance	
Sustainability	17

Description

The Sustainability Program offers an interdisciplinary, theoretical and practical approach for students to enter into the academic and/or professional fields related to Sustainability. Students gain skills to critically analyze current global affairs in order to offer alternative solutions to create sustainable societies. The Sustainability program allows students to gain professional experience with an organization through participation in the required one-unit capstone course in field experience.

Program Goals:

Upon completion of the Sustainability program, students are able to:

- Analyze, discuss and evaluate issues related to sustainability on all levels;
- Apply theory in academic disciplines such as sociology, philosophy, economics, and environmental science to the field of sustainability;
- Critically think about their role in the world and their possible contributions to a sustainable global society;
- Understand the role of ethics in sustainability.

Program Emphasis:

The three main pillars of the Sustainability program are environmental issues, economics, and social and ethical issues. The program explores issues related to these three pillars on an inter/intra personal, communal, and global level. An emphasis is placed upon 1) the interdisciplinary nature of addressing issues related to sustainability, 2) active participation and involvement in the field experience component

of the required capstone course, and 3) affective and analytical responses to concepts related to the three pillars.

Career Options:

Most career options directly related to Sustainability require a four-year degree. The Certificate may allow you to work in industry, consultancy, regulatory agencies, utilities, academia, local, state, or federal government, non-profits, or for a non-governmental organization depending on your interest and your desired academic and professional path. Some examples include: Sustainability Coordinator, Corporate Social Responsibility Officer, Project Coordinator / Manager, Environmental Planner, Policy Advocate, Community Organizer, Green Technology Consultant, Green Building Consultant, Environmental Engineer, Sustainability Advocacy Director, Environmental Economist, Green Restaurant Owner, Natural Resource Manager, Restoration Ecologist, Sustainable Development Specialist, Educator

Student Learning Outcomes

At the conclusion of the Sustainability Program the student will:

- Describe the interdisciplinary nature of key sustainability issues.
- Generate affective and analytical responses to barriers interfering with the achievement of sustainability.
- Actively engage and participate in the field of experience component.

Certificate of Performance: Sustainability

This certificate provides students the tools to critically analyze the environmental, social, and economic issues related to sustainability.

Courses:	Units
BIOL 101 Issues in Environmental Biology	4
PHIL 100 Logic and Critical Thinking	3
SUST 101 Introduction to Sustainability	3
SUST 102 Environmental Ethics	3
SUST 250 Field Experience In Sustainability	1
SOCO 223 Globalization and Social Change	3

Total Units = 17

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Courses

Sustainability (SUST)

101 Introduction to Sustainability

**3 hours lecture, 3 units
Grade Only**

Advisory: English 101 or English 105, with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6.

This course introduces students to an interdisciplinary examination of the theory and practices of sustainability. Sustainability can be defined as meeting the needs of the present generation without compromising the ability of future generations to meet their own needs. Topics include restoring ecological and environmental health, creating economic welfare, and ensuring social justice. This course is intended for students interested in Sustainability, Environmental Ethics, and Peace Studies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

102 Environmental Ethics

**3 hours lecture, 3 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in: Sustainability 101 with a grade of "C" or better, or equivalent.

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6; Philosophy 100 with a grade of "C" or better, or equivalent.

This course allows students to gain an understanding of the field of moral philosophy as it pertains to environmental issues. Ethical theories are analyzed through application to issues such as: population growth, future generations, biodiversity, animal rights, pollution, energy use and consumption. This course is intended for students interested in Sustainability, Environmental Science, Philosophy, Biology, Sociology, Geology, Ecology, and Peace Studies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

103 Ecological Commerce

**3 hours lecture, 3 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in: Sustainability 101 with a grade of "C" or better, or equivalent.

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6. This course examines sustainable business practices and their environmental, ethical, and economic impact. Students evaluate green business models to determine the effectiveness and assess the limitation of the model. Topics include ecological economics, business accountability, resource consumption and how to "green" a business. This course is intended for students interested in Sustainability, Business, Environmental Ethics and Peace Studies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

250 Field Experience In Sustainability

**16-54 total hours lecture,
32-108 total other hours, 1-3 units
Grade Only**

Prerequisite: Sustainability 101 with a grade of "C" or better, or equivalent.

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6. Students in this course develop and implement field experience projects under the supervision of college faculty. In cooperation with the staff of community organizations and agencies, students design these projects to assist the college's neighborhood communities. Students gain hands-on experience in project planning, development, implementation and evaluation. Students meet regularly with faculty and peers to receive feedback, support and guidance in their community projects. This course may be repeated up to two times, but the total units earned may not exceed three units. This course is intended for students interested in Sustainability. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Theater

See "Visual and Performing Arts" on page 422.

Technical Writing

Courses

Technical Writing (TEHW)

101 Introduction to Technical Writing 3 hours lecture, 3 units Grade Only

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6. This course will cover how to evaluate and organize technical information, develop ideas, and establish good working relationships with technical experts. The course provides practice in technical writing formats and techniques, and offers an overview of career opportunities. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Visual and Performing Arts

Dance, Digital Audio, Digital Music Technology, Fine Arts, Graphic Design, Musical Theater, Theater, Photography, Recording Arts,

Award Type	Units
Certificate of Performance	
Dance	17
Musical Theater Dance	13
Technical Theater	14
Digital Audio	12
Certificate of Achievement:	
Graphic Design	27
Recording Arts	21
Photography	42

Associate in Arts Degree:	
Two-Dimensional Emphasis Art Emphasis	33*
Three-Dimensional Emphasis Art Emphasis	36*
Graphic Design	33*
Dance	25*
Theater	32*
Musical Theater	19*
Digital Music Technology	25*
Photography	42*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Visual and Performing Arts Two- and Three-Dimensional Art

Description

This program provides fundamental training in two-dimensional design (art) enabling students to earn an associate degree while completing lower division preparation for a four-year degree. The curriculum is designed to maximize transferable course units and to provide basic skills required for employment in art-related fields.

Faculty	Office	Telephone
Terri Hughes-Oelrich	C-225C	619-388-3087
Wayne Hulgin	C-225E	619-388-3693
Yoonchung P. Kim	C-225B	619-388-3600
Cynthia Lyons-Dailard	C-225C	619-388-3794

Career Options

Some careers listed require education beyond the associate degree: art critic, art dealer, educator, historian, arts administrator, advertising specialist, ceramicist, community or computer artist, computer graphics illustrator, computer publishing, design consulting, display designer, gallery director, graphic artist, illustrator, muralist, painter, printmaker, sculptor and visual information specialist.

Student Learning Outcomes

Students who complete the program will be able to:

- Utilize design principles to compose visually successful works.
- Compare and contrast, orally or in writing, the expressive goals, techniques, strategies and styles of past and present artists working in graphic media.

- Recognize and incorporate elements such as line, mass, light, and position while drawing the human figure.
- Identify certain historically significant art works and distinguish their salient characteristics, in written responses and in oral discussion.
- An effort to reach a personal understanding of the visual arts as consumers, custodians and creators of visual culture.

Academic Programs

The associate degree in Two- and Three- Dimensional Art requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Associate in Arts Degree: Visual and Performing Arts

Two-Dimensional Art Emphasis

Courses Required for the Major:		Units
ARTF 110	Art History: Prehistoric to Gothic	3
ARTF 111	Art History: Renaissance to Modern	3
ARTF 150A	Two-Dimensional Design	3
ARTF 151	Three-Dimensional Design	3
ARTF 155A	Freehand Drawing I	3
ARTF 155B	Freehand Drawing II	3
ARTF 165A	Composition in Painting I	3
ARTF 210A	Life Drawing I	3
PHOT 100	Basic Black-and-White Photography	3

Select two courses (six units) from:

ARTF 100	Art Orientation
ARTF 109	History of Modern Art
ARTF 115	African Art
ARTF 150B	Beginning Graphic Design
ARTF 165B	Composition in Painting II
ARTF 165C	Composition in Painting III
ARTF 165D	Composition in Painting IV
ARTF 170A	Contemporary Crafts I
ARTF 170B	Contemporary Crafts II
ARTF 170C	Contemporary Crafts III
ARTF 175A	Sculpture I
ARTF 175B	Sculpture II
ARTF 175C	Sculpture III
ARTF 195A	Ceramics I
ARTF 195B	Ceramics II
ARTF 195C	Ceramics III
ARTF 196	Clay and Glaze Technology
ARTF 197A	Handbuilding Ceramics I

ARTF 197B	Handbuilding Ceramics II	
ARTF 210B	Life Drawing II	
ARTF 210C	Life Drawing III	
		6
		Total Units = 33

Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Associate in Arts Degree: Visual and Performing Arts

Three-Dimensional Art Emphasis

Courses Required for the Major:		Units
ARTF 110	Art History: Prehistoric to Gothic	3
ARTF 111	Art History: Renaissance to Modern	3
ARTF 150A	Two-Dimensional Design	3
ARTF 151	Three-Dimensional Design	3
ARTF 155A	Freehand Drawing I	3
ARTF 155B	Freehand Drawing II	3
ARTF 175A	Sculpture I	3
ARTF 195A	Ceramics I	3
PHOT 100	Basic Black & White Photography	3

Select three units from:

ARTF 165A	Composition in Painting I	
ARTF 165B	Composition in Painting II	
ARTF 165C	Composition in Painting III	
ARTF 165D	Composition in Painting IV	
ARTF 170A	Contemporary Crafts I	
ARTF 170B	Contemporary Crafts II	
ARTF 175B	Sculpture II	
ARTF 175C	Sculpture III	
		3

Select six units from:

ARTF 109	History of Modern Art	
ARTF 115	African Art	
ARTF 150B	Beginning Graphic Design	
ARTF 195B	Ceramics II	
ARTF 195C	Ceramics III	
ARTF 197B	Handbuilding Ceramics II	
ARTF 210A	Life Drawing I	
ARTF 210B	Life Drawing II	
ARTF 210C	Life Drawing III	
		6
		Total Units = 36

Recommended electives: Art-Fine Arts 193, 270, 290.

Transfer Information**Common university majors related to the field of Art-Fine Art include:**

Apparel Design and Merchandising, Art, Art Education, Art History, Creative Arts/Studies, Design, Industrial Arts, Interior Design, Multimedia, Photography, Studio Art, Textiles.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses**Art - Fine Art (ARTF)****100 Art Orientation****3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6. This course is a survey of the visual arts. Emphasis is placed on the various aesthetic approaches, philosophies and artistic orientations around the world in historical and contemporary perspective. This course is intended for humanities majors and all students interested in art and/or art history. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

109 History of Modern Art**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49 each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5. Art-Fine Art 110 and 111, each with a grade of "C" or better, or equivalent.

This survey course introduces modern art and its relevance to the development of western civilization. It emphasizes the Modernist period and covers major monuments and representative art works from Europe, Russia, and the Americas. This course is intended not only for art students but also for those who are interested in history, humanities, teaching, travel, and cultural enrichment. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

110 Art History: Prehistoric to Gothic**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is designed not only for art students, but also for those who are interested in history, humanities, teaching, travel, and cultural enrichment. It is an introductory survey of the visual arts that are most relevant to an understanding of western civilization, from prehistoric Africa and Europe through the Gothic period. It includes major monuments and representative artworks from Mesopotamia, Iran, Egypt, the Aegean and Greece. Also included are the Hellenistic, Roman, early Christian, Byzantine, and Islamic worlds and art work from early Medieval, Romanesque, and Gothic Europe. Material is presented in illustrated lectures. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

111 Art History: Renaissance to Modern**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is designed not only for art students, but also for those who are interested in history, humanities, travel, and cultural enrichment. It is an introductory survey of the visual arts that are recognized as salient in the development of western civilization from the Renaissance to the early twentieth century. The art styles covered in the course include Renaissance, Mannerism, Baroque, Rococo, Neo-Classicism, Romanticism, Impressionism, post-Impressionism, and early twentieth century Modern movements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

115 African Art**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is designed not only for art students, but also for those who are interested in history, religion, philosophy, humanities, and cultural enrichment. It is an introduction to the background, aesthetics, styles and iconography of African art. It covers a selected group of cultures throughout the continent, with an emphasis on sub-Saharan West and Central Africa. Classroom lectures are illustrated. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Fine Art (ARTF) 115 and 120 combined: maximum credit, one course. Fine Art (ARTF) 115 and Black Studies (BLAS) 111 combined: maximum credit, one course.

150A Two-Dimensional Design**1.5 hours lecture, 4.5 hours lab, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6. This course is an introduction to two-dimensional space and form. Emphasis is placed on ways of organizing visual space into vivid and coherent images. This course is designed for students beginning a study of art and/or related disciplines. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

150B Beginning Graphic Design**1.5 hours lecture, 4.5 hours lab, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; and Art-Fine Art 150A with a grade of "C" or better, or equivalent. This is an introductory class in graphic communication which uses the computer as a tool for building and editing images. As in Art 150A, students address problems of visual form and organization, but with an emphasis in this course on visual constructions which convey information, and on type and text as graphic components of those constructions. This is a core course for art majors and would be useful for anyone interested in computer graphic applications. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

151 Three-Dimensional Design**1.5 hours lecture, 4.5 hours lab, 3 units****Letter Grade or Pass/No Pass Option**

Prerequisite: Art-Fine Art 150A with a grade of "C" or better, or equivalent.

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6. This course is an introduction to three-dimensional space and form. Emphasis is placed on organizing visual space into valid and coherent structures. This course is designed for students beginning the study of art and/or related disciplines. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

155A Freehand Drawing I**1.5 hours lecture, 4.5 hours lab, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course introduces anyone with an interest in drawing to the techniques and theory they need to create naturalistic drawings in various media. It provides students with the means to see and describe the world three-dimensionally using lines and differences in dark and light, and it provides students with compositional strategies for making their depictions more meaningful and effective. No previous art experience is required. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

155B Freehand Drawing II**1.5 hours lecture, 4.5 hours lab, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; and Art-Fine Art 155A with a grade of "C" or better, or equivalent. This course builds upon the technical and compositional means introduced in 155A. It differs from 155A in its range of media and form, and in its emphasis on helping students find individual solutions to particular problems of graphic representation and expression. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

165A Composition in Painting I**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Art-Fine Art 155A with a grade of "C" or better, or equivalent.

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; Art-Fine Art 150A with a grade of "C" or better, or equivalent.

This course is an introduction to oil and acrylic painting methods and techniques. Emphasis is placed on composition, color, and application of general design principles. A variety of subject matter, such as still-life, landscape, portrait and non-objective subjects, and a variety of stylistic approaches such as cubism, collage, realism and expressionism are explored. This course is designed to develop students' creative abilities and critical thinking in visual terms. This course is intended for students pursuing an Associate in Arts degree, preparing for a major in Art, and those who wish to improve their artistic skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

165B Composition in Painting II**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Art-Fine Art 165A with a grade of "C" or better, or equivalent.

Advisory: English 49 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5; Art-Fine Art 150A and Art-Fine 155A, each with a grade of "C" or better, or equivalent.

This course continues the introduction to oil/acrylic painting methods begun in Art 165A and provides for the continued development of concepts of pictorial space, composition, and color. The course is designed to further develop students' creative abilities and critical thinking through the construction of images designed to address specific pictorial problems and goals. This course is intended for students who are preparing for a major in Art as well as for those who wish to improve their artistic skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

165C Composition in Painting III**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Art-Fine Art 165B with a grade of "C" or better, or equivalent.

Advisory: English 49 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5; Art-Fine Art 150A and Art-Fine Art 155A, each with a grade of "C" or better, or equivalent.

This course continues the study begun in Art-Fine Art 165A and 165B of oil/acrylic painting methods and techniques. Composition, color, and application of general design principles are explored at a more advanced level of creativity and sophistication. A variety of subject matter such as still life, landscapes, portraits and non-objective subjects, and a variety of stylistic approaches such as cubism, collage, realism, and expressionism are explored. The course is designed to develop students' creative abilities and critical thinking in visual terms through the use of individual assignments tailored to students' skills. The course is intended for students who are preparing for a major in art, as well as for those who wish to improve their artistic skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

165D Composition in Painting IV**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Art-Fine Art 165C with a grade of "C" or better, or equivalent.

Advisory: Art-Fine Art 150A and Art-Fine Art 155A, each with a grade of "C" or better, or equivalent. This course is the culmination of a four-semester sequence of study of oil/acrylic painting methods and techniques. The student continues to explore and develop skills and techniques in subject matter such as still-life, landscape, portrait, and non-objective subject matter, demonstrating an advanced level of creativity and critical thinking in visual terms. This course is intended for students preparing for a major in Art and may also be of interest to those who wish to improve their artistic skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

170A Contemporary Crafts I**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6; Art-Fine Art 150A with a grade of "C" or better, or equivalent.

This course teaches students techniques, methods and processes to produce a variety of crafts. Students develop projects using various media

including ceramics, wood, fibers, glass, plastic and metal. Students explore design principles, expressive quality and individual ideas. This course is intended for students pursuing careers or future studies in Studio Arts, Applied Design or Industrial Arts. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

170B Contemporary Crafts II

**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Art-Fine Art 170A with a grade of "C" or better, or equivalent.

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6. This course continues the study of various crafts media at an intermediate level. Emphasis is placed on individual exploration and expression. This course is intended for students pursuing careers or future studies in Studio Art, Applied Design or Industrial Design. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

175A Sculpture I

**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: Art-Fine Art 150A with a grade of "C" or better, or equivalent.

This course is an introduction to sculptural materials, processes and forms. The course helps students to appreciate the shapes and functions of sculpture (past and present) in the context of hands-on experience. This course is intended for transfer students planning to major in art and for all students interested in working in three-dimensional media. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

175B Sculpture II

**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: Art-Fine Art 175A with a grade of "C" or better, or equivalent.

This course continues the introduction to sculptural materials, processes and forms begun in Art-Fine Art 175A. It differs from 175A in that it requires that students show more initiative in their selection and pursuit of sculptural goals, that they be more articulate in defining these goals, and that they extend their sculptural reach to include either new sculptural forms or new sculptural materials. This course is intended for transfer students planning to

major in art and for all students interested in working in three dimensional media. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

175C Sculpture III

**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: Art-Fine Art 175B with a grade of "C" or better, or equivalent.

This course continues the acquaintanceship with sculptural materials, processes and forms begun in Art-Fine Art 175A and 175B. It differs from 175B in that it requires that students show more self-reliance in their selection and pursuit of sculptural goals, and that the goals they select be more complex and ambitious. This course is intended for transfer students planning to major in art and for all students interested in working in three-dimensional media. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

193 Photography as Fine Art

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

The application of photography techniques, traditional and experimental, is the basis in this course with concentration being on creative expression. Students are encouraged to combine photography with a variety of art media work and techniques which might include darkroom manipulation, collage, painting, hand coloring, assemblage, Polaroid transfer, electronic imaging, non-silver processes, and other mixed media techniques. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

195A Ceramics I

**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is an introductory level ceramics course in which students design and construct hand-built and wheel-thrown ceramic objects. Students learn form and surface enrichment, use glazes, and load kilns. This course is designed to meet art major and transfer requirements for ceramic or art majors and also serves students interested in developing ceramic skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

195B Ceramics II**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Art-Fine Art 195A with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is an intermediate level ceramics course in which students design and construct wheel thrown and handbuilt ceramic objects emphasizing form and surface enrichment, use molds, weigh, mix and use glazes, as well as load kilns and fire electric kilns. This course is designed for major requirements and transfer by ceramic or art majors and for students interested in developing ceramic skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

195C Ceramics III**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Art-Fine Art 195B with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Level R5 and W5.

Continuation of Art-Fine Art 195A/B.

This course is an advanced level ceramics course in which students design and construct wheel thrown and handbuilt ceramic forms selecting an area of focus emphasizing form and surface enrichment. Student will develop, mix and use clay and glazes, as well as load and fire gas and electric kilns. This course is intended for transfer students planning to major in art and for all students interested in designing objects in three dimension. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

196 Clay and Glaze Technology**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Art-Fine Art 195A with a grade of "C" or better, or equivalent.

Advisory: Art-Fine Art 195B or Art-Fine Art 197B with a grade of "C" or better, or equivalent.

This is a survey of technical processes in ceramics that introduces students to basic and advanced techniques of glaze formulation, mixing, and testing. The course also acquaints students with the composition of clays, stains, and engobes and how

these respond to different kilns and firing conditions. This course is designed to help ceramics majors and other interested students understand the physical and chemical nature of ceramic materials. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

197A Handbuilding Ceramics I**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Art-Fine Art 195A with a grade of "C" or better, or equivalent.

Advisory: Completion of or concurrent enrollment in English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course provides instruction in the design and construction of hand-built ceramic forms. Students create ceramic forms emphasizing form and surface enrichment, while gaining experience applying glazes and loading kilns. This course is designed for art majors and for students interested in developing ceramic skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

197B Handbuilding Ceramics II**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Art-Fine Art 197A with a grade of "C" or better, or equivalent.

Advisory: Completion of or concurrent enrollment in English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is an intermediate level ceramics course in which students design and construct hand-built ceramic forms emphasizing form and surface enrichment, weigh, mix and use glazes, as well as load kilns and fire electric kilns. This course is designed for major requirements and transfer by ceramic or art majors and for students interested in developing ceramic skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

210A Life Drawing I**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; Art-Fine Art 150A and 155A,

each with a grade of "C" or better, or equivalent. This basic course in figure drawing helps students understand form, structure, and proportions of the human figure as they apply to visual expression. Students learn about human anatomy and physical features, composition and perspective, and developing and evaluating their personal style. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

210B Life Drawing II

**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Prerequisite: Art-Fine Art 210A with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; Art-Fine Art 150A and 155A, each with a grade of "C" or better, or equivalent. This course is a continued study and refinement of skills and concepts acquired in ARTF 210A. Students develop the skills needed to successfully draw the human form. Areas covered include further study of the skeletal and muscular systems in humans, perception of form, contour drawing, and modeling. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

210C Life Drawing III

**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Figure drawing and composing related to the individual interests of the student. Enrollment based upon space availability and previous high achievement/portfolio. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

270 Work Experience

**Hours by Arrangement
(One unit of credit is earned for each 75 hours of
paid employment or 60 hours of volunteer work.)
1-4 units
Grade Only**

Limitation on Enrollment: Must obtain an Add Code from Work Experience Coordinator for registration. A program of on-the-job learning experiences for students employed in a job related to their major or their educational goals. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate

Degree Credit & transfer to CSU and/or private colleges and universities.

290 Independent Study

**Hours by Arrangement, 1-3 units
Letter Grade or Pass/No Pass Option**

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

Open only to those students who have exhausted departmental offerings in their areas of emphasis. This course may be taken four times with different content for a maximum of six units. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Visual and Performing Arts Art: Graphic Design

Description

Living in an information-seeking society, we are surrounded by words and pictures. It is the task of the graphic designer to research, analyze, organize and make artistic order out of chaos. Graphic design students must learn to speak a global visual language and develop an awareness of the meanings and power of symbols and words. The products and services they design and promote will make a social and ecological impact.

Program Emphasis

Early emphasis is on the design process, form, color and typography. The elements and principles of design are applied to projects which include packaging, magazine production, and design and production of posters, logos and brochures. Guided by instructors who are working design professionals, students learn to design for the real world. They make decisions about issues of concept, format, imagery, type, printing and methodology. Computer and traditional methods are used to solve graphic problems. The program culminates in a professional portfolio which can be used to continue studies to a four-year university or obtain employment. The portfolio is critiqued by practicing design advisors and alumni.

Faculty	Office	Telephone
Candice Lopez	T-310A	619-388-3560
Andrea Singer	T-309A	619-388-3933

For more information visit:
<http://sdccgraphicdesign.blogspot.com>

Career Options

Some careers in graphic design-related work require education beyond the associate degree. This list is not all-inclusive: advertising designer, art director, environmental graphic designer, graphic designer, type designer, illustrator, and magazine/editorial designer, multimedia designer, web page designer.

For additional information please visit our website:
<http://sdccgraphicdesign.blogspot.com>

Student Learning Outcomes

Students who complete the program will be able to:

- Research, analyze, organize and formulate artistic order out of chaos.
- Recognize and speak a global visual language and demonstrate an awareness of the meanings and power of symbols and words.
- Design products and services that will make a social and ecological impact.
- Apply elements and principles of design to projects that include packaging, magazine production, and design and production of posters, logos and brochures.
- Formulate decisions about issues of concept, format, imagery, type, printing and methodology.
- Use Computer and traditional methods to solve graphic problems.
- Create a professional portfolio that can be used to pursue studies to a four-year university or obtain employment.

Academic Programs

The associate degree in Two- and Three- Dimensional Art requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Certificate of Achievement: Visual and Performing Arts

Graphic Design

Students are provided with skills for entry-level employment in the graphic design field while also developing a portfolio in graphic design for jobs and/or specific university admission requirements.

Courses Required for the Major:		Units
ARTG 100	Basic Graphic Design	3
ARTG 106	Typography	3
ARTG 118	Graphic Design History	3
ARTG 120	Illustration	3
ARTG 124	Intermediate Graphic Design I (Page Layout)	3
ARTG 125	Digital Media	3
ARTG 133	Intermediate Graphic Design II (Identity Systems)	3
ARTG 148B	Portfolio B	3
ARTF 155A	Freehand Drawing I	3

Total Units = 27

Associate in Arts Degree: Visual and Performing Arts

Graphic Design

The associate degree program offers employment skills, development of a portfolio in graphic design and offers courses for preparation for university transfer.

Courses Required for the Major:		Units
ARTF 110	Art History: Prehistoric to Gothic	3
ARTF 111	Art History: Renaissance to Modern	3
ARTF 155A	Freehand Drawing I	3
ARTG 100	Basic Graphic Design	3
ARTG 106	Typography	3
ARTG 118	Graphic Design History	3
ARTG 120	Illustration	3
ARTG 124	Intermediate Graphic Design I (Page Layout)	3
ARTG 125	Digital Media	3
ARTG 133	Intermediate Graphic Design II (Identity Systems)	3
ARTG 148B	Portfolio B	3

Total Units = 33

Recommended electives: Art-Fine Art 210A; Art-Graphic Design 126, 144, 148A, 149, 206, 270, 290; Photography 100, 105.

Transfer Information**Common university majors related to the field of Art-Graphic Design include:**

Graphic Communications, Communication Design, Design Media, Digital Design, Design Graphics, Graphic Design, Illustration.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses**Art - Graphic Design (ARTG)****100 Basic Graphic Design**

**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

This course is an introduction to the fundamental principles of graphic communication. Instruction incorporates traditional hand-rendering methods as well as use of the computer. In this class the fundamental principles and elements of design are identified and applied to two and three dimensional projects. This course is intended for graphic design majors and anyone interested in basic graphic design. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

106 Typography

**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Limitation on Enrollment: This course is not open to students with previous credit for Art-Graphic Design 265A Typography.

This beginning course covers the selection, styles, terminology, classifications, spacing, layout, and history of typography. Emphasis is placed on

problem solving skills and analyzing concepts to solve typographic problems. Traditional hand rendering skills and computer software are used to develop effective typographic design. This course is intended for graphic design majors and anyone interested in typography. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

118 Graphic Design History

**3 hours lecture, 3 units
Grade Only**

This course examines graphic design as a vital component of each culture and period in human history. Great minds in design, breakthrough technologies and important design movements are covered in their historical context. This course is intended for graphic design majors and anyone interested in design history. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

120 Illustration

**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; and Art-Fine Art 150A and Art-Fine Art 155B, each with a grade of "C" or better, or equivalent.

This course addresses illustration methods, materials, and tools as related to the discipline of graphic design. Emphasis is placed on developing effective visual concepts and solutions through specific illustration assignments. Students explore a variety of media techniques utilizing both black and white and color. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

124 Intermediate Graphic Design I (Page Layout)

**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Advisory: Art-Graphic Design 125 or Art-Fine Arts 150A, or 150B, each with a grade of "C" or better, or equivalent.

This intermediate course covers the design and layout of multiple page documents such as annual reports, brochures, newsletters, and stationery packages. The primary tool is the computer, utilizing layout software, but traditional design media is also used. Emphasis is placed on the application of grids and principles and procedures of effective layout.

This course is designed for the student in graphic design as preparation for the major. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

125 Digital Media

**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with credit for Art-Commercial Art 125. This course is an introduction to the principles of digital media utilized for visual communication. Instruction incorporates the current hardware and software utilized in the graphic design industry. The specific hardware and software is announced for each course section. The course is tailored to the student in graphic design. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

126 Intermediate Digital Media

**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; and Art-Graphic Design 125 with a grade of "C" or better, or equivalent.

This course is an intermediate level survey course which explores the principles of digital media utilized for visual communication. Instruction will incorporate the primary hardware and software utilized in the digital media industry today. Each section of this course may utilize different hardware and software and may therefore be taken three times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

133 Intermediate Graphic Design II (Identity Systems)

**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Advisory: Art-Graphic Design 125 or Art-Fine Arts 150A, or 150B, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Art-Commercial Art 110 or 133.

This intermediate course covers the application of design principles to the production of logos and marks. Students learn to use type in current

marks, create design briefs, and use branding in the development of package designs. Traditional and computer approaches are covered. This course is designed for the student as preparation for the major in graphic design. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

144 Web Page Graphic Design

**.5 hour lecture, 4.5 hours lab, 2 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; and Art-Graphic Design 124 and Art-Graphic Design 125, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Art-Graphic Art 265B, Web Page Design/Graphic Art.

This intermediate course explores the graphic elements of web page design. Emphasis is placed on the content, look and feel and navigational issues of web design. Instruction incorporates the current hardware and software utilized in the web industry. The specific hardware and software will be announced for each course section each semester. This course is tailored to the student in graphic design. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

148A Portfolio A

**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Limitations on Enrollment: (1) This course is not open to students with credit for Art-Graphic Design 147 or 155; and (2) Student must submit portfolio of graphic design work in order to obtain add code from instructor for registration.

This advanced course covers the design and layout of personal identity to a stationery package, resume, cover letter and self-promotional piece. The class features guest lecturers in the fields of portfolio preparation, business and legal issues. Analysis of existing work, issues of format and content and implementation of a portfolio development plan culminates in completed panels. This course is designed as preparation for the major in graphic design. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

148B Portfolio B**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Limitations on Enrollment: (1) This course is not open to students with credit for Art-Graphic Art 147; and (2) Student must submit portfolio of graphic design work in order to obtain add code from instructor for registration.

This advanced course applies the portfolio strategies developed in ARTG 148A to the creation of a complete professional portfolio of work. Students are required to formally present their portfolios for review and critical analysis by department faculty and advisors. This course is designed as preparation for the major in graphic design. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

149 Studio Practices**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Limitation on Enrollment: Must obtain an Add Code from the instructor for enrollment. Students must submit portfolio of graphic design work in order to obtain an add code from the instructor for registration.

This advanced course is designed to provide opportunities for professional practice in the field of graphic design. Whenever possible students will work on real jobs for non-profit organizations and San Diego City or Miramar College. Interfacing with clients, developing design briefs and graphic problem solving will result in printed portfolio samples. This course is designed for the student in graphic design as preparation for the major in graphic design. This course may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

151 Travel by Design**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6. This course is a practical study of creativity and global design through travel and the exploration of new people, places and cultures. Emphasis is placed on the application of innovative thinking and global competencies to design solutions for an increasingly interconnected world. Students expand their perspectives and develop global competencies through immersion into select geographic areas. Students may choose to travel

to the select geographic area or experience it through online participation. This course is designed for graphic arts majors and anyone interested in developing creativity through global competencies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

206 Advanced Typography**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5; Art-Graphic Design 106 with a grade of "C" or better, or equivalent.

This advanced course covers techniques and conceptual strategies to solve complex typographic problems. Emphasis is placed on historical and contemporary letter forms and the expressive potential of typography to create meaning. This course is intended for graphic design majors and anyone interested in advanced typography. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

225 Advanced Digital Media**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Prerequisite: Art-Graphic Design 125 with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; Art-Graphic Design 126 with a grade of "C" or better, or equivalent.

This course is an advanced study of the principles of digital media used for visual communication. Instruction incorporates current hardware and software utilized in the graphic design industry. Specific hardware and software is announced for each course section each semester. This course is designed for students majoring in graphic design and anyone interested in furthering their digital media skills. This course may be repeated three times with significant software updates. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

270 Work Experience in Graphic Design
Hours by Arrangement
(One unit of credit is earned for each 75 hours of
paid employment or 60 hours of volunteer work.)
1-4 units
Grade Only

Limitation on Enrollment: Must obtain an Add Code from Work Experience Coordinator for registration. A program of on-the-job learning experiences for students employed in a job related to their major or their educational goals. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

290 Independent Study in Graphic Design
Hours by Arrangement, 1-3 Units
Grade Only

Limitation on Enrollment: Must obtain an Add Code from instructor for registration. Open to advanced students interested in working on special problems in Graphic Design. (FT) This course may be taken four times with different content for a maximum of six units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Visual and Performing Arts Dance

Description

Dance is a vigorous and specialized area in the performing arts, and is unique in its ability to convey emotional and cultural values. Dance is physically demanding and requires a thorough understanding of aesthetic values. The Dance major at San Diego City College is one of six options in the Visual and Performing Arts Division. This program is primarily designed for the student who intends to transfer to San Diego State University, or to other universities that offer baccalaureate preparation in Dance. Additionally, the program provides an excellent

foundation in dance for students interested in other performing arts fields or entry level into the workforce.

The following dance courses meet the Physical Education graduation requirement: DANC 110, Ballet; DANC 115, Tap; DANC 120, American Street Dance; DANC 130, Dance Repertoire; DANC 135, Jazz Dance; DANC 140, DANC 145, Ballroom; Modern Dance; DANC 177, Dance Improvisation; DANC 178, Advanced Contemporary; DANC 179 Advanced Classical; and DANC 261, Dance Performance.

Program Emphasis

The focus of the Dance program at San Diego City College is on modern, ethnic dance forms and body modalities. Courses in choreography, dance history, dance performance and improvisation are among those required for the Associate in Arts degree in Dance. Dance students will work closely with the City College Theater and Musical Theater departments in production for public performance.

Faculty	Office	Telephone
Alicia Rincon	C-108	619-388-3563
Terry Wilson	C-214	619-388-3555

Career Options

Most careers related to Dance and other performing arts require education beyond the associate degree. Graduates of university dance programs may be eligible for careers in regional dance theater, musical theater or may qualify for teaching positions. Higher education positions in dance usually require graduate level preparation. Dance is an excellent form of exercise and recreation as well as a valuable asset in community theater production.

Student Learning Outcomes

Upon completion of a Certificate of Dance, a student will be able to demonstrate knowledge of:

- The history of dance as it relates to western culture, including Ballet, Modern, Jazz, Broadway/Musical Theater, and Ethnic forms of dance.
- Aesthetic perception of various dance forms, and critical analysis and response to performance.
- An understanding of choreographic, technical and improvisational elements of dance.

Academic Programs

The associate degree in Dance requires completion of the courses listed for the degree. Additional general education and graduation requirements for

the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Certificate of Performance: Dance*

This certificate prepares the dance student with a solid foundation of kinesthetic training in one or more idioms, principles of choreography, movement education, along with the process of performance. Graduates will be qualified to work in regional dance Theater; as a professional dancer in industrial work in areas such as Los Angeles, and as a certified dance instructor or independent choreographer.

Courses:	Units
DANC 181 Introduction to Dance	3
DANC 111 Ethnic Dance Forms	2
DANC 253 Choreography	2

Select ten units from:

DANC 110 Ballet	0.5-1
DANC 120 American Street Dance	0.5-1
DANC 130 Dance Repertoire	0.5-1
DANC 135 Jazz Dance	0.5-1
DANC 140 Modern Dance I	0.5-1
DANC 177 Dance Improvisation	0.5-1
DANC 178 Advanced Contemporary Dance	1
DANC 179 Advanced Classical Dance	1
DANC 183 Music for Dance	2
DANC 261 Dance Performance	2
DANC 271 Dance Production	1-2

Total Units = 17

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Musical Theater Dance*

The Musical Theater Dance Certificate prepares students to develop and understand the skills and expectations required of professional musical theatre performers. Graduates will be qualified to perform in regional theatres, national tours, cruise ships, theme parks and on Broadway.

Courses:	Units
DRAM 173 Musical Theater Workshop	2
DRAM 251 Musical Comedy Rehearsal, Production and Performance	3

Select eight units from:

DANC 110 Ballet	0.5-1
DANC 130 Dance Repertoire	0.5-1
DANC 135 Jazz Dance	0.5-1
DANC 140 Modern Dance I	0.5-1
DANC 177 Dance Improvisation	0.5-1
DANC 261 Dance Performance	2

Total Units = 13

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Associate in Arts Degree: Visual and Performing Arts

Dance

Courses Required for the Major:	Units
DANC 111 Ethnic Dance Forms	2
DANC 181 Introduction to Dance	3
DANC 183 Music for Dance	2
DANC 253 Choreography	2

Select 12 units from the following dance

technique courses:

DANC 110 Ballet	0.5-1
DANC 120 American Street Dance	0.5-1
DANC 130 Dance Repertoire	0.5-1
DANC 135 Jazz Dance	0.5-1
DANC 140 Modern Dance I	0.5-1
DANC 177 Dance Improvisation	0.5-1
DANC 178 Advanced Contemporary Dance	1
DANC 179 Advanced Classical Dance	1
DANC 271 Dance Production	1-2

Complete two semesters of the following course (4 units total):

DANC 261, Dance Performance	4
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Total Units = 25

Recommended electives: DRAM 122, 173, 174, 251.

Transfer Information

Common university majors related to the field of Dance include:

Dance, Dance and Performance Studies, Kinesiology, Liberal Studies, Physical Education, Theater Arts, Visual and Performing Arts.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate

major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Dance (DANC)

110 Ballet

**2-3 hours lab, .5-1 unit
Letter Grade or Pass/No Pass Option**

Ballet is a course in traditional ballet technique focusing on correct body alignment and placement through repetition and centre work. The class analyzes, discusses, and critiques the line, design, ballet technique, choreography and dynamics of ballet movements. Ballet fulfills lower division requirements for Dance majors. This course, in combination with Physical Education 110, may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

111 Ethnic Dance Forms

**1 hour lecture, 3 hours lab, 2 units
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is an introduction to multiple cultures and global dance traditions. Each tradition is examined in terms of its particular set of techniques, styles and rhythms. Special emphasis is placed on the exploration of movement characteristic of each cultural dance form. This course is not limited to dance majors and minors. Dance majors are encouraged to expose themselves to a variety of cultural dance forms. Course content, including country, culture and/or dance type, changes each semester. This course may be taken up to four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

115 Tap

**2-3 hours lab, .5-1 unit
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Tap is an introductory course which explores a variety of tap dance styles. Emphasis is on the development of balance, ankle articulation, timing and clarity of sound in the performance of basic tap vocabulary. Rhythm studies include musical phrasing, dynamics, body placement, and improvisation. This course is designed for dance and theater majors as well as students interested in exercise and aerobic experience. This course may be taken four times for credit. Students must demonstrate increased proficiency and skill attainment with each repetition. When this course is offered for three hours a week the additional time is utilized in the practice and perfection of rhythmic and sound clarity. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

120 American Street Dance

**2-3 hours lab, .5 - 1 unit
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

American Street Dance is an introductory course in a variety of established and emerging dance forms including Hip Hop, Funk, Pop, Lock and Fly. Street dance movements, rhythms and styles are explored through dance combinations. This course may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

127 Body Modalities and Injury Prevention

**1 hour lecture, 3 hours lab, 2 units
Letter Grade or Pass/No Pass Option**

This course builds on basic concepts of anatomy, physiology, and kinesiology to introduce traditional and non-traditional approaches to movement and injury prevention. Emphasis will be placed on the following modalities: Feldenkrais, Alexander Technique, Rolfing, Pilates, Gyrokinesis, physioball, foam roller, theraband, yoga, breath support (Tai Chi and Qi Gung), and introduction to Bartenieff Fundamentals. Student skills and proficiencies are enhanced by supervised repetition of various body modalities techniques, alignment and core

stabilization, and body connections; therefore, this course may be taken up to four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

130 Dance Repertoire

2-3 hours lab, .5 - 1 unit
Letter Grade or Pass/No Pass Option

Advisory: Dance 110, 135 or 140; or Physical Education 110, 135, or 140, with a grade of "C" or better, or equivalent.

Dance Repertoire is designed to introduce the dancer to the choreography of renowned choreographers. This course provides the opportunity for students to learn and perform selected choreography in ballet, modern, jazz, tap and musical theater. This course, in combination with Physical Education 130, may be taken four times for credit. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

135 Jazz Dance

2-3 hours lab, .5 - 1 unit
Letter Grade or Pass/No Pass Option

Jazz Dance is a course which explores a variety of jazz dance techniques focusing on the development of coordination, flexibility, balance, strength, correct body alignment and rhythmic perception. Dance combinations are performed to demonstrate technical ability at all skill levels. Jazz Dance fulfills lower division requirements for dance majors. This course, in combination with Physical Education 135, may be taken of four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

140 Modern Dance

2-3 hours lab, .5 - 1 unit
Letter Grade or Pass/No Pass Option

Modern Dance is a course that explores the fundamental concepts and techniques of modern dance including floor stretch, center work, locomotor sequences and dance combinations. The student demonstrates, defines and performs flexibility, coordination, rhythmic and dynamic perception, control and strength. The class critiques, discusses and analyzes line, design, technique, choreography and dynamic qualities through lectures, videotapes and concert critiques. Modern Dance fulfills lower division requirements for dance majors. This course, in combination with Physical Education 140, may be taken four times for credit. (FT) Associate Degree

Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

145 Ballroom and Social Dance

2-3 hours lab, .50 - 1 unit
Letter Grade or Pass/No Pass Option

Advisory: English 49 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5.

Ballroom and Social Dance is an introductory course focusing on the fundamentals of partner dance and basic steps in a variety of social and ballroom dance genres. Emphasis is placed on partnering technique, frame, style, and steps. This course is designed for dance and theatre majors as well as students who wish to explore historical dance. This course may be taken four times for credit. Students must demonstrate proficiency in the performance of increasingly complex Latin rhythms, tango variations, swing styles and partnering with each repetition. When this course is offered for three hours a week the additional time is utilized in the practice and perfection of styling, postures, rhythms and variations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

150 Dance Making: Ballet

3 hours lab, 1 unit
Grade Only

Advisory: Dance 253 with a grade of "C" or better, or equivalent.

This course is a practical exploration of the processes and elements used in the art of dance making in the area of Ballet. Within a workshop format, students work under close faculty supervision to research the historical masterpieces of Ballet and reinterpret them in a contemporary light. Emphasis is placed on concept creation, use of story and movement, improvisation, dance patterns, revision and refinement to develop an original dance in a fixed, repeatable form. This course is designed for dance majors and all students interested in dance and choreography. This course may be repeated three times with new choreography. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

151 Dance Making: Jazz

3 hours lab, 1 unit
Grade Only

Advisory: Dance 253 with a grade of "C" or better, or equivalent.

This course is a practical exploration of the processes and elements used in the art of dance making in the area of Jazz. Within a workshop format, students work under close faculty supervision to research Jazz, including its African roots, its place in American musical theatre, and the influence of Funk, Hip-Hop and Latin rhythms, in order to create an original piece. Emphasis is placed on concept creation, use of story and movement, improvisation, dance patterns, revision and refinement to develop an original dance in a fixed, repeatable form. This course is designed for dance majors and all students interested in dance and choreography. This course may be repeated three times with new choreography. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

152 Dance Making: Modern

**3 hours lab, 1 unit
Grade Only**

Advisory: Dance 253 with a grade of "C" or better, or equivalent.

This course is a practical exploration of the processes and elements used in the art of dance making in the area of Modern dance. Within a workshop format students work under close faculty supervision to research the 20th century pioneers of Modern dance and 21st century trends to create an original, emotive Modern dance. Emphasis is placed on concept creation, use of story, emotion and movement, improvisation, dance patterns, revision and refinement to develop an original dance in a fixed, repeatable form. This course is designed for dance majors and all students interested in dance and choreography. This course may be repeated three times with new choreography. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

153 Dance Making: Dance Theater

**3 hours lab, 1 unit
Grade Only**

Advisory: Dance 253 with a grade of "C" or better, or equivalent.

This course is a practical exploration of the processes and elements used in the art of dance making in the area of Dance Theatre. Within a workshop format, students work under close faculty supervision to integrate multimedia, text, spoken word and/or film with dance to create an original piece of Dance Theatre. Emphasis is placed on concept creation, use of story and movement, improvisation, dance

patterns, revision and refinement to develop an original dance in a fixed, repeatable form. This course is designed for dance majors and all students interested in dance and choreography. This course may be repeated three times with new choreography. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

177 Dance Improvisation

2-3 hours lab, .5 - 1 unit

Letter Grade or Pass/No Pass Option

Advisory: Dance 110, 135, or 140; or Physical Education 135 or 140, with a grade of "C" or better, or equivalent.

This course is designed to give students the opportunity to learn beginning and intermediate improvisational dance skills through the use of space, time, dynamics, and motion of body parts. Emphasis is placed on performance ability and technique. The student is involved in a structured dance performance in various situations and progresses to spontaneous movement in group and individual works. This course fulfills lower division requirements for dance majors. This course, in combination with Physical Education 177, may be taken four times for credit. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

178 Advanced Contemporary Dance

3 hours lab, 1 unit

Letter Grade or Pass/No Pass Option

Advisory: Dance 135 or Physical Education 135, with a grade of "C" or better, or equivalent.

This course focuses on the movement principles of American dance masters Jack Cole, Bob Fosse, Luigi and Matt Mattox. Instruction includes student performance of various contemporary dance styles for videotaped analysis of technical proficiency. This course, in combination with Physical Education 178, may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

179 Advanced Classical Dance

3 hours lab, 1 unit

Letter Grade or Pass/No Pass Option

Advisory: Dance 110 with a grade of "C" or better, or equivalent.

This course focuses on correct advanced body alignment, coordination, flexibility and strength. The class compares, discusses and analyzes the

movement principles of the Royal, French, Cecchetti and Russian methods. This course, in combination with Physical Education 179, may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

181 Introduction to Dance

**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with credit for Physical Education 260. Introduction to Dance is designed to give students the opportunity to appreciate the aesthetic foundations of dance as interpreted within Western traditions. The course covers basic techniques of Western dance traditions that foster an awareness of dance as therapy and fitness as well as art and dance in film, video, and live performance. Additionally, students are introduced to dance as the expression of social discourse distinct to historical periods within Western history. Finally, students study the techniques of selected canonical or well known dancers, choreographers and their craft. This course is introductory but prepares both potential performers and scholars with an interest in performance for intermediate studies in dance. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

183 Music for Dance

**2 hours lecture, 2 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; Dance 253 or Physical Education 116 with a grade of "C" or better, or equivalent.

Music for Dance introduces the fundamentals of music through the study of terminology, notation, elements and form as they relate to movement. The course explores the interrelationship of music and dance and provides students the opportunity to compose and perform rhythmic and movement projects. This course fulfills lower division requirements for dance majors. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

253 Choreography

**1.5 hours lecture, 1.5 hours lab, 2 units
Letter Grade or Pass/No Pass Option**

Advisory: Dance 110, 120, 135, or 140; or Physical Education 135 or 140, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Physical Education 116. Choreography is a course that explores the theories and elements utilized in the creative process of dance composition. Emphasis is placed on student application of choreographic concepts through the development of movement compositions. This course fulfills lower division requirements for dance majors. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

261 Dance Performance

**6 hours lab, 2 units
Grade Only**

Advisory: Physical Education 135 or 140 or Dance 110, 135, or 140 with a grade of "C" or better, or equivalent.

Dance Performance provides the opportunity for students to apply intermediate and advanced skills in ballet, jazz and modern dance in preparation for public performance. Emphasis is placed on student application of dance, staging, and performance techniques in a theatrical environment. This course fulfills lower division requirements for dance majors. This course, in combination with Physical Education 129, may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

271 Dance Production

**3-6 hours lab, 1-2 units
Letter Grade or Pass/No Pass Option**

Dance Production explores the technical and management aspects of producing a dance concert. Emphasis is placed on student application of design and construction of costumes, lighting design, makeup application, stage and house management, and publicity. This course fulfills lower division requirements for dance majors. This course, in combination with Physical Education 118, may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised

Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Visual and Performing Arts Theater

Program Emphasis

The Theater Arts program provides an opportunity to gain practical experience in professional and community theater work and to prepare for continued higher education. Major theater productions are offered each year, allowing students to develop practical skills and talents while earning college credit for transfer to universities.

Faculty	Office	Telephone
Duane Gardella	C-107	619-388-3594
June Richards	C-110	619-388-3617
Katherine Rodda	C-106	619-388-3088

Career Options

Most careers related to theatre require education beyond the associate degree; however, an understanding and mastery of technical theatre skills provides some preparation for work in local community theatre and professional theatre. A partial list of possible career options follows: set designer, model builder, makeup artist, lighting designer, stage manager, scenic artist, set builder, set carpenter, set painter, stage technician, sound technician, prop maker, lighting operator.

Program Learning Outcomes

Your education is grounded in a dynamic relationship to the history of Theatre arts as a craft and an awareness of the conditions of the world around you. In addition, you will be able to work effectively within an ensemble. As a program we encourage each student to present yourself and your personal artistic talents with clarity and confidence.

Student Learning Outcomes

Upon completion of the program, the student will be able to:

- Effectively practice the theatre arts through involvement in the creation and presentation of public performances in theatre.
- Develop a structural approach to interpretation of language in dramatic text.

- Explain and practice basic production processes such as acting, scenic, costume, and make-up design, and technical operation related to production.
- Identify the historical and cultural dimension of theatre, including the works of leading playwrights, actors, directors, and designers.
- Acquire inter-cultural and multi-cultural understanding, as well as perception of the universal and timeless human conflicts presented in dramatic works.
- Augment the discipline, cooperation, accountability, and perseverance necessary for positive self-identification and success in life.

Certificate of Performance: Technical Theatre

This is a certificate in Technical Theatre in which the student will put into practice the skills necessary in scenery construction, scene painting, costume, and makeup in order to pursue a professional career in theatre, film, television, music, and/or dance.

Associate in Arts Degree: Visual and Performing Arts, Theatre

The theatre program offers transfer courses in preparation for university theatre majors as well as fundamental skills in acting and play production useful for employment or for participation in community theatre productions.

Student will be assessed through a combination of performance evaluations, written assignments, and written tests and quizzes.

Academic Programs

The associate degree in Theater requires completion of the courses listed for the degree. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Certificate of Performance: Technical Theater*

Courses:	Units
DRAM 122 Makeup for the Stage	2
DRAM 123 Beginning Stagecraft	3
DRAM 126 Advanced Stagecraft	3
DRAM 129 Beginning Scene Painting	3
DRAM 143 Beginning Costuming	3

Total Units = 14

*A Certificate of Performance is a departmental award that does not appear on the student's

transcript. All courses must be completed within the San Diego Community College District.

Associate in Arts Degree: Visual and Performing Arts

Theater

The theater program offers transfer courses in preparation for university theater majors as well as fundamental skills in acting and play production useful for employment or for participation in community theater productions.

Courses Required for the Major: **Units**

DRAM 105	Introduction to Dramatic Arts	3
DRAM 119	Acting for Film and Television	3
DRAM 122	Makeup for the Stage	2
DRAM 123	Beginning Stagecraft	3
DRAM 132	Beginning Acting	3
DRAM 134	Beginning Voice for Actors	3
DRAM 165	Introduction to Stage Movement	3

Required Electives

DRAM 107	Study of Filmed Plays	3
DRAM 108	Playwriting	3
DRAM 109	Theatre and Social Issues	3
DRAM 129	Beginning Scene Painting	3

Total Units = 32

Recommended electives: Dramatic Arts 103, 106, 250, 251.

Transfer Information

Common university majors related to the field of Drama include:

Drama, Liberal Studies, Theater, Theater and Performance Studies, Theatre Arts, Visual and Performing Arts.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Visual and Performing Arts Musical Theater

Program Emphasis

This program provides some of the preparation for transfer to programs in dance, voice, acting, movement and provides basic training in musical theater and theater.

Faculty	Office	Telephone
Stephanie Robinson	C-225F	619-388-3933
Duane Gardella	C-107	619-388-3594
June Richards	C-110	619-388-3617
Alicia Rincon	C-103	619-388-3563

Career Options

Some career options listed require a baccalaureate degree: musical theater stage performer, actor, television actor/performer, choreographer, stage chorus actor, show dancer, stage movement instructor, high school and elementary movement and dance instructor, creative dramatics instructor.

Program Learning Outcomes

Musical Theatre is the most diversified area of the dramatic arts. Our focus in training students is to integrate three art forms, acting, singing and dancing into a single mode of expression. Our students explore the unique relationship that exists among these three disciplines, in order to compete as performers in a challenging job market. Student Learning Outcomes

Associate in Arts Degree: Visual and Performing Arts, Musical Theatre

This program provides fundamental skills and theory in musical comedy, theatre and music both for transfer students and for persons interested in participating in theatre and musical theatre productions.

Students who complete the program will be able to:

- Effectively practice Musical Theatre arts through involvement in the creation and presentation of public performances in Musical theatre.
- Explain and practice basic production processes such as acting, scenic, costume, and make-up design, and technical operations related to production.
- Identify/describe the historical and cultural dimensions of Musical Theatre, including the works of leading musical theatre playwrights, and composers.

- Acquire the discipline, cooperation, accountability, and perseverance necessary for positive self-identification an success in life.

Academic Programs

The associate degree in Musical Theater requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Associate in Arts Degree: Visual and Performing Arts

Musical Theater

This program provides fundamental skills and theory in musical comedy, theater and music both for transfer students and for persons interested in participating in theater and musical theater productions.

Courses Required for the Major:	Units
DANC 115 Tap	1
DANC 135 Jazz Dance	1
DANC 153 Dance Making: Dance Theatre	1
DRAM 119 Acting for Film and Television	3
DRAM 132 Beginning Acting	3
DRAM 172 Beginning Musical Theater Audition	2
DRAM 173 Intermediate Musical Theater Workshop	2
DRAM 251 Musical Comedy Rehearsal, Production and Performance	1-4
MUSI 120 Beginning Voice	2
Total Units = 19	

Recommended electives: Dance 110, 261; Dramatic Arts 134; Music 121.

Transfer Information

Common university majors related to the field of Musical Theater include:

Composition, Liberal Studies, Music, Music Business, Music Industry and Technology, Music Performance, Music Theater, Visual and Performing Arts.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific

transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Dramatic Arts (DRAM)

103 Acting for Non-majors

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Dramatic Arts 130. This course introduces students to improvisational acting. The first phase of the course treats acting as process-centered. The instructor leads the participants using a variety of exercises to imagine, enact and reflect upon human experiences. The second phase of the course emphasizes problem-solving skills in group improvisational work. The group improvises action and dialogue appropriate to the content it is exploring, using elements of drama to give form and meaning to the experience. This course is designed for students who are interested in studying acting. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

105 Introduction to Dramatic Arts

**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6.

This course is an introductory study of the art and literature of the theater. Emphasis is placed on the examination and evaluation of dramatic texts in terms of genre, historical context, aesthetics and reception. In addition, this course introduces students to the technical aspects of the theatrical industry including production and personnel through campus drama productions and field trips. This course is designed for students majoring in dramatic arts and anyone interested in theatre. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

106 Acting for Radio/Voice-Over
2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: English 48 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5; Radio and Television 105 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Dramatic Arts 106, 265 (Acting for Radio/Voice-Over) or Radio and Television 265 (Acting for Radio/Voice-Over). This course is a practical study of the voice-over industry. Emphasis is placed on voice-over acting techniques for radio and television commercials, multimedia and other audio and video presentations. Students are expected to read aloud extensively as well as to record their voice for critique and self-evaluation. Topics also include an overview of the voice-over business, marketing, current technology, and professional work and studio etiquette. This course is intended for students majoring in drama or radio and television as well as for anyone interested in the voice-over business. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

107 Study of Filmed Plays
3 hours lecture, 3 units
Grade Only

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6. This course is a study of cinematic adaptations of plays, comparing stage and screen versions in the areas of form and structure, writing, and production. Emphasis is placed on developing students' appreciation for dramatic art and providing practice in the art of theater criticism. This course is designed for Drama majors and any student interested in the Humanities. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

108 Playwriting
3 hours lecture, 3 units
Grade Only

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6. This course gives students an opportunity to write effective material for the theatre. Topics and exercises explore dialogue, monologue, exposition, autobiography, writing for the opposite gender and prismatic structure. Students are required to write scenes that explore issues of structure that facilitate

the development of a technique that is both individual and based on traditional dramaturgical ideas. This class is designed for students majoring in theatre and those students interested in the Humanities. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

109 Theatre and Social Issues
3 hours lecture, 3 units
Grade Only

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6. This course is a study of the role of theatre in society within its cultural, aesthetic, economic, and political manifestations. Emphasis is placed on increasing students' understanding of politics in theatrical representation and theatre as a tool for social change. Topics include the nature and function of theatrical representation, moving to historical and contemporary issues in American and World cultures. This class is designed for students majoring in theatre and those students interested in the Humanities and/or social and theoretical issues. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

119 Acting for Film and Television
2 hours lecture, 3 hours lab, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5; and Dramatic Arts 132 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Radio and Television 119 or 265 or Dramatic Arts 265, Acting for Film and Television. (Same as Radio and Television 119.) This course introduces students to the skills required for on-camera performing techniques as used in the motion picture and television industry. Students participate in the selection, rehearsal, and on-camera performance of material from television and motion picture scripts including drama, sitcoms, soaps and commercials. Emphasis is placed on cold reading taped audition skills, improvisational and interview techniques, and the fundamental acting techniques required for camera, scene, and monologue studies. This course provides a comprehensive introduction to students intending to enter a career in the dramatic arts and radio/television. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

122 Makeup for the Stage**1 hour lecture, 3 hours lab, 2 units
Grade Only**

This course is an introductory hands-on study of the materials and techniques used in stage makeup design and application. Emphasis is placed on the acquisition of a lexicon pertinent to the history and use of makeup in the theater as well as on the actual application of stage makeup in the classroom as a member of the makeup crew for a theatrical production. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

123 Beginning Stagecraft**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Limitation on Enrollment: This course is not open to students with previous credit for Dramatic Arts 125. This lecture/laboratory course emphasizes student involvement in all phases of technical scene production. The course emphasizes construction, painting, rigging, placement, and manipulation of stage scenery, lighting equipment, sound and properties, and the organization and management of stage activity and stagecraft technology. Students study the aesthetics and practical application of set, sound and lighting design. This course is designed for students pursuing an Associates Degree in performance and technical theater and may be repeated one time. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

126 Advanced Stagecraft**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Dramatic Arts 123 with a grade of "C" or better, or equivalent.

This course offers students an advanced study of technical stage production and scene technology with an emphasis on the methods and practices of technical theory and on practical, hands-on experience. Course content includes theater design, stage decor and lighting and the synthesis of all elements of stagecraft within an environment of actual stage production. Students develop crew leadership skills as they create and construct set designs and operate stage equipment for all Dramatic Arts production throughout the semester. This course is designed for students pursuing an associate degree in performance and technical theatre and may be repeated one time. (FT)

Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

129 Beginning Scene Painting**2 hours lecture, 3 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 48 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5.

Limitation on Enrollment: This course is not open to students with previous credit for Dramatic Arts 265: Introduction to Scene Painting and Decorative Arts. This course introduces students to basic techniques and materials used in the painting of scenery for the stage. Students learn techniques in faux painting, murals, trompe l'oeil (trick the eye), and decorative motifs for theatre. Students experiment with color mixing, base, layout, ink, lay-in detail and the use of brushes and tools. Emphasis is placed on application of techniques for theatre settings. This course provides a comprehensive introduction to students pursuing a degree in Visual and Performing Arts or a Certificate in Technical Theatre. This course may be taken three times. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

132 Beginning Acting**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Dramatic Arts 131A. This course is a beginning level study, practice and execution of the fundamentals of acting designed to develop a foundation in basic acting technique. Emphasis is placed on the effective communication of ideas and emotions by a dramatic character to audience. The course content includes staging techniques, improvisation, theater games, scenes, monologues, stage movement, and an introduction to the lexicon of acting for theater. This course is intended for students who are interested in developing basic acting techniques. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

133 Intermediate Acting**2 hours lecture, 3 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Dramatic Arts 132 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Dramatic Arts 131B. This course is designed to build upon the acting and scene work skills developed in Dramatic Arts 132. Emphasis is placed on character analysis through lecture, demonstration and exercises as well as on scene rehearsal and presentation. This course is intended for students who are interested in preparing for a major in drama. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

134 Beginning Voice for Actors**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Level R5 and W5.

This course is designed as an introduction to voice for actors. Students learn the mechanics of voice production and the various elements of theatre speech: quality, strength time and pitch. The students are introduced to the American Standard Pronunciation and International Phonetic Alphabet. Lecture and discussion, plus individual and group exercises, are combined to help the student acquire the basics of good voice, speech and articulation. This course is for students pursuing a degree in Visual and Performing Arts with an emphasis in Drama. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

136 History of Canonized Theatre- Ancient Greece to the Restoration**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is designed to introduce the student to a history theatre of the Western canon from ancient times to the Restoration in England. The student examines the physical theatre and methods of staging drama from the earliest records to the mid-17th Century. Emphasis is placed on text analysis of the works of the canonized playwrights and the relationship of the theatre to the historical, political

and religious events of the times. This course is intended for students pursuing a degree in Visual and Performing Arts with an emphasis in Drama. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

137 History of Canonized Western Theatre- Restoration to the Present**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is designed to introduce students to a history of canonized Western theatrical experiences from the English Restoration to the present and includes examination of the physical theatre and methods of staging drama. Emphasis is placed on text analysis of the works of canonized playwrights and the relationship of theatre to the historical, political and religious events of the times. This course is intended for students pursuing a degree in Visual and Performing Arts with an emphasis in Drama. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

142 Drawing for the Theatre: Costume Illustration**1 hour lecture, 6 hours lab, 3 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 and M20; Art-Fine Art 155A and 210A, each with a grade of "C" or better, or equivalent.

This course is a comprehensive hands-on study of costume illustration techniques for the theatre. Emphasis is placed on the visual development process for costume design. Students develop and research a costuming concept based on the text of a play, draw design sketches, render a series of costume presentation boards and flat pattern costumes. Exposure to various media enhances personal style and expression. This course is designed for theatre majors and anyone interested in fashion design for the theatre. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

143 Beginning Costuming**2 hours lecture, 3 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 and M20.

This is a lecture and laboratory course that emphasizes student involvement in the techniques and methodology of costume construction. Class material emphasizes practical experience in sewing, fabrics and their modification, costume craft techniques such as millinery, masks, footwear and accessories, and service on costumes crews. Students study costume production procedures in regards to time, budgets and labor. This course is designed for students pursuing an Associates Degree in performance and technical theater. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

165 Introduction to Stage Movement**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Dramatic Arts 165A. This course serves as an introduction to basic techniques of movement for the stage. Stage movement focuses on the actor's body as an expressive instrument. Students acquire flexibility, strength, and physical repertoire of stage movement. The student is challenged to explore and utilize new areas of dramatic expression. Some examples of contemporary movement are Tai Chi, Suzuki, Alexander, and Feldenkrais. This course is intended for students pursuing a degree in Visual and Performing Arts with an emphasis in Drama. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

172 Beginning Musical Theater Audition**1 hour lecture, 3 hours lab, 2 units
Letter Grade or Pass/No Pass Option**

This course is a beginning-level study and demonstration of the skills needed to competitively audition for musical theater productions. Emphasis is placed on selecting and rehearsing appropriate ballads and up-tempo songs, as well as on music preparation, song interpretation, lyric memorization techniques, audition performance, projection,

appearance, and communication. Course content also includes an introduction to the process of auditioning for musical theater within a professional context. Students are required to participate in an audition recital. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

173 Intermediate Musical Theater Workshop
**1 hour lecture, 3 hours lab, 2 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Dramatic Arts 172 with a grade of "C" or better, or equivalent.

This course is an intermediate-level study and demonstration of the skills necessary to integrate singing and movement in performance and to audition for musical theater in a competitive way. Emphasis is placed on student participation in the selection, rehearsal, and weekly performance of ballad and up-tempo audition songs. Course content includes music preparation, lyric interpretation, musical terms and notation, and stage movement at the intermediate level. By the end of the course, students are able to arrange an audition and apply professional conduct and standards toward the goal of theater as employment. This course is designed for students pursuing an Associates Degree in performance. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

250 Rehearsal, Production and Performance
**3-12 hours lab, 1-4 units
Letter Grade or Pass/No Pass Option**

This course is a study and application of the skills, responsibilities and commitment required for work in play production and performance. Throughout the course, students participate in the rehearsal, production and performance of an actual play. As part of this process, students research and provide written critiques of the background, style, historical conditions and artistic theory connected to the given play and apply these to an original interpretation of the production. This course may be repeated three times. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

251 Musical Comedy Rehearsal, Production and Performance**3-12 hours lab, 1-4 units
Grade Only**

This course is a study and application of the skills, responsibilities and commitment required for work

in the production and performance of a musical. Throughout the course, students participate in rehearsal, production and performance as actors, singers, dancers, technicians, assistant directors, stage managers and production crew. As part of this process, students research and provide written critiques of the background, style, historical conditions and artistic theory connected to the given musical and apply these to an original interpretation of the production. This course may be repeated three times. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

290 Independent Study

**Hours by Arrangement, 1-3 units
Letter Grade or Pass/No Pass Option**

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

Advanced special work in dramatic arts: acting, design, lighting, film, business, makeup, costumes, direction, or play production. This course may be taken four times with different content for a maximum of six units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Visual and Performing Arts Digital Audio

Program Emphasis

The Digital Audio Certificate of Performance is a course of study in digital recording, mixing and mastering of musical projects. This is a hands-on program in which students utilize state-of-the-art software and plug-ins for Musical Instrument Digital Interface (MIDI) sequencing projects. The Digital Audio Certificate of Performance program prepares students for entry-level positions in a variety of fields in the music industry.

Faculty	Office	Telephone
Stephanie Robinson	C-225F	619-388-3933

Career Options

Entry level employment options for graduates of the Digital Audio Certificate of Performance programs include positions in recording, mixing, mastering music for music compact discs, jingles or commercials, and radio and television station packages. This program also serves as a base for future career options such as digital art technician, recording studio engineer, synthesizer programmer, and retail music equipment sales.

Academic Programs

The associate degree in Two- and Three- Dimensional Art requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Certificate of Performance: Digital Audio *

Courses:	Units
MUSI 150A Basic Musicianship	3
MUSI 190 Electronic Music Studio	3
MUSI 201 Recording Arts	3
MUSI 202 Computer Music	3
Total Units = 12	

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Visual and Performing Arts Recording Arts

Program Emphasis

The Certificate of Achievement in Recording Arts prepares Music students with a solid foundation in digital recording, mixing and mastering of musical projects using state-of-the-art software and plug-ins. Students produce musical projects using Musical Instrument Digital Interface (MIDI) sequencing, as well as music for multimedia projects, film and video. Combined with course work in basic musicianship, students are prepared for entry-level positions in a variety of fields in the music industry.

Faculty	Office	Telephone
Stephanie Robinson	C-225F	619-388-3933

Career Options

Examples of entry level employment options after successful completion of the Certificate of Achievement in Recording Arts include: recording, mixing, mastering, composition and/or production of music for music CDs, film, video, music videos, jingles or commercials, radio and television station identification packages, and multimedia projects. This program also serves as a base for further education leading to careers such as digital audio technician, recording studio engineer, producer, sound re-enforcement engineer, synthesizer programmer, and retail music equipment sales.

Academic Programs

The associate degree in Two- and Three- Dimensional Art requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Certificate of Achievement: Visual and Performing Arts

Recording Arts

Courses Required for the Major:		Units
MUSI 150A	Basic Musicianship	3
MUSI 190	Electronic Music Studio	3
MUSI 201	Recording Arts	3
MUSI 202	Computer Music	3
MUSI 205A	Projects in Electronic Music	3
RTVC 107	Audio Production	3
RTVC 152	Digital Audio Post Production	3

Total Units = 21

Recommended elective: Music 115A.

Visual and Performing Arts Digital Music Technology

Program Emphasis

The Digital Music Technology program provides an opportunity for students to gain specific hands-on skills in each of the technologies currently used in the music industry. Students will also gain practical experience for professional and community musical performance and preparation for continued higher education. Students will participate in various facets of music production for a variety of uses in the commercial marketplace which will allow them to

develop practical skills and talents while earning college credit for transfer to universities or entry into the workplace.

Faculty	Office	Telephone
Stephanie Robinson	C-225F	619-388-3933

Career Options

Examples of employment options available in entry level digital music technology after successful completion of the associate degree program include: composition and/or production of music for music CD's, film, video, music videos, jingles or commercials, radio and TV station ID packages, and multimedia projects. Additional careers include digital audio technician, recording studio engineer, sound re-enforcement engineer, and synthesizer programmer. Some of these careers require education beyond the associate degree.

Student Learning Outcomes

Upon completion of the Digital Music Technology program:

- Students will be able to successfully operate ProTools software in the context of a recording studio; students will be able to pass a Digidesign training exam covering the use of this software.
- Students will have an understanding of MIDI technology and the operation of a MIDI based studio.
- Students will understand analog and digital signal flow as it pertains to a recording studio environment.
- Students will be able to successfully utilize microphones/microphone placement in order to record live instruments with ProTools software.

Academic Programs

The associate degree in Two- and Three- Dimensional Art requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Associate in Arts Degree: Visual and Performing Arts

Digital Music Technology

Courses Required for the Major:		Units
MUSI 108	The Business of Music	3
MUSI 115A	Elementary Piano	1

MUSI 150A	Basic Musicianship	3
MUSI 190	Electronic Music Studio	3
MUSI 201	Recording Arts	3
MUSI 202	Computer Music	3
MUSI 205A	Projects in Electronic Music	3
RTVC 107	Audio Production OR	
RTVC 152	Digital Audio Post Production	3
RTVC 151	Introduction to Multimedia	3

Total Units = 25

Recommended electives: Music 100, 109, 111, 115B, 120, 121, 215A, 215B, 230A, 230B, 290, 296; Radio and Television 154, 157, 167.

Transfer Information

Common university majors related to the field of Music include: Composition, Creative Studies, Ethnomusicology, Liberal Studies, Music, Music Business, Music Education, Music Industry and Technology, Music Performance, Music Theater, Visual and Performing Arts.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Music (MUSI)

100 Introduction to Music

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This is a survey course designed to develop listening perception through lectures, recordings, films and concerts. The conceptual and stylistic differences

in music from various periods and cultures will be examined through discussion of the elements of music as well as through discussions of ethnic, jazz, vocal instrumental and 20th century music. This course is designed to support students in all majors who are interested in satisfying the general education requirements for Arts and Humanities. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

108 The Business of Music

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: Completion of or concurrent enrollment in: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6. This course is a comprehensive survey of the music business. Course content emphasizes the various areas of the music business, the functions of each area and the relationships between the areas. Topics covered include songwriting, music publishing, copyright, music licensing, unions and guilds, agents and managers, artists and management, the record industry, artists' recording contracts, studios and engineers, and music in radio, television and advertising. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

109 World Music

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This music survey course explores the music cultures of Asia, the Middle East, Africa, Central and South America, the Caribbean and other areas with resident populations in San Diego. Musical practices and perspectives from several music cultures are studied with an emphasis on understanding and appreciation from non-ethnocentric viewpoints. Listening perception is developed through lectures and multimedia presentations. The course is intended to satisfy general education requirements for Arts and Humanities and satisfies the San Diego Community College District's Multicultural Course Studies requirement. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

110 Music for Elementary School Teachers
2.5 hours lecture, 1.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course prepares students to teach music as part of the curriculum in the elementary school classroom, the preschool, or day-care program. Students develop an understanding of musical concepts primarily by singing and/or playing an instrument and create lesson plans for teaching these concepts to children. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

111 Jazz - History and Development
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is a survey of the history and development of jazz in the United States. Emphasis is placed on the origins of jazz, the variety of styles that developed throughout the twentieth century, current trends and outstanding performers and composers. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

115A Class Piano I
.5 hours lecture, 1.5 hours lab, 1 unit
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course introduces basic skills to music majors whose theoretical and practical keyboard skills are deficient, and to non-music majors who have had little or no experience at the piano. This course focuses on developing repertoire, sight reading, transposition, harmonization, creative composition, and modulation techniques. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

115B Class Piano II
.5 hours lecture, 1.5 hours lab, 1 unit
Letter Grade or Pass/No Pass Option

Prerequisite: Music 115A with a grade of "C" or better, or equivalent.

This course is a continuation of Music 115 A, with an emphasis on moderately difficult techniques in developing repertoire, keyboard techniques, sight-reading, transposition, harmonization, creative composition, improvisation, ensemble playing, and modulation techniques. This course is appropriate for music majors whose theoretical and practical keyboard skills are deficient as well as for non-music majors. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

120 Beginning Voice Class
1.5 hour lecture, 1.5 hours lab, 2 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Music 120A. Beginning Voice Class is an introductory study of efficient vocal production and performance. Beginning exercises for breath management, extending the vocal range, increasing vocal resonance and volume, and singing in an expressive manner are introduced. Vocal exercises and solos are performed to demonstrate these skills. Choral singers, all music majors and students considering music as a major benefit from this class. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

121 Intermediate Voice
1.5 hours lecture, 1.5 hours lab, 2 units
Letter Grade or Pass/No Pass Option

Prerequisite: Music 120 with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Music 120B. Intermediate Voice is an in-depth study of specific elements of efficient vocal technique and performance. These include breath management via body alignment, managing stage fright, and analyzing the expressive elements of selected music. Vocal exercises and songs from various music styles are performed including selections made by students. Choral singers, all music majors, elementary education majors and students considering singing as a profession benefit from this

class. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

130A College Chorus I

**1 hour lecture, 2 hours lab, 1.5 units
Letter Grade or Pass/No Pass Option**

This course is an entry-level introduction to choral singing for potential music majors. Emphasis is placed on developing good vocal tone, intonation, and breath support. Students rehearse and perform easy choral literature arranged for soprano, alto, tenor and bass with piano accompaniment, including but not limited to selections from Broadway musicals, popular and light classical genres. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

130B College Chorus II

**1 hour lecture, 2 hours lab, 1.5 units
Letter Grade or Pass/No Pass Option**

Advisory: Music 130A with a grade of "C" or better, or equivalent.

This course is an intermediate-level exploration of choral singing for potential music majors. Emphasis is placed on developing the musical ear, intonation, diction and independence within a choral section. Students rehearse and perform intermediate-level choral literature arranged for soprano, alto, tenor and bass with piano accompaniment, including but not limited to selections from Broadway musicals, popular and light classical genres. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

130C College Chorus III

**1 hour lecture, 2 hours lab, 1.5 units
Letter Grade or Pass/No Pass Option**

Advisory: Music 130B with a grade of "C" or better, or equivalent.

This course is an intermediate to advanced level exploration of choral singing for potential music majors. Emphasis is placed on further developing the musical ear, diction, sight-singing pitch, and independence within a choral section or small ensemble. Students rehearse and perform intermediate to advanced level choral literature arranged for soprano, alto, tenor and bass with and without piano accompaniment, including but not limited to selections from standard classical repertory in English and Latin. Students rehearse and perform a cappella literature arranged for

soprano, alto, tenor and bass. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

130D College Chorus IV

**1 hour lecture, 2 hours lab, 1.5 units
Letter Grade or Pass/No Pass Option**

Advisory: Music 130C with a grade of "C" or better, or equivalent.

This course is an advanced-level exploration of choral singing for potential music majors. Emphasis is placed on further developing the musical ear, identifying aspects of musical notation, sight-singing, and exploring a wider range of choral literature. Students rehearse and perform advanced-level contrapuntal "a cappella" choral literature arranged for soprano, alto, tenor and bass as both part of a larger ensemble and in solo quartets. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

150A Basic Musicianship

**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is designed for music majors as well as non-music majors. It enables the student to develop perceptions in sight and sound as related to the symbols of rhythmic, melodic, and harmonic notation. It will also enable the student to develop skill in writing, major, minor, and chromatic scales, chord construction and intervals; and to identify terms used to indicate tempo and dynamics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

190 The Electronic Music Studio

**2.5 hours lecture, 1.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Advisory: Completion of or concurrent enrollment in: Music 150A with a grade of "C" or better, or equivalent.

This course is a study of recording and electronic music equipment. It is a prerequisite to future work in the electronic music studio and also prepares students for a major in music. The course

demonstrates basic techniques using microphones, tape recorders, the mixing board, synthesizers, samplers and music applications such as sequencing on computers, Emphasis is on students' acquisition of basic skills needed for practical application and on acquiring knowledge of simple electronic and acoustic theory, including Musical Instrument Digital Interface (MIDI). Students design and create special projects using this equipment and proper protocol during lab hours and present their projects in class. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

201 Recording Arts

**2.5 hours lecture, 1.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Music 190 with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Advisory: Completion of or concurrent enrollment in: Music 150A with a grade of "C" or better, or equivalent.

This course is a study of advanced acoustics and electronic theory as applied to recording, mixing, and sound processing. The course will demonstrate various applications of advanced tape recording, microphone use, and mixing, such as tape editing, effects processing, music concrete composition, and other techniques for music composition. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

202 Computer Music

**2.5 hours lecture, 1.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Music 190 with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; Music 150A with a grade of "C" or better, or equivalent.

This course is a study of the application of contemporary digital technology to the practice of music performance and composition. The emphasis of this course is on the acquisition of computer skills to access and manipulate musical data via MIDI and other digital formats. These skills allow students to digitally sample sounds, control synthesizers and samplers, synchronize computers to tape, sequence music, transcribe and print musical scores and conceive new techniques for music composition. This

course is designed for students who are interested in continuing their education in the Electronic Music Studio. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

205A Projects in Electronic Music

**2.5 hours lecture, 1.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Music 190 with a grade of "C" or better, or equivalent.

Advisory: Music 201 or 202 with a grade of "C" or better, or equivalent.

In this course, students create a portfolio of music recordings and/or productions in an electronic music studio. Assigned projects incorporate composition, arranging, engineering, and production applications in a variety of media environments. Students analyze the nature of sound, sound production, sound enhancement, and the resulting music created. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

205B Projects in Electronic Music

**2.5 hours lecture, 1.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Music 205A with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; Music 150A with a grade of "C" or better, or equivalent.

In this course, students expand their portfolio to include music projects /productions for various media applications and industries such as for the Internet, television and cinema. Students analyze the nature of sound, sound production, sound enhancement, and the resulting music and sound recordings created. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

206A Projects in Composition

**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; Music 150A with a grade of "C" or better, or equivalent.

Advisory: Completion of or concurrent enrollment in: Music 190. Students have the option to create their music with the aid of recording facilities and computer workstations on campus if they are

currently enrolled in or have passed Music 190 with a grade of "C" or better, or equivalent.

In this course students learn to work efficiently as composers with the added support of constant positive feedback. This course is not limited to composing in a classical style but addresses broader issues common to all styles and genres. Included are such studies in compositional principles of form and structure, and other issues that enable students to analyze the nature of their musical creativity. The emphasis is on the students' examining from a critical standpoint weaknesses and strengths in their own original compositions as well as that of their peers, and on the students' developing their creative potential. In addition to music majors and students with advanced knowledge of music, this course is intended for any students actively creating their own music. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

206B Projects in Composition

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; Music 150A with a grade of "C" or better, or equivalent.

Advisory: Completion of or concurrent enrollment in: Music 190. Students have the option to create their music with the aid of recording facilities and computer workstations on campus if they are currently enrolled in or have passed Music 190 with a grade of "C" or better, or equivalent.

This course is a companion course to Music 206A and is designed to allow students, with the aid of recording facilities and computer workstations running music software, to pursue their work as composers. This course is not limited to composing in a classical style but addresses broader issues common to all styles and genres. Included are such studies in compositional principles of balance, texture, dramatic emphasis and other issues that enable students to analyze the nature of their musical creativity. Upon completion of the Music 206 course sequence students have a portfolio of original music. In addition to music majors and students with advanced knowledge of music, this course is intended for any students actively creating their own music. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

209 Electronic Music Studio Internship

4 hours lab, 1 units

Grade Only

Prerequisite: Music 190 with a grade of "C" or better, or equivalent.

Advisory: Completion of or concurrent enrollment in: Music 201 or 202, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Tryout or Audition.

This course allows advanced students in recording arts and computer music to get credit for assisting others in the Electronic Music Studio lab. After audition students are assigned to assist beginning and intermediate students from other classes working in the Electronic Music Studio lab. In this way students reinforce their knowledge and skills by guiding and mentoring others on the basis of what they had learned by seeing and doing in previous courses. This course may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

215A Class Piano III

.5 hours lecture, 1.5 hours lab, 1 unit

Letter Grade or Pass/No Pass Option

Prerequisite: Music 115B with a grade of "C" or better, or equivalent.

This course is an intermediate level of study of practical and theoretical keyboard techniques for music majors, credential applicants, and non-music majors with comparable skills. The course focuses on intermediate skill development of repertoire, keyboard technique, sight-reading, transposition, harmonization, creative composition, improvisation, ensemble playing, and modulation techniques. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

215B Class Piano IV

.5 hours lecture, 1.5 hours lab, 1 unit

Letter Grade or Pass/No Pass Option

Prerequisite: Music 215A with a grade of "C" or better, or equivalent.

This course is an advanced level of study of practical and theoretical keyboard techniques for music majors, credential applicants, and non-music majors with comparable skills. The course focuses on advanced skill development of repertoire, keyboard technique, sight-reading, transposition, harmonization, creative composition, improvisation, ensemble playing, and modulation techniques. (FT)

Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

230A-B Jazz Improvisation

3 hours lab, each course: 1 unit

Letter Grade or Pass/No Pass Option

A comprehensive study of the techniques and literature of improvisation with an emphasis of jazz improvisation and interpretation. Analysis and practical application of chord progressions used in jazz. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

230C Jazz Improvisation

3 hours lab, 1 unit

Letter Grade or Pass/No Pass Option

Prerequisite: Music 230B with a grade of "C" or better, or equivalent.

This course is a continuation of Music 230 A and B, Jazz Improvisation. Emphasis is placed on providing students with an ever-broadening repertoire of Jazz standards and theory as well as an introduction to the basics of commercial arranging. This course is designed for Music majors, students planning on a career in commercial music, and anyone interested in honing their Jazz skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

230D Jazz Improvisation

3 hours lab, 1 unit

Letter Grade or Pass/No Pass Option

Prerequisite: Music 230C with a grade of "C" or better, or equivalent.

This course is a continuation of Music 230 A, B and C, Jazz Improvisation. Emphasis is placed on providing students with an ever-broadening repertoire of Jazz standards as well as more contemporary Jazz tunes. Topics also include advanced Jazz theory and commercial arranging concepts. This course is designed for Music majors, students planning on a career in commercial music, and anyone interested in honing their Jazz skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

290 Independent Study

Hours by Arrangement, 1-3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

Course is designed to meet individual needs or interests of students who wish to work on special projects in music. Special projects include all aspects of music and may involve topics which are broad in scope along with those that are narrow in scope. Special projects may include an unlimited number of diversified phases of the music curricula. This course may be taken four times with different content for a maximum of six units. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

296 Individual Instruction in Music

1.5 - 6 hours lab, .5 - 2 units

Pass/No Pass Only

Limitation on Enrollment: Concurrent enrollment in an approved related course. The instructor of the related course will supply Add Code to the student, which permits registration in the course.

Individual instruction in music which employs self-paced audio and visual multimedia systems designed to assist students in reaching specific learning objectives related to other instructional course areas; hence, it is designed to supplement related courses as specified above. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Visual and Performing Arts Photography

Program Description

The photography program offers a wide range of theory, technique and skills course work from beginning through advanced levels. The program is structured to emphasize the development of creative expression, visual awareness, and technical skills required to enter the photography field or to prepare for transfer to four-year institutions.

Program Emphasis

The certificate of achievement program and the associate degree, Visual and Performing Arts, Photography Emphasis, is designed for students seeking employment in the photography field.

Faculty	Office	Telephone
David Eichinger	V-414C	619-388-3368
David King	V-414B	619-388-3649

Career Options

This list is not all-inclusive. Some careers require education beyond the associate degree: advertising photographer, commercial photographer, fashion photographer, food photographer, editorial photographer/journalist, industrial photographer, portrait/wedding photographer, photo researcher, photographic artist, photographic printer, photography instructor, photo laboratory technician, stock photographer.

Academic Programs

The associate degree in Two- and Three- Dimensional Art requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Certificate of Achievement: Visual and Performing Arts

Photography

Courses Required for the Major:		Units
PHOT 100	Basic Black-and-White Photography	3
PHOT 109	Photographic Composition and Design	3
PHOT 125	Photo Business Operations	2
PHOT 143	Introduction to Digital Photography	3
PHOT 150	History of Photography	3
PHOT 180	Digital Imaging	3
PHOT 200A	Photographic Lighting Techniques	4
PHOT 259	The Photographic Portfolio	3

Select a minimum of six units from:

PHOT 203	Intermediate Lighting Techniques	4
PHOT 220	Portraiture	3
PHOT 230	Advertising Photography	3
PHOT 240	Large Format Photography	3
PHOT 250	Fashion Photography	3
PHOT 257	Wedding and Event Photography	2

Select a minimum of nine units from:

PHOT 135	Intermediate Black-and-White Photography	3
PHOT 165	Electronic Portfolios for Photographers	3
PHOT 205	Travel Photography	3
PHOT 215	Photo Journalism and Documentary Photography	3
PHOT 235	Advanced Black and White Photography	3
PHOT 243	Advanced Digital Photography	3
PHOT 245	Landscape and Nature Photography	3
PHOT 255	Photographic Exhibition and Curatorial	3

Select a minimum of three units from:

PHOT 126	Legal Issues for Photographers	2
PHOT 127	Self Promotion for Professional Photographers	2
PHOT 145	Color Transparency Photography	2
PHOT 160	Book Publishing for Photographers	1.5
PHOT 237	Historic & Alternative Photo Processes	3
PHOT 258	Production for Commercial Photography	2
ARTF 155A	Freehand Drawing	1-3

Total Units = 42

Associate in Arts Degree: Visual and Performing Arts

Photography

Courses Required for the Major:		Units
PHOT 100	Basic Black-and-White Photography	3
PHOT 109	Photographic Composition and Design	3
PHOT 125	Photo Business Operations	2
PHOT 143	Introduction to Digital Photography	3
PHOT 150	History of Photography	3
PHOT 180	Digital Imaging	3
PHOT 200A	Photographic Lighting Techniques	4
PHOT 259	The Photographic Portfolio	3

Select a minimum of six units from:

PHOT 203	Intermediate Lighting Techniques	4
PHOT 220	Portraiture	3
PHOT 230	Advertising Photography	3
PHOT 240	Large Format Photography	3
PHOT 250	Fashion Photography	3
PHOT 257	Wedding and Event Photography	2

Select a minimum of nine units from:

PHOT 135	Intermediate Black-and-White Photography	3
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PHOT 165	Electronic Portfolios for Photographers	3
PHOT 205	Travel Photography	3
PHOT 215	Photo Journalism and Documentary Photography	3
PHOT 235	Advanced Black and White Photography	3
PHOT 243	Advanced Digital Photography	3
PHOT 245	Landscape and Nature Photography	3
PHOT 255	Photographic Exhibition and Curatorial	3

Select a minimum of 3 units from:

PHOT 126	Legal Issues for Photographers	2
PHOT 127	Self Promotion for Professional Photographers	2
PHOT 145	Color Transparency Photography	2
PHOT 160	Book Publishing for Photographers	1.5
PHOT 237	Historic & Alternative Photo Processes	3
PHOT 258	Production for Commercial Photography	2
ARTF 155A	Freehand Drawing	1-3

Total Units = 42

Recommended electives: Photography 102, 103, 270, 290, 296. *Suggested courses for Photography Fine Arts, Design Emphasis:* ARTF 193, PHOT 180, 181, 235, 240. *Suggested courses for Photography Advertising, Commercial Emphasis:* PHOT 125, 220, 230, 240, 250.

Transfer Information**Common university majors related to the field of Photography include:**

Art, Art and Design, Art Photography, Communication, Film and Electronic Arts, Photography, Visual and Public Arts.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Liberal Arts and Sciences with an emphasis. This degree may be individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses**Photography (PHOT)**

100 Basic Black-and-White Photography
1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of "C" or better, or equivalent.

This course is an introduction to basic camera handling skills and the aesthetics of photography. Emphasis is placed on how to use cameras, lenses, exposure meters, flash, enlargers, related equipment and compositional skills to create original images. Laboratory practice includes Black and White film processing, printing and presentation. This course is the entry level course for students working toward a certificate or degree in Photography and in other Visual Arts programs. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

102 Directed Photo Lab Studies

3 hours lab, 1 unit
Pass/No Pass Only

Corequisite: Completion of or concurrent enrollment in: Photography 100 or 143, with a grade of "C" or better, or equivalent.

This course is a supervised laboratory in darkroom and/or digital photography. Emphasis is placed on refinement of personal photographic skills. Content varies with each repetition in photographic subjects and application of techniques. This course may be taken up to four times for credit. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

103 Intermediate Directed Photo Lab Studies
3 hours lab, 1 unit
Pass/No Pass

Prerequisite: Photography 102 with a grade of "Pass" or better, or equivalent.

This course is a project-based supervised lab in darkroom and/or digital photography at the intermediate level. Emphasis is placed on instruction and practice in photo lab and photo editing techniques. This course is for intermediate

photo students and may be taken up to four times for credit. Students are required to use new photographic subjects, processes and techniques with each repetition. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

105 Introduction to Photography
3 hours lecture, 3 units
Grade Only

Advisory: English 101 or English 105 each with a grade of "C" or better, or equivalent, or Assessment Skill Level R6 and W6.

This is a basic photography course for non-photo majors covering how to use cameras, lenses, exposure meters and similar equipment using flash and available light. Use of various films including black and white, color slide, color negative, and digital image acquisition are covered. This course does not satisfy the prerequisites for subsequent photo classes. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

109 Photographic Composition and Design
2 hours lecture, 3 hours lab, 3 units
Letter Grade or Pass/No Pass Option

Advisory: Completion of or concurrent enrollment in: Photography 100 or Photography 143 each with a grade of "C" or better, or equivalent.

This course is a study of composition as applied to photography. Emphasis is placed on identifying and isolating compositional elements for a photograph. Topics include the Golden Rectangle/Golden Mean and the Rule of Thirds as applied to photographic arts. This course is designed for photography majors and anyone pursuing a career in photography. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

125 Photo Business Operations
2 hours lecture, 2 units
Grade Only

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of "C" or better, or equivalent.

Survey of basic organization and planning techniques utilized in media and production with emphasis on pre-production planning, budgeting and scheduling. Variety of current photography related business operations will be covered and concentration on portfolio development and presentation and career opportunities in

photography. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

126 Legal Issues for Photographers
2 hours lecture, 2 units
Grade Only

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6.

This course is designed to introduce the student to the legal rights and liability facing professional photographers, including situations that require releases or agreements to make photographs and how to legally protect their intellectual property rights. The course addresses legal issues associated with the photography industry, how to develop an appropriate business structure, and how to establish legal and financial resources. This course is appropriate for the intermediate or advanced photo student desiring a career in photography. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

127 Self Promotion for Professional Photographers
2 hours lecture, 2 units
Letter Grade or Pass/No Pass Option

Prerequisite: Photography 100 or Photography 143 each with a grade of "C" or better, or equivalent.

This course is designed to cover techniques and approaches used to promote a professional photography business and/or the sales of photographs for display or stock agencies. Emphasis is placed on strategies, promotional campaigns, personal and business resources available, and photo-specific sales techniques. This course is designed for the serious intermediate or advanced photography student intent upon earning revenue with their photography. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

135 Intermediate Black-and-White Photography
1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only

Prerequisite: Photography 100 with a grade of "C" or better, or equivalent.

This course provides students with intermediate-level instruction and practice in black and white film exposure and development procedures and printing. Emphasis is placed on various techniques for enhancing black and white negative and print quality. Topics also include composition, visual

communication skills, use of light, lighting control and equipment. Instruction includes use of 35 mm format and an introduction to medium format cameras. This course is designed for the student working on a certificate or degree in Photography and as preparation for higher level courses in the program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

143 Introduction to Digital Photography
1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only

Advisory: Completion of or concurrent enrollment in: Photography 100 or Photography 105 or Art-Fine Art 190A, each with a grade of "C" or better, or equivalent.

This course is an introduction to the methods and processes involved in photographic image acquisition, optimization and output used in Digital Photography. Emphasis is placed on the evolution from traditional, analog/wet darkroom to digital approaches to photography and the relationship between these approaches. This course is designed for students who wish to pursue a career in photography. Students should provide digital or film camera with manual controls. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

145 Color Transparency Photography
2 hours lecture, 2 units
Grade Only

Prerequisite: Photography 100 or Photography 105 with a grade of "C" or better, or equivalent.

This course is an introduction to color photography, covering color perception, color theory, and the principles of color as they apply to transparency/slide films, and how they compare to color negative and B/W materials. Other topics to be covered will include: exposure techniques; using camera filters; composition; and the types and characteristics of light. There is a strong emphasis on understanding and using lighting and lighting control with all types of light sources both in the studio and on location. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

150 History of Photography
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This class is a survey of the history and development of photography and traces the various scientific and aesthetic issues involved in creating the 'light-based' image. It traces its progress from being a tool of fine art mediums through its involvement in the digital revolution. The course examines photography's social/cultural/economic impact, its impact on the study of history, and discusses present and future directions. The class is required for photography majors in the degree program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

155 Color Photography, Negative
2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Photography 100 with a grade of "C" or better, or equivalent.

Advisory: Photography 135 with a grade of "C" or better, or equivalent.

This course will explore the concepts of using color negative photography materials with the emphasis on proper film exposure, printing procedures, and color composition. The topics covered will include the theory of color, color perception, visual concepts, and lighting control. The student will be shown the proper techniques for exposing and processing color negatives, printing from color negative materials, print finishing and presentation and understanding and using various light sources with color negative materials, both in the studio and on location. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

156 Color Photography Positive
2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Photography 100 with a grade of "C" or better, or equivalent.

Advisory: Photography 135 and Photography 145, each with a grade of "C" or better, or equivalent.

This course will cover the concepts and techniques of using color positive/reversal photography materials, with the emphasis on proper film exposure, printing procedures, and color composition. The topics covered will include: the theory of color; color perception; visual concepts; and light and lighting control. The student will be shown the proper techniques for exposing and processing color positive materials, printing with color positive materials, print finishing and presentation, and the use of various light sources both in the studio and on

location. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

160 Book Publishing for Photographers
1 hour lecture, 1.5 hours lab, 1.5 units
Letter Grade or Pass/No Pass Option

Prerequisite: Art-Graphic Design 100 or Photography 100, 105 or 143, with a grade of "C" or better, or equivalent.

This course is a hands-on study of book publishing for photographers. Emphasis is placed on concept creation, layout, design and assembly strategies, and publishing and promotion options. This course is designed for intermediate-level photography students with an interest in creating photographic books for portfolio, monograph or self-promotion purposes. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

165 Electronic Portfolios for Photographers
1 hour lecture, 6 hours lab, 3 units
Grade Only

Prerequisite: Photography 143 with a grade of "C" or better, or equivalent.

Advisory: Photography 180 with a grade of "C" or better, or equivalent Student needs photo/image editing skills to produce internet ready files.

This course is a hands on study in the development of an electronic portfolio to showcase work and/or function as a sales tool for their work and professional services. Emphasis is placed on the special layout and design needs of photographic web sites for showing and selling images. The course is designed for intermediate and advanced photo students ready to put one's own work and creative services online for sale. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

180 Digital Imaging
1 hour lecture, 6 hours lab, 3 units
Grade Only

Prerequisite: Photography 143 with a grade of "C" or better, or equivalent.

This course is an introduction to the theories and methods of computer use in image making utilizing both traditional photography and advanced technology. The course provides hands on experience in using computer technology as a digital darkroom. Emphasis is on the use of industry standard photo editing software. Focus is on the applications and principles of image creation, manipulation, and enhancement for

visual expression and communication using digital technology. This course is for photography students who can demonstrate a basic level skill with Photoshop. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

181 Intermediate Digital Imaging
1 hour lecture, 6 hours lab, 3 units
Grade Only

Prerequisite: Photography 180 with a grade of "C" or better, or equivalent.

This course presents the theory and practice required for an intermediate level of image creation and visual communication utilizing traditional and digital photography methods. Students explore a variety of creative techniques for producing, editing and altering images using computers, software and digital tools. Emphasis is placed on the skills required by technical assistants in the world of commercial photography. The course is designed for intermediate and advanced Photo students. This course may be repeated three times to update skills as digital imaging software technologies change. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

200A Photographic Lighting Techniques
1.5 hours lecture, 7.5 hours lab, 4 units
Grade Only

Prerequisite: Photography 143 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Photography 200. This course is the study of the lighting concepts, techniques, and equipment used in all phases and types of film and digital photography. Emphasis is on the understanding, control, and manipulation of lighting and lighting equipment using both additive and subtractive lighting techniques. This includes the use of studio and portable lighting equipment, and the techniques of mixing natural and man-made light. Other topics include: related special shooting techniques; multiple exposure; matte-boxing; using a shooting light-table; painting with light and advertising/product-specific lighting considerations. This course is designed for advanced students in photography. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

203 Intermediate Lighting Techniques
2.25 hours lecture, 5.5 hours lab, 4 units
Grade Only

Prerequisite: Photography 200A with a grade of "C" or better, or equivalent.

This course is designed for intermediate level photo students to add higher level techniques and skills to the student's repertoire. Emphasis is placed on increasing the student's repertoire to include the use of mixed light, location lighting, painting with light, Green/Blue screen sets and the use of a light table. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

204 Creative Photographic Techniques
.67 hours lecture, .99 hours lab, 1 unit
Letter Grade or Pass/No Pass Option

Prerequisite: Photography 100 or 143, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for maximum credit for Photography 265G.

This course is for intermediate and advanced photo students and provides a broad base of creative photographic techniques involving digital, traditional, and artistic methods such as canvas printing, image transfers, high contrast/litho imaging, Photoshop filters, large format Polaroid, specialty films, and more. This course may be taken up to four times with each iteration covering a different type of photographic technique. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

205 Travel Photography
1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option

Advisory: Completion of or concurrent enrollment in: Photography 100, 105, or 143, each with a grade of "C" or better, or equivalent.

This course provides photography students with the necessary concepts and techniques to improve their image-making while traveling to prepare them for careers in photojournalism or commercial travel imaging. The course covers film and digital, color and black and white, infrared, tripods and night shooting, lens selection, filters, darkroom work, printing, luggage, X-ray, and much more. This course is designed for students planning a career in stock, editorial, travel, or assignment photography. Students may choose to repeat this course up to four times if the travel is to a different location, whereas the images and information gained would also be new and different. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

215 Photo Journalism and Documentary Photography

1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only

Prerequisite: Photography 100 or 143, with a grade of "C" or better, or equivalent.

This class covers the use of photographs to illustrate news stories, feature stories, and other narrative content. It explores the equipment used by professional photojournalists in this field, and their interaction with the photo editor/buyer. It examines the approaches to the creation of their images from the objective news photo to the persuasive documentary image. The course is designed for intermediate to advanced photo students with an interest in pictorial media. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

220 Portraiture

1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only

Prerequisite: Photography 100 with a grade of "C" or better, or equivalent.

Advisory: Photography 135 and Photography 155, each with a grade of "C" or better, or equivalent. Camera types and formats, lenses, films, and accessory equipment used for portrait and wedding photography. How to use different types and sources of light both in the studio and on location. Using B/W and color films. Posing techniques and proper use of cosmetics, clothing, etc. The physical, psychological, and compositional aspects and characteristics of different portrait styles. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

230 Advertising Photography

2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Photography 100 and Photography 145, each with a grade of "C" or better, or equivalent.

Advisory: Photography 135 with a grade of "C" or better, or equivalent.

The emphasis in this course is in producing photographs to sell a product or service using both black and white and color film materials. An understanding of the photographer's role in the advertising industry will be explored and used as the basis from which all assignments are evaluated. Topics for lecture will include terminology used in the advertising field, layout production and working to layouts. The psychology of ad design

and color usage will be covered. Lighting staples and techniques will be discussed as they relate to projects. The photographer's role working with clients and on assignment work with the Art Director and as a member of the creative team will be heavily emphasized. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

235 Advanced Black and White Photography
2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Photography 135 with a grade of "C" or better, or equivalent.

This course concentrates on advanced theory and the practice of black and white photography to include professional applications, specialized processes, master of dark room skills with emphasis on individual expression. Presentation of advanced printing techniques, film, paper types, toners, and archival processing, are topics to be covered. Students will concentrate on individualized goals, exploring visual ideas and expanding their abilities using the black and white photography medium. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

237 Historic & Alternative Photo Processes
1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only

Prerequisite: Photography 135 with a grade of "C" or better, or equivalent.

This class introduces and demonstrates many of the historic and non-traditional photo processes that are still being used to create unique images. These may include cyanotypes, tintypes, Van Dykes, Platinum and Palladium prints as others. It is designed for advanced photo students exploring new ways to express their photographic vision. To allow students to develop skills with major processes, this course can be taken up to four times concentrating on a different process each time. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

240 Large Format Photography
1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only

Prerequisite: Photography 100 and Photography 145, each with a grade of "C" or better, or equivalent.

Advisory: Photography 135 with a grade of "C" or better, or equivalent.

It is recommended, but not required, that students have their own view camera. Instruction and practice

in view camera techniques used in architecture, advertising, product, landscape and other commercial and artistic applications in B/W and color. Using the camera movements for perspective control and image manipulation. Processing sheet film. Doing close-up and copy work. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

243 Advanced Digital Photography
1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option

Prerequisite: Photography 143 with a grade of "C" or better, or equivalent.

This course further hones the skills learned in the Introduction to Digital Photography course. Emphasis is placed on capturing, retouching, and printing digital files. Topics include High Dynamic Range and Enhanced Depth of Field imaging, single- and multi-row stitching for unlimited resolution, and shooting tethered for professional photo sessions. This course is designed for advanced photography students who have a solid foundation in basic digital acquisition and editing. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

245 Landscape and Nature Photography
1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only

Prerequisite: Photography 100 or Photography 105 or Photography 143, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Photography 265C. This course explores the application of film and digital photography in the natural outdoor setting. From images of the "Grand Landscape" to details and abstracts drawn from nature, the class studies effect of light, exposure, composition, concepts of isolation and context, color theory, and various camera shooting techniques along with the work of major landscape and nature photographers. The class is designed for intermediate level photo students who have basic film or digital skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

250 Fashion Photography
2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Photography 100 and Photography 145, each with a grade of "C" or better, or equivalent.

Advisory: Photography 135 with a grade of “C” or better, or equivalent.

This course will show the student how to create and produce attractive, exciting fashion photos. It will cover both B/W and color, and how to shoot for advertising and fashion magazines. The student will be given instruction and practice in using natural and man-made light on location and in the studio. Posing; clothing; accessories; locations/props; and special techniques in shooting and lighting will be discussed and demonstrated. The student will be shown how to shoot and layout effective fashion model composites. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

257 Wedding and Event Photography
2 hours lecture, 2 units
Letter Grade or Pass/No Pass Option

Prerequisite: Photography 100 or 143, with a grade of “C” or better, or equivalent.

Advisory: Photography 180 with a grade of “C” or better, or equivalent.

This course covers the techniques, equipment, and approaches used by wedding and event photographers. It identifies the “must have” shots, the use of assistants, digital equipment, check lists, working with clients. This course is for advanced level photo students. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

258 Production for Commercial Photography
2 hours lecture, 2 units
Grade Only

Prerequisite: Photography 200 with a grade of “C” or better, or equivalent.

Advisory: Photography 125 or 230, with a grade of “C” or better, or equivalent.

This course introduces the role of the Commercial Photography Producer and covers the tasks and skills needed such as identifying and obtaining locations, wardrobe, talent, stylists and props as well as special equipment. It is designed for advanced photo students with a good knowledge of professional equipment and skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

259 The Photographic Portfolio
1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option

Prerequisite: Photography 100 or 143, with a grade of “C” or better, or equivalent.

This course covers the design, fabrication, editing, sequencing, assembly, and presentations of portfolios of work for professional photo students wanting to sell their photographic services or products and for art photographers seeking to show their work in galleries or museums. It is designed for intermediate and advanced students to create and polish their portfolios. This course may be taken up to four times with each iteration covering a different type of portfolio. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

290 Independent Study in Photography
3-9 hours lab, 1-3 units
Grade Only

Limitation on Enrollment: Must obtain an Add Code from instructor for enrollment.

Advanced individual projects in Photography. Open only to those photo students who have exhausted departmental offerings in their area of emphasis. Independent Study contract between student and professor required. This course may be taken four times with different content for a maximum of six units. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 116. Please refer to the class schedule and/or see the dean or department chair for availability.

Occupational Work Experience

Occupational work experience is a program of on-the-job learning experiences for students employed in a job related to an occupationally oriented major. The goals and assignments for completion of the courses are formulated with industry under the direction of the college instructor assigned to teach Work Experience 270. The grading system is the same as for other subjects offered by the college and the time spent for preparation and training is also comparable. Adequate records are maintained to determine satisfactory progress and attendance. Students in the Cosmetology program will be required to comply with and maintain standards of dress and grooming. Excessive absences may

result in exclusion from the program. All prospective students are required to attend an orientation program.

Student Learning Outcomes

Students will be able to:

- Apply critical thinking, research, analysis and resolution for work-related objectives.
- Convert classroom instruction to the employment environment through the development and attainment of three (3) learning objectives.
- Develop and apply competencies in the workplace and within course-related activities.

Courses

Work Experience (WORK)

270 Occupational Work Experience

Hours by Arrangement

(One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.)

1-4 units

Grade Only

A program of on-the-job learning experiences for students employed in a job related to their major or their educational goals. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

272 General Work Experience

Hours by Arrangement

(One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.)

1-3 units

Grade Only

Limitation on Enrollment: Must obtain an Add Code from Work Experience Coordinator for enrollment.

A program of on-the-job learning experiences designed to assist the student in developing occupational effectiveness. Employment need not be related to a vocational or occupational major. This course may be taken for a maximum of six units. However, the combined maximum credit for all work experience courses from all disciplines may not

exceed 16 units. Associate Degree Credit & transfer to CSU and/or private colleges and universities. Program will provide the trainee with an opportunity to acquire additional skills, expand career options, workplace skill competencies, subject mastery skills and California State Board examination strategies necessary for acquiring their State Cosmetology Instructor's license. A total of 300 hours of lecture/ demonstration and laboratory training to include technical and practical aspects of cosmetology science. This course is offered as a non-degree/credit for a specialized certificate. Associate Degree Credit only and not Transferable.

Apprenticeship

Award Type	Units
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Associate in Science Degree/Certificate of Achievement:

ABC Construction Electronic Systems Technician	25-48*
ABC Electrical	25-48*
ABC Heating, Ventilation, & Air Conditioning	25-48*
ABC Pipefitting	25-48*
ABC Plumbing	25-48*
ABC Sheet Metal	25-48*
Honeywell Tool & Die	18*
San Diego and Imperial Counties Pipetrades-Pipefitting	34-35*
San Diego and Imperial Counties Pipetrades-Plumbing	34-35*
San Diego City Civil Service Communications Technician	34.5*
San Diego Gas and Electric Co.	25-48*
San Diego Transit Electronic Technician	32*
San Diego Trolley: Light Rail Vehicle Lineman	41.5*
Revenue Maintainer	40*
Wayside Assistant Lineman	46*
Solar Turbines	56*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

The apprenticeship training program provides an opportunity for a balanced approach of on-the-job training and related technical instruction to achieve the position of journey person in one of the state-approved programs. The length of the program depends on the trade selected and can range from two to five years. The program encourages

the transfer of skills and knowledge from master journeymen and journeywomen to apprentices to further employment potential in their trade. The California state system was established in 1939 with the passage of the Shelley-Maloney Apprenticeship Labor Standards Act. This act established the California Apprenticeship Council as the policy-making body; named the State Director of Industrial Relations as the administrator of apprenticeship; authorized the Division of Apprenticeship Standards (DAS) to approve training standards and provide assistance in the development of apprenticeship programs; and assigned responsibility for related and supplemental training to state and local boards responsible for vocational education.

Affirmative Action Statement

The Apprenticeship Committees for whom the District provides related and supplemental instruction have indicated they do not and will not discriminate against any employee or against any applicant for employment because of age, race, color, religion, handicap, ancestry, sex or national origin.

Admission To The Program

Indenture in a state-approved apprenticeship program is a required prerequisite to enroll in the apprenticeship related and supplemental classes. Applicants for apprenticeship should contact the employer, program coordinator or labor union listed before each program in the apprenticeship course description section of the catalog. Each of the individual programs listed in the apprenticeship course description section of this catalog is administered by an apprenticeship committee made up of member representatives from the respective trades or industries. This committee serves as the approval body for all apprenticeship matters relating to the particular trade. See our Website for more information: <http://sdcity.edu/Apprenticeship>.

Completion Requirements

In addition to the academic requirements listed below, each apprentice must complete the prescribed number of hours of training during the period of the apprenticeship program as approved by the apprenticeship committee to receive the certificate of achievement or two-year degree.

Student Learning Outcomes

Through a mentored-process of engagement with technical curriculum, the student will be able to:

- Demonstrate preparedness for successful transition to the Journeyman level designation and professional certification by the California Division of Apprenticeship Standards.
- Illustrate procedures utilized for trade and industry specific practices in use of tools techniques and hands-on skills and competencies for Journeyman-level practices in target occupations.
- Identify and utilize equipment and related components of target trade profession to meet target standards for measurement, calibration and target trade practices at Journeyman levels.
- Read, comprehend and apply target trade instructions and design standards for construction or production outcomes as required by target trade practices and industry standards.

Certificate of Achievement Requirements:

Courses Required for the Major **Units**

A. Completion of the related and supplemental instruction during the period of the program as approved by the Apprenticeship Committee

Total Units = 25-48

Associate in Science Degree Requirements:

The Associate in Science degree is conferred upon successful completion of the required apprenticeship programs of Associated Builders and Contractors (A.B.C.), Honeywell Tool and Die, Jet Products Corporation, Operating and Maintenance Engineers HVAC, San Diego and Imperial Counties Pipetrades, San Diego City Civil Service Communications Technician, San Diego Gas and Electric Company, San Diego Trolley, or Solar Turbines, Incorporated.

Courses Required for the Major **Units**

A. Completion of the related and supplemental instruction during the period of the program as approved by the Apprenticeship Committee

Total Units = 25-48

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of catalog. **The associate degree requires a minimum of 60 units.**

Recommended electives: English 101.

Associated Builders and Contractors Construction Electronic Systems Technician Apprenticeship

This is a three-year electrical apprenticeship program in the low-voltage electrical trade. Applications for this program should be directed to Associated Builders and Contractors, 13825 Kirkham Way, Poway, CA 92064; (858) 513-4700. Only students accepted as apprentices under Associated Builders and Contractors are eligible for enrollment in the following Construction Electronic Systems Technician courses.

Courses

Construction Electronic Systems Technician (CEST)

301A Introduction to Construction Electronic Systems Technician I

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40.

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This course provides the Construction Electronic Systems Technician apprentice with instruction in general construction site safety, measurements and formulas, use of hand and power tools, interpretation of blueprints, basic rigging techniques and methods used to move equipment and materials. (FT) Associate Degree Credit only and not Transferable.

301B Introduction to Construction Electronic Systems Technician II

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This course provides the Construction Electronic Systems Technician apprentice with instruction in industry standards and building codes, residential and commercial construction methods, basic electrical theory, electrical meters, OSHA safety

standards, and ladders and rigging. (FT) Associate Degree Credit only and not Transferable.

302A Intermediate Construction Electronic Systems Technician I

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This course provides the Construction Electronic Systems Technician with instruction in mathematics related to the trade and electronic theory. Also includes electronic measurement tools and techniques, Alternating Current (AC) and Direct Current (DC) electrical systems and grounding, and blueprint reading related to the trade. (FT) Associate Degree Credit only and not Transferable.

302B Intermediate Construction Electronic Systems Technician II

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This course provides the Construction Electronic Systems Technician with instruction in types of cabling, switches and relays, terminating conductors, low-voltage codes and standards, and computer cabling applications. (FT) Associate Degree Credit only and not Transferable.

303A Advanced Construction Electronic Systems Technician

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This course provides the Construction Electronic Systems Technician with instruction in wire and cable selection, advanced buses and networks, fiber optic installation, cable and satellite television systems, and wireless communications. (FT) Associate Degree Credit only and not Transferable.

303B Advanced Construction Electronic Systems Technician II

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This course provides the Construction Electronic Systems Technician with instruction in site survey, job planning and documentation, maintenance

and repair, supervision, and fire and security alarm systems. (FT) Associate Degree Credit only and not Transferable.

349 Construction Electronic Systems Technician Work Experience

**Hours by Arrangement, 300 hours total, 4 units
Pass/No Pass Only**

Limitation on Enrollment: Student must be a state registered apprentice in this trade and concurrently enrolled in a related apprenticeship class. This course consists of on-the-job learning experiences in the Construction Electronic Systems Technician occupational field. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate Degree Credit only and not Transferable.

Associated Builders and Contractors Electrical Apprenticeship

This is a four-year electrical apprenticeship program in the electrical trades (inside wireman). Applications for this program should be directed to Associated Builders and Contractors, 13825 Kirkham Way, Poway CA 92064; (858) 513-4700. Only students accepted as apprentices under Associated Builders and Contractors are eligible for enrollment in the following electrical courses.

Courses

Electrical (ELEC)

301A Introduction to Electrical Apprenticeship I

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 and M40.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Electricity 60A or 160A.

This course provides the electrical apprentice with instruction in general construction site safety,

measurements and formulas, use of hand and power tools, interpretation of blueprints, basic rigging techniques and methods used to move equipment and materials. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

301B Introduction to Electrical Apprenticeship II

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Electricity 60A, 160A or 301A, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Electricity 60B or 160B.

This course provides the electrical student with instruction in basic principles of electrical safety and hazard procedures, including working with toxics and vapors. Students are also provided with instruction in techniques used to hand bend conduits and install anchors and supports. Additional instruction included an introduction to basic electrical theory and test equipment, the use of National Electric Code (NEC) boxes, fittings and conductors, and the interpretation of related electrical blueprints and commercial/industrial/residential symbols, diagrams and schematics used for wiring. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

302A Intermediate Electrical Apprenticeship I

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Electricity 60B, 160B or 301B, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Electricity 65A or 165A.

This course is an intermediate study of electrical techniques for Electrical Apprentices. Topics include the principles of alternating currents, the characteristics of circuits, transformers, motor theory applications, grounding purposes and methods, National Electrical Code (NEC) requirements for conduit bending, types of bends, specifications for boxes and fittings, and location considerations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

302B Intermediate Electrical Apprenticeship II

2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: Electricity 65A, 165A or 302A, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Electricity 65B or 165B.

This course provides the electrical apprentice with study and practice in the installation of connections for conductor termination and splices. Topics include the use of cable pulling instruments, National Electrical Manufacturers Association (NEMA) and National Electrical Code (NEC) standards for cable trays, installation of electrical service, components and equipment, the use of manual take-off methods and troubleshooting techniques, identification of ratings for current breakers and fuses, regulations for sizing, use, and installation of relay switches, conductors and overrides, and electrical lighting principles, types and applications. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

303A Advanced Electrical Apprenticeship I

2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: Electrical 302B or 165B (formerly ELEC 65B) with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Building Construction Technology 212 or Electrical 70A or 170A.

This course is an advanced study of electrical techniques. Topics include branch load calculations for circuits and varied electrical appliances, electrical conductors, devices used for overprotection of loads, currents, circuits and fuses, fill requirements for boxes/raceways, principles of wiring devices, switches and receptacles, requirements for distribution equipment, settings for voltage, switch gear, circuits and components, distribution system transformers, National Electrical Code (NEC) requirements, and troubleshooting. This course is designed for students in the Electrical Apprenticeship program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

303B Advanced Electrical Apprenticeship II

2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: Electrical 303A or 170A (formerly Electrical 70A) with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Building Technology 213 or Electrical 70B or 170B.

This course provides the electrical worker with instruction in basic lighting and National Electrical Code (NEC) requirements for indoor and outdoor lighting. Topics include introductory motor basics, including calculations, transformers, instruments for testing, wiring, protection, maintenance, and troubleshooting for various types of motors and motor controls. This course also covers an introduction to heating, ventilation, and air conditioning (HVAC) systems and refrigeration theory, including compressors, operating systems and system maintenance equipment, and safety requirements. The principles of combustion, hazardous materials, their reactions in varied locations, and the use of safety equipment is also included in this course. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

304A Electrical Apprenticeship Specialties I

2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: Electrical 303B or 170B (formerly ELEC 70B) with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Building Construction Technology 222 or Electrical 75A or 175A.

This course provides the electrical apprentice with instruction in calculations for wiring commercial and residential dwellings and National Electrical Code (NEC) requirements for lighting and specialty fixtures. Topics include the standby emergency electrical systems and system applications, disconnect switches, feeder and branch circuits for direct current (DC) systems, theory and operating principles for solid-state devices, operational amplifier circuits, transformers and components of fire alarm and security systems, and installation methods for smoke and heat detectors. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

304B Electrical Apprenticeship Specialties II **2 hours lecture, 3 hours lab, 3 units** **Grade Only**

Advisory: Electrical 304A or 175A (formerly Electrical 75A) with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Building Construction Technology 223 or Electrical 75B or 175B.

This course is designed to provide the electrical apprentice with advanced instruction in controls for motors, starters, relays, switches and transformers as well as in the installation and connection of gas burner controls and commercial and industrial Heating Ventilation and Air Conditioning (HVAC) control systems. Topics also include National Electrical Code (NEC) and Occupational Safety and Health Administration (OSHA) requirements for connecting and grounding varied welding machines, installation and protection of heat-tracing and freeze protection equipment, principles and maintenance of motors, and selection of materials and tools required for high voltage termination/splices according to manufacturer's specifications. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

349 Electrical Work Experience **300 hours lab, 4 units** **Pass/No Pass Only**

Limitation on Enrollment: Student must be a state registered apprentice in this trade and concurrently enrolled in a related apprenticeship class.

This course consists of on-the-job learning experiences in the occupational field of electrical trades. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate Degree Credit only and not Transferable.

Associated Builders and Contractors Heating, Ventilation & Air Conditioning Apprenticeship

A four-year Heating, Ventilation and Air Conditioning (HVAC) apprenticeship program. Applications should be directed to Associated Builders and Contractors, 13825 Kirkham Way, Poway CA 92064; (858) 513-4700. Only students accepted as apprentices under

Associated Builders and Contractors are eligible for enrollment in the following HVAC courses.

Courses

Heating, Ventilation & Air Conditioning (HVAC)

301 Introduction to HVAC I **2 hours lecture, 3 hours lab, 3 units** **Grade Only**

Advisory: English 48 and Mathematics 38, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and M30.

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

In this course, trade mathematics and drawings, the tools of the trade, blueprint terminology and basic rigging equipment and procedures as applicable to HVAC are covered. This course is designed to give the HVAC apprentice student an understanding of copper and plastic piping practices. (FT) Associate Degree Credit only and not Transferable.

302 Introduction to HVAC II **2 hours lecture, 3 hours lab, 3 units** **Grade Only**

Advisory: Heating, Ventilation & Air Conditioning 301 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This course introduces the HVAC trainee to the basic concepts and environmental concerns related to heating, ventilation, and air conditioning including soldering, brazing, ferrous metal piping practices, basic electricity, heating and cooling. This course also describes the HVAC program and the career opportunities available in the HVAC trade. (FT) Associate Degree Credit only and not Transferable.

303 Intermediate HVAC I **2 hours lecture, 3 hours lab, 3 units** **Grade Only**

Advisory: Heating, Ventilation & Air Conditioning 302 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This course instructs the HVAC trainee in the properties of air and covers chimneys, flues and vents. Students are introduced to basic mechanical

procedures commonly performed in HVAC service work such as the operation, installation and servicing of electric furnaces. This course also introduces the student to alternating current and electronic components and circuits used in HVAC systems. (FT) Associate Degree Credit only and not Transferable.

304 Intermediate HVAC II

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Heating, Ventilation & Air Conditioning 303 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This course instructs the HVAC trainee in HVAC controls and metering devices and introduces the trainee to control circuit analysis. This course also covers compressors and heat pumps and instructs the student in leak detection, evacuation, recovery and charging service procedures used to troubleshoot, repair and/or maintain proper operation of the mechanical refrigeration system. (FT) Associate Degree Credit only and not Transferable.

305 Advanced HVAC I

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Heating, Ventilation & Air Conditioning 304 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This course instructs the HVAC trainee in preventive maintenance and provides an introduction to troubleshooting applying to all types of HVAC equipment. This course also covers troubleshooting electronic controls, gas heating, electric heating and oil heating. (FT) Associate Degree Credit only and not Transferable.

306 Advanced HVAC II

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Heating, Ventilation & Air Conditioning 305 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This course instructs the HVAC trainee in troubleshooting cooling, accessories, heat pumps and commercial heating and cooling systems. This course also covers water and air balance, steam systems and customer relations. (FT) Associate Degree Credit only and not Transferable.

307 HVAC Specialties

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Heating, Ventilation & Air Conditioning 306 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This course offers advanced blueprint reading and specifications as they relate to HVAC, indoor air quality and energy conservation equipment commonly used in HVAC systems. This course also covers energy management systems and the methods of water treatment and water treatment equipment used with HVAC systems. (FT) Associate Degree Credit only and not Transferable.

308 HVAC Specialties II

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Heating, Ventilation & Air Conditioning 307 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This course covers commercial heating and cooling systems, maintenance of these systems and system start-up and shut down. This course also covers commercial and industrial refrigeration systems, equipment, refrigerated warehouses, walk-in coolers display cases, etc. (FT) Associate Degree Credit only and not Transferable.

349 HVAC Work Experience

**Hours by Arrangement, 300 hours total, 1-4 units
Pass/No Pass Only**

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

Limitation on Enrollment: Student must be a state registered apprentice in this trade and concurrently enrolled in a related apprenticeship class.

This course consists of on-the-job learning experiences in the occupational field of HVAC. Student must be an indentured HVAC apprentice and be currently enrolled in a related apprenticeship class. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. (FT) Associate Degree Credit only and not Transferable.

Associated Builders and Contractors Pipefitting Apprenticeship

A four-year apprenticeship program. Applications should be directed to Associated Builders and Contractors, 13825 Kirkham Way, Poway CA 92064; (858) 513-4700. Only students accepted as apprentices under Associated Builders and Contractors are eligible for enrollment in the following pipefitting courses

Prerequisite: Pipefitting apprentices must complete Plumbing (PLBG) 305, 310, 315 and 320 with a grade of "C" or better or equivalent prior to enrolling in the Apprenticeship Pipefitting program.

Proficiency in oxy-fuel cutting of straight, curved and bevel cuts, and shielded metal arc welding of mild steel plate is required for completion of the apprenticeship program. Welding proficiency can be achieved through non-credit courses offered through the San Diego Community College District Continuing Education division.

Courses

Pipefitting (PLPF)

325 Introduction To Pipefitting 2 hours lecture, 3 hours lab, 3 units Grade Only

Advisory: Plumbing (PLBG) 165B or PLBG 320, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for PLPF 80 or PLPF 180. Apprenticeship - Student must be a state registered apprentice in this trade.

This course is designed to give the Pipefitting student an introduction to blueprint drawings and detail sheets, piping systems, standards and specifications. The course content includes advanced blueprint reading and trade math as well as motorized equipment and aboveground pipe installation. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

330 Intermediate Pipefitting 2 hours lecture, 3 hours lab, 3 units Grade Only

Advisory: Pipefitting (PLPF) 180 or 325, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Pipefitting (PLPF) 85 or 185. Apprenticeship - Student must be a state registered apprentice in this trade.

This course is designed to give the Pipefitting Apprentice student instruction in pipe hangers and supports, identifying and installing valves, field routing and vessel trim, spring can supports. Emphasis is placed planning work activities and performing non-destructive examination testing. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

335 Advanced Pipefitting 2 hours lecture, 3 hours lab, 3 units Grade Only

Advisory: Pipefitting (PLPF) 185 or 330, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Pipefitting (PLPF) 90 or 190. Apprenticeship - Student must be a state registered apprentice in this trade.

This course is designed to give the Pipefitting Apprentice student instruction in advanced pipe fabrication, aligning pipe to rotating equipment, steam traps, in-line specialties, special piping, hot taps and maintaining valves. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

349 Pipefitting Work Experience Hours by Arrangement, 4 units Pass/No Pass Only

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

Limitation on Enrollment: Student must be a state registered apprentice in this trade and concurrently enrolled in a related apprenticeship class.

This course consists of on-the-job learning experiences in the occupational field of pipefitting. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. (FT) Associate Degree Credit only and not Transferable.

Associated Builders and Contractors Plumbing Apprenticeship

A four-year apprenticeship program. Applications should be directed to Associated Builders and Contractors, 13825 Kirkham Way, Poway CA 92064; (858) 513-4700. Only students accepted as apprentices under Associated Builders and Contractors are eligible for enrollment in the following plumbing courses.

Courses

Plumbing (PLBG)

305 Introduction to Plumbing I **2 hours lecture, 3 hours lab, 3 units** **Grade Only**

Advisory: English 48 and English 49 and Mathematics 38, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 and M30.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Plumbing (Construction Trades) 60A, 105 or 160A.

This course is designed to give the plumbing apprentice student introductory information regarding OSHA (Occupational Safety & Health Administration) standards of safety and precautions for working on the construction site; a review of math as it relates to plumbing, hand and power tool usage, basic plumbing blueprint reading and basic rigging. This course is designed for students planning a career in the plumbing trade. This course is designed for students planning a career in the plumbing trade. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

310 Introduction to Plumbing II **2 hours lecture, 3 hours lab, 3 units** **Grade Only**

Advisory: Plumbing (Construction Trades) 160A or 305, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade.

This course is not open to students with previous credit for Plumbing (Construction Trades) 60B, 110 or 160B.

This course is designed to give the plumbing apprentice student an introduction to reading and interpreting the International Association of Plumbing and Mechanical Officials (IAPMO) uniform plumbing codes and residential plumbing drawings, identifying various types of pipe and the procedures for working with the pipe. This course also includes identification of various plumbing lines and their components. This course is designed for students planning a career in the plumbing trade. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

315 Intermediate Plumbing I **2 hours lecture, 3 hours lab, 3 units** **Grade Only**

Advisory: Plumbing (Construction Trades) 160B or 310, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Plumbing (Construction Trades) 65A, 115 or 165A.

This course is designed to provide the intermediate plumbing apprentice student the knowledge of introductory plumbing math, the identification of various commercial drawings, the installation of Drain, Waste & Vent (DWV) piping components and systems for commercial properties utilizing local and National Plumbing Codes. This course is designed for students planning a career in the plumbing trade. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

320 Intermediate Plumbing II **32 - 36 hours lecture, 48 - 64 hours lab, 3 units** **Grade Only**

Advisory: Plumbing (Construction Trades) 165A or 315, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Plumbing (Construction Trades) 65B, 120 or 165B.

This course is designed to give the intermediate plumbing apprentice student the ability to perform testing of water supply piping and systems, installation of the components of a water supply system, and the ability to read and interpret commercial plumbing drawings for project

requirements according to local and national codes. The application of advanced trade math concepts is further developed. This course is designed for students planning a career in the plumbing trade. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

325 Advanced Plumbing I

**2 hours lecture, 3.5 hours lab, 3 units
Grade Only**

Advisory: Plumbing (Construction Trades) 165B or 320, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Plumbing (Construction Trades) 70A, 125 or 170A.

This course is designed to provide the advanced plumbing apprentice student with the ability to perform applications of advanced math for plumbers and methods of handling waste. This course also provides information relating to water softening measures, methods of locating buried lines, the installation and maintenance of waste pressure booster systems, and the prevention of backflow. This course is designed for students planning a career in the plumbing trade. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

330 Advanced Plumbing II

**2 hours lecture, 3.5 hours lab, 3 units
Grade Only**

Advisory: Plumbing (Construction Trades) 175B or 340, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Plumbing (Construction Trades) 70B, 130 or 170B.

This course is designed to provide the advanced plumbing apprentice student with the ability to organize job tasks, clean and disinfect potable water systems, thaw frozen pipes, install main to meter water services and solar systems. This course also covers the ability to rough-in fixtures for residential, commercial and handicapped settings and install natural gas and storm drainage systems. This course is designed for students planning a career in the plumbing trade. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

335 Plumbing Construction Specialties

**32 - 36 hours lecture, 48 - 64 hours lab, 3 units
Grade Only**

Advisory: Plumbing (Construction Trades) 170B or 330, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Plumbing (Construction Trades) 75A, 135 or 175A.

This course is designed to introduce the plumbing apprentice student to specialty topics such as swimming pool installation, medical gas systems, mobile home and mobile home park plumbing systems, and private water waste and treatment systems. This course is designed for students planning a career in the plumbing trade. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

340 Plumbing Code

**32 - 36 hours lecture, 48 - 64 hours lab, 3 units
Grade Only**

Advisory: Plumbing (Construction Trades) 170A or 325, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Plumbing (Construction Trades) 75B or 175B.

This course is designed to prepare the advanced plumbing apprentice student to apply plumbing codes to correctly design and build plumbing systems. Primary topics include coverage of codes pertaining to plumbing fixtures and fittings, water heaters and fuel piping, drainage, waste and vent systems, sewage and reclaimed water systems, sizing and standards, shielded metal arc welding and alternate plumbing systems. This course is designed for students planning a career in the plumbing trade. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

349 Plumbing Work Experience

**300 hours lab, 4 units
Pass/No Pass Only**

Limitation on Enrollment: Student must be a state registered apprentice in this trade and concurrently enrolled in a related apprenticeship class.

This course consists of on-the-job learning experiences in the occupational field of plumbing trades. The combined maximum credit for all work

experience courses from all disciplines may not exceed 16 units. Associate Degree Credit only and not Transferable.

Associated Builders and Contractors Sheet Metal Apprenticeship

A four-year sheet metal apprenticeship program. Applications should be directed to Associated Builders and Contractors, 13825 Kirkham Way, Poway CA 92064; (858) 513-4700. Only students accepted as apprentices under Associated Builders and Contractors are eligible for enrollment in the following sheet metal courses.

Proficiency in oxy-fuel cutting of straight, curved and bevel cuts, and shielded metal arc welding of mild steel plate and thin gauge metal is required for completion of the apprenticeship program. Welding proficiency can be achieved through non-credit courses offered through the San Diego Community College District Continuing Education division.

Courses

Sheet Metal (SHEE)

301A Level 1 Sheet Metal/HVAC Apprenticeship

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 38, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 and M30.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Sheet Metal 60A or 105.

This course is an introduction the Sheet Metal and Heating, Ventilation and Air Conditioning (HVAC) trades. Topics include the tools of the trade, safety practices, trade mathematics, blueprints and drawings, and basic rigging. This course is designed for apprentices in Sheet Metal/HVAC. (FT) Associate Degree Credit only and not Transferable.

301B Level 1 Sheet Metal/HVAC Apprenticeship

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Sheet Metal 301A or 60A, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Sheet Metal 60B or 110.

This course is a continuation of Sheet Metal and Heating, Ventilation and Air Conditioning (HVAC) trades at the introductory level. Topics include intermediate math, duct and air distribution theory and installation, welding concepts, insulation, and electricity related to the HVAC trade. This course is designed for apprentices in the Sheet Metal and HVAC fields. (FT) Associate Degree Credit only and not Transferable.

302A Level 2 Sheet Metal/HVAC Apprenticeship

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Sheet Metal 60B or 301B, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Sheet Metal 65A or 115.

This course is an intermediate level introduction to the concepts of cooling and sheet metal layout. Topics include layout and line development, mathematics and measurements used in the trade, bend allowances and triangulation. This course is designed for apprentices in the Sheet Metal and Heating, Ventilation and Air Conditioning (HVAC) fields. (FT) Associate Degree Credit only and not Transferable.

302B Level 2 Sheet Metal/HVAC Apprenticeship

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Sheet Metal 65A or 302A, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Sheet Metal 65B or 120.

This course is an intermediate study of heating and metering for the Sheet Metal and Heating, Ventilation and Air Conditioning (HVAC) trades.

Topics include basic electronics, metering devices, compressors, heat pumps, and leak detection, evacuation, recovery and charging. This course is designed for apprentices in the Sheet Metal/HVAC fields. (FT) Associate Degree Credit only and not Transferable.

304A Level 3 Sheet Metal/HVAC Apprenticeship

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Sheet Metal 65B or 302B, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Sheet Metal 70A or 125.

This course is an intermediate level study of blueprints and specifications for Heating, Ventilation and Air Conditioning (HVAC) ductwork. Topics include Sheet Metal and Air Conditioning Contractors of North America (SMACNA) Manuals, duct and fabrication standards, gutters and downspouts, roof flashing, and principles of air flow. This course is designed for apprentices in the sheet metal and HVAC trades. (FT) Associate Degree Credit only and not Transferable.

304B Level 3 Sheet Metal/HVAC Apprenticeship

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Sheet Metal 70A or 304A, with a grade of "C" or better, or equivalent

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Sheet Metal 70B or 130.

This course is an advanced study of blueprint reading and system design for the sheet metal and Heating, Ventilation and Air Conditioning (HVAC) trades. Topics include indoor air quality, types of duct systems, and field measuring and fitting. This course is designed for apprentices in the sheet metal and HVAC trades. (FT) Associate Degree Credit only and not Transferable.

305A Level 4 Sheet Metal/HVAC Apprenticeship

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Sheet Metal 70B or 304B, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Sheet Metal 75A or 135.

This course covers advanced Heating, Ventilation and Air Conditioning (HVAC) and Sheet Metal applications. Topics include system start-up and shut-down, commercial and industrial refrigeration systems, hydronic heating and cooling systems, and how to design fume and exhaust systems per Occupational Safety and Health Administration (OSHA) and American Conference of Governmental Industrial Hygienists (ACGIH) standards. This course is designed for apprentices in Sheet Metal/HVAC. (FT) Associate Degree Credit only and not Transferable.

305C Level 4 Sheet Metal/HVAC Apprenticeship

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Sheet Metal 75A or 305A, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Sheet Metal 75B.

This course covers advanced Heating, Ventilation and Air Conditioning (HVAC) troubleshooting and Sheet Metal roofing. Topics include troubleshooting and repair of gas and electric heating systems, cooling systems, heat pumps, and electronic controls, as well as system balancing. Sheet Metal topics include metal roof system applications and installation. This course is designed for apprentices in Sheet Metal/HVAC. (FT) Associate Degree Credit only and not Transferable.

349 Sheet Metal Work Experience

**300 hours per semester, 4 units
Pass/No Pass Only**

Limitation on Enrollment: Student must be a state registered apprentice in this trade and concurrently enrolled in a related apprenticeship class.

The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate Degree Credit.

Honeywell Tool and Die Apprenticeship

A four-year apprenticeship in the tool and die and mold maker trades at Honeywell Corporation.

Applications for the program are accepted at Honeywell Controls Corporation, 2055 Dublin Drive, San Diego, CA 92154.

This program will prepare the student for a career in machining as a Tool and Die Maker or Mold Maker. Upon completion of the apprenticeship program the student will receive a Journeyman certificate in the trade from the State of California.

Career options include Tool and Die Maker, Mold Maker. The Journeyman certificate will prepare the student for all aspects of the trade, promotion into supervisory and management positions may be possible upon completion of the Associate or Bachelor's degree.

Certificate of Achievement: Honeywell Tool and Die Apprenticeship

Courses Required for the Major:		Units
MATH 104	Trigonometry	3
ENGL 101	Reading and Composition	3
COMS 103	Oral Communication	3
ENGE 151	Engineering Drawing	2
MACT 140	Machine Technology	4
MFET 105	Print Reading and Symbology	3
Total Units = 18		

Associate in Science Degree: Honeywell Tool and Die Apprenticeship

Courses Required for the Major:		Units
MATH 104	Trigonometry	3
ENGL 101	Reading and Composition	3
COMS 103	Oral Communication	3
ENGE 151	Engineering Drawing	2
MACT 140	Machine Technology	4
MFET 105	Print Reading and Symbology	3
Total Units = 18		

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of catalog. **The associate degree requires a minimum of 60 units.**

San Diego and Imperial Counties Pipetrades Apprenticeships

Five-year apprenticeship programs in Pipefitting and in Plumbing are available. Applications for these programs are accepted at San Diego and

Imperial Counties Pipetrades, 6225 Federal Blvd., San Diego, CA 92114. Call 619-262-7588 for application information.

Certificate of Achievement: San Diego and Imperial Counties Pipetrades Apprenticeship

Pipefitting Apprenticeship

Courses Required for the Major:		Units
PMBG 301	Pipe Trades Orientation	3
PMBG 303	Piping Mathematics	3
PMBG 305	Pipe Bending and Rigging	2
PMBG 307	Drawing I	3
PMBG 311	Basic Science	3
PIPF 331	Arc Welding I	2

Select two to three units from the following:

PIPF 328	Pipefitters Code	3
PIPF 330	Pipefitting Certification	3
PIPF 334	Arc Welding IV	2
PIPF 335	Arc Welding V	2
PIPF 349	Pipefitting Work Experience or	
PMBG 349	Plumbing Work Experience	
		16

Total Units = 34-35

Certificate of Achievement: San Diego and Imperial Counties Pipetrades Apprenticeship

Plumbing Apprenticeship

Courses Required for the Major:		Units
PMBG 301	Pipe Trades Orientation	3
PMBG 303	Piping Mathematics	3
PMBG 305	Pipe Bending and Rigging	2
PMBG 307	Drawing I	3
PMBG 311	Basic Science	3
PIPF 331	Arc Welding I	2

Select two to three units from the following:

PMBG 337	Service and Repair	3
PMBG 330	Fifth Year Specialties	3
PMBG 332	Piping Technologies	2
PIPF 349	Pipefitting Work Experience or	
PMBG 349	Plumbing Work Experience	
		16

Total Units = 34-35

Associate in Science Degree: San Diego and Imperial Counties Pipetrades Apprenticeship

Pipefitting Apprenticeship

Courses Required for the Major:	Units
PMBG 301 Pipe Trades Orientation	3
PMBG 303 Piping Mathematics	3
PMBG 305 Pipe Bending and Rigging	2
PMBG 307 Drawing I	3
PMBG 311 Basic Science	3
PIPF 331 Arc Welding I	2

Select two to three units from the following:

PIPF 328 Pipefitters Code	3
PIPF 330 Pipefitting Certification	3
PIPF 334 Arc Welding IV	2
PIPF 335 Arc Welding V	2

PIPF 349 Pipefitting Work Experience or	
PMBG 349 Plumbing Work Experience	16

Total Units = 34-35

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of catalog. **The associate degree requires a minimum of 60 units.**

Recommended electives: English 101; PIPF 304, 308, 310, 314, 318, 320, 322, 324, 326.

Associate in Science Degree: San Diego and Imperial Counties Pipetrades Apprenticeship

Plumbing Apprenticeship

Courses Required for the Major:	Units
PMBG 301 Pipe Trades Orientation	3
PMBG 303 Piping Mathematics	3
PMBG 305 Pipe Bending and Rigging	2
PMBG 307 Drawing I	3
PMBG 311 Basic Science	3
PIPF 331 Arc Welding I	2

Select two to three units from the following:

PMBG 337 Service and Repair	3
PMBG 330 Fifth Year Specialties	3
PMBG 332 Piping Technologies	2

PIPF 349 Pipefitting Work Experience or	
PMBG 349 Plumbing Work Experience	16

Total Units = 34-35

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of catalog. **The associate degree requires a minimum of 60 units.**

Recommended electives: English 101; PMBG 317, 319, 321, 323, 325, 329, 335, 337, 339; PIPF 332, 333, 334, 335.

Courses

Pipefitting (PIPF)

304 Heating I, Steam

**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course provides an introduction to hot water steam heating, gravity hot water systems, forced hot water heating systems, problems caused by air in the systems, hot water piping connections, and installation of equipment safety devices for hot water boilers. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

308 Pneumatic Controls

**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is a review of the fundamentals of pneumatics, controllers, controlled devices and auxiliary devices. The course includes day-night and heat-cooling thermostats, ventilation, heating, and cooling controls, humidity control, year-round air conditioning, and master-submaster systems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

310 Refrigeration and Air Conditioning

**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course covers refrigeration and air conditioning systems. Emphasis is placed on the components in refrigeration and air conditioning systems, theories of electricity relevant to the trade, operation

of evaporative condensers, maintenance on refrigeration systems, and pipe and line layout and installation in a refrigeration system. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

314 Heating II Hydronics

**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This Hydronics course introduces the technical aspects of the design, calculation and installation of hydronics heating and cooling systems. Emphasis is placed on residential, commercial, institutional and industrial hydronics applications. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

318 Fitting Fabrication

**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course provides the student with basic pipefitting skills; taking accurate measurements, cutting pipe and calculating fitting "take off". Topics include the difference between screw and welded pipe and their uses; proper and safe use of copper and plastic pipe as well as pipe hangers and supports. Students learn to apply pipe layout and fitting fabrication principles/procedures for elbows, tees and laterals used in the industrial piping industry. In addition the student learns to use welding experience and mathematics to design, lay out and fabricate fittings used in the pipefitting trade. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

320 TIG Welding

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is designed to provide the apprentice with a working knowledge of the welding process known as TIG (Tungsten Inert Gas)/GTAW (gas tungsten arc welding). Students learn the fundamentals, the process, equipment, techniques, preparation, shielding gas and electrodes. Guided bend testing and quality weld inspection are also covered. Emphasis is on performing TIG/GTAW

welding in a safe manner. (FT) Associate Degree Credit only and not Transferable.

322 Instrumentation and Automated Systems

**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course introduces the operation, installation and testing of instruments and automated systems. Emphasis is placed on pressure measuring instruments, liquid level instruments, density measuring instruments, temperature and humidity measuring instruments, speed and position transmitters, automatic force balance controllers, pneumatic control valves, control valve accessories and instrumentation systems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

324 Pipe Drafting and Blueprint Reading

**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is an introduction to blueprint reading and drafting pertaining to domestic water systems and piping layout. Emphasis is placed on the use of drawing tools and appropriate pipefitting diagrams to draw waste vent systems and to diagram water and gas lines using mock-ups. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

326 Advanced Piping Mathematics

**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. Advanced Piping Mathematics is designed to introduce and develop the applied piping and calculating skills necessary in the piping industry. Topics include the application of trigonometry, offset problems, and pipe and tube bending mathematics. (FT) Associate Degree Credit only and not Transferable.

328 Pipefitters Code

**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade.

This course reviews the fundamentals of pipefitting. Topics include isometric drawing interpretation, tools and tool safety, hydraulics, plan reading, and trigonometry tables. The foundations of hydraulics, pneumatics, refrigeration, arc welding and rigging are introduced and explored. (FT) Associate Degree Credit only and not Transferable.

330 Pipefitting Certification

**3 hours lecture, 3 units
Pass/No Pass Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course covers the application of the most current codes and state regulations governing piping, mechanical installations and excavating operations. Upon completion, the apprentice will be prepared to take the Journeyman P.I.P.E. exam and Cal/OSHA Excavation Competent Person exam. (FT) Associate Degree Credit only and not Transferable.

331 Arc Welding I

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40.

Limitation on Enrollment: Student must be a state registered apprentice in this trade. This course is not open to students with credit for Pipefitting (PIPF) 302.

In this course the student is introduced to arc welding, intensive pipe and plate welding, safe welding practices, personal protection and fire protection. Basic electricity, the types of arc welding machines, arc welding consumables, and arc welding symbols are covered. This course is designed to give the apprentice student a basic understanding of arc welding. (FT) Associate Degree Credit only and not Transferable.

332 Arc Welding II

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Advisory: Pipefitting (PIPF) 331 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

In this course the student is introduced to the safety procedures for arc welding, arc welding equipment and equipment maintenance. Students learn how to weld trial beads. Additional instruction on basic electricity is covered. This course is designed to

build on the students' basic understanding of arc welding. (FT) Associate Degree Credit only and not Transferable.

333 Arc Welding III

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Advisory: Pipefitting (PIPF) 332 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This is an advanced Arc Welding course. In this course the student studies Federal OSHA rules and regulations related to arc welding. The student is introduced to and begins to prepare for the SMAW/GTAW United Association Arc Welding certification test. (FT) Associate Degree Credit only and not Transferable.

334 Arc Welding IV

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Advisory: Pipefitting (PIPF) 333 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This is an advanced Arc Welding course. In this course the student is introduced to the fundamentals of metallurgy, mechanical properties of metals, non-ferrous metals, shielding gases, and heat-treating. Welding low-, medium- and high-carbon steel is also covered, as well as welding alloy steels, stainless steels and high-chromium alloys. In addition, this course covers the use of computer-assisted arc welding machines for the high-tech industry. (FT) Associate Degree Credit only and not Transferable.

335 Arc Welding V

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Advisory: Pipefitting (PIPF) 334 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This is an advanced Arc Welding course and is the last in a series of five welding courses required for a Pipefitting Apprenticeship. In this course students take the FED OSHA 10-hour course on confined space entry as related to arc welding and receive a certificate from FED OSHA. All procedures and techniques required for the SMAW/GTAW United Association welding certification are reviewed. The

student takes the required arc-welding test at the end of this course for this certification. (FT) Associate Degree Credit only and not Transferable.

349 Pipefitting Work Experience

**300 hours per semester, 4 units
Pass/No Pass Only**

Limitation on Enrollment: Student must be a state registered apprentice in this trade and concurrently enrolled in a related apprenticeship class. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. See note preceding Apprenticeship listing. (FT) Associate Degree Credit only and not Transferable.

Courses

Plumbing (PMBG)

301 Pipe Trades Orientation

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 and M40.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course introduces the fundamentals of the pipe trades and includes OSHA regulations, tool safety, first-aid and prevention, proper use and care of tools, workplace habits and attitudes, business practices and employer-employee relationships as they apply to the pipefitting trades. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

303 Piping Mathematics

**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course introduces Piping Mathematics and its practical application to the trade. Topics include basic math, piping formulas, symbols and terms, and the metric system of measurement. Content is explored and developed through problem solving. (FT) Associate Degree Credit only and not Transferable.

305 Pipe Bending and Rigging

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course introduces pipe bending and rigging principles as they apply to plumbing jobs. Topics include principles, mathematics, and methods of pipe bending. Rigging hardware, slings, signal systems, and knot tying are a sampling of the course rigging topics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

307 Drawing I

**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course introduces drawing concepts used in the pipetrades and includes preliminary drawings, isometric and plan flat symbols, applied drawing and blueprint reading, plans used in the trade, and architects scale. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

309 Supervision and Leadership

**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. Students learn leadership skills as defined by the United Association (UA) and the Mechanical Contractors' Association (MCA) in the field of plumbing. In addition, students are introduced to the theory and installation of domestic hot water energy systems, and the design of plumbing modules including waste vents, water and gas lines using mock-ups. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

311 Basic Science

**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course reviews the fundamental science and mechanics of the piping trade. Topics include industry applications of the properties of water, hydraulics, pneumatics and metals. (FT) Associate Degree Credit only and not Transferable.

313 Copper and Gas Welding**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course provides hands-on use of soldering, brazing, welding and metal cutting procedures. Topics include safety practices, equipment needs, filler materials, types of pipe welds, oxyacetylene cutting, cutting defects, flame straightening, and use of templates. (FT) Associate Degree Credit only and not Transferable.

315 Metallic Arc Welding**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course provides instruction on arc welding, pipe and plate welding, and operation of oxyfuel cutting equipment. Students learn how to set up equipment, perform trial beads and maintain equipment. Topics also include types of welds, preheating and stress relieving and quality control and codes. This course also covers welding procedure qualifications, vee welds, pipe welds, piping materials, a basic electricity review, and pipe welding processes. Emphasis is on the safe use of equipment. (FT) Associate Degree Credit only and not Transferable.

317 Drainage Systems**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course focuses on the application of the waste and vent section of the Plumbing Code. Topics include sewage disposal and safety and the installation and testing of plumbing drainage systems, traps, vents, municipal and private sewers, and plumbing fixtures. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

319 Gas Distribution**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course focuses on the application of the gas section of the Plumbing Code with respect to the operation and installation of gas vent systems and controls. Emphasis is placed on the implications of

the laws of gases and the safe design and lay out of a gas system to code specification. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

321 Math/Builder Level-Transit**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course focuses on advanced math applied to science and mechanics problems in the field. Topics include piping and offset calculations, basic flow problems and use of the builders level-transit to determine elevation differentials and simple tangents. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

323 Water Distribution Systems**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is a study of the principles which govern the method of water supply and distribution. Topics covered include water treatment, pipeline materials, pipe losses, cross connectors and backflow prevention. The focus is on the construction of a hot water supply in accordance with the Uniform Plumbing Code and sizing charts. Safety is emphasized. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

325 Fixtures and Controls**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course emphasizes plumbing fixtures and controls. Topics covered include institutional fixtures and design, fixture controls, appliances, accessories, standard abbreviations and standard specifications. Safe use of tools and equipment is emphasized. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

327 Plumbing Code**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is a survey of the Plumbing Code emphasizing special areas requiring knowledge of

large multiple installations of plumbing. Emphasis is placed on a working knowledge of applicable plumbing codes for layout and installation in the field. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

329 Advanced Drawing and Plan Reading
3 hours lecture, 3 units
Grade Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course provides the student with advanced level plan reading and drawing skills related to plumbing systems. Emphasis is placed on the ability to independently develop drawings and sketches and accurately interpret building plans and specifications for all primary building systems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

330 Fifth Year Specialties
3 hours lecture, 3 units
Grade Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course covers the application of the most current codes and state regulations governing plumbing, piping and excavating operations. Upon completion, the apprentice will be prepared to take the Journeyman P.I.P.E. exam and Cal/OSHA Excavation Competent Person exam. (FT) Associate Degree Credit only and not Transferable.

332 Piping Technologies
1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This is a piping course designed for plumbing apprentices wishing to expand their knowledge of the plumbing industry and the "state of the art" medical gas systems used in the trade. Topics include the necessary information and skills needed to pass the Medical Gas Installation Certification Examination recognized by the San Diego Plumbing and Pipefitter Joint Apprenticeship Committee. Apprentices also utilize computers and software to plan, diagnose, and layout plumbing projects. (FT) Associate Degree Credit only and not Transferable.

335 Solar Systems and Plumbing Modules
3 hours lecture, 3 units
Grade Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course provides an introduction to the theory and installation of domestic hot water energy systems. Emphasis is placed on solar plumbing modules. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

337 Service and Repair
3 hours lecture, 3 units
Grade Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course introduces the theory and practice of service work in the plumbing industry. Emphasis is placed on understanding customer relations, work planning, and troubleshooting plumbing systems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

339 Plumbing Design and Layout
3 hours lecture, 3 units
Grade Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course emphasizes the principles, operation, installation and distribution of hot and cold water, drainage and ventilation systems in regards to the Plumbing Code. Topics prepare the student to plan for plumbing project labor and material costs. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

349 Plumbing Work Experience
300 hours per semester, 4 units
Pass/No Pass Only

Limitation on Enrollment: Student must be a state registered apprentice in this trade and concurrently enrolled in a related apprenticeship class. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate Degree Credit only and not Transferable.

**San Diego City Civil Service
 Communications Technician
 Apprenticeship**

A four-year apprenticeship program in the installation, maintenance and repair of

communications equipment offered through the City of San Diego. This is a promotional opportunity for City of San Diego employees only and applicants must meet criteria specified by the city. For information about employment through the City of San Diego, call 619-682-1011.

This apprenticeship program combines classroom instruction in Electronic Systems with on-the-job training to prepare City of San Diego Communication Technicians in the areas of installation, maintenance and repair of communications equipment in City facilities and vehicles

Upon successful completion of the program, the student will receive a Journeyman certificate from the State of California, and will be eligible for employment in the field of communication equipment maintenance and repair.

Certificate of Achievement: San Diego City Civil Service Communications Technician Apprenticeship

Prepares student for employment as a Communications Technician with the City of San Diego.

Courses Required for the Major:		Units
ELDT 123	Introduction to Digital Circuits	3.0
ELDT 123L	Digital Circuits Laboratory	1.0
ELDT 124	Basic DC Electronics	4.0
ELDT 124L	Basic DC Laboratory	1.0
ELDT 143	Semiconductor Devices	3.0
ELDT 143L	Semiconductor Devices Laboratory	1.5
ELDT 144	OP-AMPS, Sensors and Computers	3.0
ELDT 144L	OP-AMPS and Sensors Laboratory	1.5
ELDT 224	Microprocessor Design	3.0
ELDT 224L	Microprocessor Design Laboratory	1.5
ELDT 228	Communication Circuits	3.0
ELDT 228L	Communication Circuits and Certification Laboratory	1.0
ELDT 229	Advanced Telecommunications Networks	3.0
ELDT 229L	Advanced Telecommunications Networks Laboratory	1.0
ELDT 230	Advanced Computer Designs	3.0
ELDT 230L	Advanced Computer Designs Laboratory	1.0
Total Units = 34.5		

Associate in Science Degree: San Diego City Civil Service Communications Technician Apprenticeship

Prepares student for employment as a Communications Technician with the City of San Diego.

Courses Required for the Major:		Units
ELDT 123	Introduction to Digital Circuits	3.0
ELDT 123L	Digital Circuits Laboratory	1.0
ELDT 124	Basic DC Electronics	4.0
ELDT 124L	Basic DC Laboratory	1.0
ELDT 143	Semiconductor Devices	3.0
ELDT 143L	Semiconductor Devices Laboratory	1.5
ELDT 144	OP-AMPS, Sensors and Computers	3.0
ELDT 144L	OP-AMPS and Sensors Laboratory	1.5
ELDT 224	Microprocessor Design	3.0
ELDT 224L	Microprocessor Design Laboratory	1.5
ELDT 228	Communication Circuits	3.0
ELDT 228L	Communication Circuits and Certification Laboratory	1.0
ELDT 229	Advanced Telecommunications Networks	3.0
ELDT 229L	Advanced Telecommunications Networks Laboratory	1.0
ELDT 230	Advanced Computer Designs	3.0
ELDT 230L	Advanced Computer Designs Laboratory	1.0
Total Units = 34.5		

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of catalog. **The associate degree requires a minimum of 60 units.**

Recommended electives: ELDT 126, 126L, 198, 227, 227L.

San Diego Gas and Electric Company Apprenticeship

A three-year apprenticeship program in various electrical trades at the San Diego Gas and Electric Company. Applications for the following trades are accepted at SDG&E, 8306 Century Park Court, San Diego, CA 92123: 1.) Lineman; 2.) Electric Meter Tester; and 3.) Electric Repair Shop Mechanic. All applicants must be company employees. **COMPLETION REQUIREMENTS:** In addition to the academic requirements listed below, each apprentice must complete the prescribed number of hours of training during the period of the

apprenticeship program as approved by the apprenticeship committee to receive the certificate of achievement or two-year degree.

A three-year apprenticeship program in various electrical trades at the San Diego Gas and Electric Company. Applications for the following trades are accepted at SDG&E, 8306 Century Park Court, San Diego, CA 92123.

1. Lineman
2. Electric Meter Tester
3. Substation Electrician

All applicants must be company employees. Apprentices in all three trades will complete the following courses:

Certificate of Achievement: San Diego Gas and Electric Company Apprenticeship

Courses Required for the Major:	Units
SDGE 302 Electric Lineman IA	5
SDGE 304 Electric Lineman IB	5
SDGE 310 Electric Lineman IIA	5
SDGE 312 Electric Lineman IIB	5
SDGE 320 Electric Lineman IIIA	5
SDGE 322 Electric Lineman IIIB	5

Work Experience (on the job training for the duration of the apprenticeship period) (4 units/semester, maximum of 16 units); including the following course(s):

SDGE 349A Electric Meter Tester Work Experience	4
SDGE 349B Substation Electrician Work Experience	4
SDGE 349C Electric Lineman Work Experience	4
Total Units = 34-36	

Associate in Science Degree: San Diego Gas and Electric Company Apprenticeship

Associate in Science Degree Requirements: The Associate in Science degree is conferred upon successful completion of the required apprenticeship program San Diego Gas and Electric Company. Apprentices in all three trades will complete the following courses:

Courses Required for the Major:	Units
SDGE 302 Electric Lineman IA	5

SDGE 304 Electric Lineman IB	5
SDGE 310 Electric Lineman IIA	5
SDGE 312 Electric Lineman IIB	5
SDGE 320 Electric Lineman IIIA	5
SDGE 322 Electric Lineman IIIB	5

Work Experience (on the job training for the duration of the apprenticeship period) (4 units/semester, maximum of 16 units); including the following course(s):

SDGE 349A Electric Meter Tester Work Experience	4
SDGE 349B Substation Electrician Work Experience	4
SDGE 349C Electric Lineman Work Experience	4
Total Units = 34-36	

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of catalog. **The associate degree requires a minimum of 60 units.**

Recommended electives: English 101.

Courses

San Diego Gas and Electric (SDGE)

302 Electric Lineman IA

**5 hours lecture, 5 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40.
Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Electricity 190.

This course provides an orientation in the power distribution and line construction industry. Basic electrical principles and safety on the job are emphasized. Topics include basic mathematical computations, including trigonometry fundamentals, electron theory and the fundamentals of magnetism. Students will combine electrical theory with laboratory and practical applications in the course of study. (FT) Associate Degree Credit only and not Transferable.

304 Electric Lineman IB**5 hours lecture, 5 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Electricity 191.

This course involves the study of the power distribution and line construction industry. Topics include methods of producing electricity, A.C. and D.C. meters and circuitry and electric batteries. Students will also learn about Ohm's Law and Kirchoff's Law and electromagnetic induction. (FT) Associate Degree Credit only and not Transferable.

310 Electric Lineman IIA**5 hours lecture, 5 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Electricity 192.

This course is a study of alternating current circuits, A.C. and D.C. motors and generators, pole and overhead construction, and transformers and voltage regulators. Topics include schematics, shunt and series capacitors and safety issues outlined by the Occupational Safety and Health Act (OSHA). Calculating power used by electrical circuits is also covered. (FT) Associate Degree Credit only and not Transferable.

312 Electric Lineman IIB**5 hours lecture, 5 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Electricity 193.

This course covers state safety orders for line construction and maintenance, transmission and distribution systems and conductors and electrical systems faults. Students will also learn about short circuits, system protective concepts and how to

identify control circuits from wiring diagrams. (FT) Associate Degree Credit only and not Transferable.

320 Electric Lineman IIIA**5 hours lecture, 5 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Electricity 194.

This course covers advanced theory of electrical distribution lines and systems. Other topics include phasing, system groundings, substations and the use of electrical instruments. Students will also learn how to connect transformers in accordance with the state code. Usage of fusing tables and reference tables, including technical symbols are also covered. (FT) Associate Degree Credit only and not Transferable.

322 Electric Lineman IIIB**5 hours lecture, 5 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Electricity 195.

This course is a continuation of advanced theory of electrical distribution lines and systems. Topics include the use of "hot sticks" and special equipment; repair and maintenance of poles and lines both cold and energized, safety practices and the local/state requirements. Students will be expected to master competencies such as those included in elements of electricity, overhead pole and electrical line construction, safety codes and applications, electric power system, transformer and meter installations, and exploration of underground electrical distribution. (FT) Associate Degree Credit only and not Transferable.

349A Electric Meter Tester Work Experience**300 hours per semester, 4 units
Pass/No Pass Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. Student must be enrolled in a related apprenticeship class.

The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. See note preceding Apprenticeship course listings. Associate Degree Credit only and not Transferable.

349B Substation Electrician Work Experience 4 units, 4 hours other Pass/No Pass Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. Student must be enrolled in a related apprenticeship class.

The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units (300 hours per semester). See note preceding Apprenticeship course listings. (FT) Associate Degree Credit only and not Transferable.

349C Electric Lineman Work Experience 300 hours per semester, 4 units Pass/No Pass Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. Student must be enrolled in a related apprenticeship class.

The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. See note preceding Apprenticeship course listings. Associate Degree Credit only and not Transferable.

San Diego Transit Electronic Technician Apprenticeship

The San Diego Transit apprenticeship program is a four-year program designed to prepare the student for a career as a bus Electronics Technician. For application to the program, please contact San Diego Transit Corporation, 100 16th Street, San Diego, CA 92101. More information is available at: www.sdcommute.com/Jobs/sdetc/.

Program Goals:

This program will provide training for apprentice bus Electronic Technicians for San Diego Transit.

Program Emphasis:

This program provides related instruction in electronic systems for apprentices working at San Diego Transit.

Career Options:

Bus Electronic Systems Technician.

Certificate of Achievement: San Diego Transit Electronic Technician

Courses Required for the Major:		Units
MATH 096	Intermediate Algebra and Geometry	5
ELDT 123	Introduction to Digital Circuits	3
ELDT 123L	Digital Circuits Laboratory	1
ELDT 124	Basic DC Electronics	4
ELDT 124L	Basic DC Laboratory	1
ELDT 125	DC/AC Circuit Analysis with Pspice	4
ELDT 125L	DC/AC Circuit Analysis Laboratory	1
ELDT 143	Semiconductor Devices	3
ELDT 143L	Semiconductor Devices Laboratory	1.5
ELDT 144	OP-AMPS, Sensors and Computers	3
ELDT 144L	OP-AMPS and Sensors Laboratory	1.5
ELDT 228	Communication Circuits	3
ELDT 228L	Communication Circuits and Certification Laboratory	1
Total Units = 32		

Associate in Science Degree: San Diego Transit Electronic Technician

Courses Required for the Major:		Units
MATH 096	Intermediate Algebra and Geometry	5
ELDT 123	Introduction to Digital Circuits	3
ELDT 123L	Digital Circuits Laboratory	1
ELDT 124	Basic DC Electronics	4
ELDT 124L	Basic DC Laboratory	1
ELDT 125	DC/AC Circuit Analysis with Pspice	4
ELDT 125L	DC/AC Circuit Analysis Laboratory	1
ELDT 143	Semiconductor Devices	3
ELDT 143L	Semiconductor Devices Laboratory	1.5
ELDT 144	OP-AMPS, Sensors and Computers	3
ELDT 144L	OP-AMPS and Sensors Laboratory	1.5
ELDT 228	Communication Circuits	3
ELDT 228L	Communication Circuits and Certification Laboratory	1
Total Units = 32		

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of catalog. **The associate degree requires a minimum of 60 units.**

San Diego Trolley Apprenticeship

A four-year apprenticeship in electro-mechanical trades at San Diego Trolley. Application for the

following trades are accepted at 1255 Imperial Avenue, Suite 900, San Diego, CA 92101-7492.

Certificate of Achievement: San Diego Trolley Apprenticeship

Light Rail Vehicle Lineman

Courses Required for the Major:		Units
MATH 46	Elementary Algebra & Geometry	5
ELDT 123	Introduction to Digital Circuits	3
ELDT 123L	Digital Circuits Laboratory	1
ELDT 124	Basic DC Electronics	4
ELDT 124L	Basic DC Laboratory	1
ELDT 143	Semiconductor Devices	3
ELDT 143L	Semiconductor Devices Lab	1.5
AIRE 100	Basic Refrigeration Theory	4
AIRE 103	Basic Refrigeration Lab	2
TROL 301	San Diego Trolley Light Rail Vehicle I	2
TROL 302	San Diego Trolley Light Rail Vehicle II	1.5
TROL 303	San Diego Trolley Light Rail Vehicle III	3
TROL 304	San Diego Trolley Light Rail Vehicle IV	3
Total Units = 34		

Certificate of Achievement: San Diego Trolley Apprenticeship

Revenue Maintainer

Courses Required for the Major:		Units
MATH 46	Elementary Algebra & Geometry	5
ELDT 123	Introduction to Digital Circuits	3
ELDT 123L	Digital Circuits Laboratory	1
ELDT 124	Basic DC Electronics	4
ELDT 124L	Basic DC Laboratory	1
ELDT 125	DE/AC Circuit Analysis with Pspice	4
ELDT125L	DC/AC Circuit Analysis Lab	1
ELDT 143	Semiconductor Devices	3
ELDT 143L	Semiconductor Devices Lab	1.5
Total Units = 23.5		

Certificate of Achievement: San Diego Trolley Apprenticeship

Wayside Lineman

Courses Required for the Major:		Units
MATH 46	Elementary Algebra & Geometry	5
ELCT 111	Electrical Theory I	3
ELCT 111L	Electrical Laboratory I	2
ELCT 121	Electrical Theory II	3

ELCT 121L	Electrical Laboratory II	2
ELCT 131	Electrical Theory III	3
ELCT 131L	Electrical Laboratory III	2
ELCT 141	Electrical Theory IV	3
ELCT 141L	Electrical Laboratory IV	2
ELCT 200	Electrical Control Systems	3
ELCT 200L	Electrical Control Systems Lab	2

Total Units = 30

Associate in Science Degree: San Diego Trolley Apprenticeship

Light Rail Vehicle Lineman

Courses Required for the Major:		Units
MATH 46	Elementary Algebra & Geometry	5
ELDT 123	Introduction to Digital Circuits	3
ELDT 123L	Digital Circuits Laboratory	1
ELDT 124	Basic DC Electronics	4
ELDT 124L	Basic DC Laboratory	1
ELDT 143	Semiconductor Devices	3
ELDT 143L	Semiconductor Devices Lab	1.5
AIRE 100	Basic Refrigeration Theory	4
AIRE 103	Basic Refrigeration Lab	2
TROL 301	San Diego Trolley Light Rail Vehicle I	2
TROL 302	San Diego Trolley Light Rail Vehicle II	1.5
TROL 303	San Diego Trolley Light Rail Vehicle III	3
TROL 304	San Diego Trolley Light Rail Vehicle IV	3
Total Units = 34		

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of catalog. **The associate degree requires a minimum of 60 units.**

Recommended electives: Electronic Systems 125, 125L, 126, 126L, 144, 144L; English 101.

Associate in Science Degree: San Diego Trolley Apprenticeship

Revenue Maintainer

Courses Required for the Major:		Units
MATH 46	Elementary Algebra & Geometry	5
ELDT 123	Introduction to Digital Circuits	3
ELDT 123L	Digital Circuits Laboratory	1
ELDT 124	Basic DC Electronics	4
ELDT 124L	Basic DC Laboratory	1
ELDT 125	DE/AC Circuit Analysis with Pspice	4
ELDT125L	DC/AC Circuit Analysis Lab	1
ELDT 143	Semiconductor Devices	3

ELDT 143L Semiconductor Devices Lab 1.5

Total Units = 23.5

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of catalog. **The associate degree requires a minimum of 60 units.**

Recommended electives: Electronic Systems 126, 126L, 144, 144L; English 101.

Associate in Science Degree: San Diego Trolley Apprenticeship

Wayside Lineman

Courses Required for the Major:		Units
MATH 46	Elementary Algebra & Geometry	5
ELCT 111	Electrical Theory I	3
ELCT 111L	Electrical Laboratory I	2
ELCT 121	Electrical Theory II	3
ELCT 121L	Electrical Laboratory II	2
ELCT 131	Electrical Theory III	3
ELCT 131L	Electrical Laboratory III	2
ELCT 141	Electrical Theory IV	3
ELCT 141L	Electrical Laboratory IV	2
ELCT 200	Electrical Control Systems	3
ELCT 200L	Electrical Control Systems Lab	2
Total Units = 30		

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of catalog. **The associate degree requires a minimum of 60 units.**

Recommended electives: Electronic Systems 123, 123L, 124, 124L, 125, 125L, 126, 126L, 143, 143L, 144, 144L; English 101;

Courses

San Diego Trolley (TROL)

301 San Diego Trolley Light Rail Vehicle I 1.5 hours lecture, 1.5 hours lab, 2 units Grade Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is an introduction to the San Diego Trolley Light Rail Vehicle apprenticeship program. Topics include organization of the company,

on-the-job safety, use of tools and test equipment, lubrication and maintenance, and vehicle layout and component identification. (FT) Associate Degree Credit only and not Transferable.

302 San Diego Trolley Light Rail Vehicle II 1 hour lecture, 2 hours lab, 1.5 units Grade Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course covers beginning levels of maintenance and inspection of Light Rail Vehicles in the San Diego Trolley Light Rail Vehicle apprenticeship program. Topics include mechanical concepts, planned and unplanned maintenance, component inspections, and use of support equipment. (FT) Associate Degree Credit only and not Transferable.

303 San Diego Trolley Light Rail Vehicle III 2 hours lecture, 3 hours lab, 3 units Grade Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course covers intermediate levels of maintenance and inspection of Light Rail Vehicles in the San Diego Trolley Light Rail Vehicle apprenticeship program. Topics include electrical theory, electrical measurement, schematic drawings, control systems, and system troubleshooting. (FT) Associate Degree Credit only and not Transferable.

304 San Diego Trolley Light Rail Vehicle IV 2 hours lecture, 3 hours lab, 3 units Grade Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course covers advanced levels of maintenance and inspection of Light Rail Vehicles in the San Diego Trolley Light Rail Vehicle apprenticeship program. Topics include electrical component and circuit theory, number systems, logic, small to large scale circuit integration, and analysis and troubleshooting of vehicle controls. (FT) Associate Degree Credit only and not Transferable.

349A Wayside Assistant Lineman Work Experience 300 hours per semester, 4 units Pass/No Pass Only

Limitation on Enrollment: Student must be a state registered apprentice in this trade and concurrently enrolled in a related apprenticeship class.

The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. See note preceding apprenticeship course listings. Associate Degree Credit only and not Transferable.

349B Light Rail Vehicle Lineman Work Experience

**300 hours per semester, 4 units
Pass/No Pass Only**

Limitation on Enrollment: Student must be a state registered apprentice in this trade and concurrently enrolled in a related apprenticeship class.

The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. See note preceding apprenticeship course listings. Associate Degree Credit only and not Transferable.

349C Revenue Maintainer Work Experience

**300 hours per semester, 4 units
Pass/No Pass Only**

Limitation on Enrollment: Student must be a state registered apprentice in this trade and concurrently enrolled in a related apprenticeship class.

The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. See note preceding apprenticeship course listings. Associate Degree Credit only and not Transferable.

Solar Turbines Incorporated Apprenticeship

A four-year indentured apprenticeship program in a number of manufacturing or technical trades is available. Applications for the following trades are accepted at Solar Turbines, Incorporated. 2200 Pacific Coast Highway, P.O. Box 85376 MZ-M1, San Diego, CA 92186-5376.

1. Master Machinist
2. Tool and Die Maker
3. Sheet Metal Experimental Mechanic
4. Precision Machine Tool Mechanic

Enrollment in classes other than those listed will be allowed with the approval of the Solar Turbines Incorporated Apprenticeship Coordinator.

Certificate of Achievement: Solar Turbines, Incorporated Apprenticeship

Courses Required for the Major:		Units
MFET 105	Print Reading and Symbology	3
MFET 115	Properties of Materials	3
MFET 120	Manufacturing Process	4
MATH 104	Trigonometry	3
ENGE 110	Science for Technical Applications	4
ENGE 151	Engineering Drawing	2
ENGL 101	Reading and Composition	3
COMS 103	Oral Communications	3
MACT 150	Introduction to Computer Numerical Control (CNC) & Electrical Discharge Machining (EDM)	4
Total Units = 29		

Associate in Science Degree: Solar Turbines, Incorporated Apprenticeship

Complete the following, as required, for a minimum of 60 units.

1. Certificate of Achievement, Solar Turbines Incorporated Apprenticeship
2. District Requirements
3. General Education Requirements

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of catalog. **The associate degree requires a minimum of 60 units.**

Recommended electives: Machine Technology 160M, 160S, 170; Manufacturing Technology 150, 210; Electronics 125; Computer Business Technology 180; Aviation Technology (Miramar Campus) 103B, 103C.

Courses

Solar Turbines (SOLR)

349 Solar Work Experience

**300 hours per semester, 4 units
Pass/No Pass Only**

Limitation on Enrollment: Student must be a state registered apprentice in this trade and concurrently enrolled in a related apprenticeship class.

The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate Degree Credit only and not Transferable.

Courses

Heavy Equipment Operator (HEOP)

301A Construction Equipment Operator IA

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5 and M40.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course familiarizes apprentices with the heavy equipment operator (HEO) trade. There is an emphasis on safety training relevant to working around equipment and others. Course participation includes opportunities to apply knowledge and develop skills in the operation of track-type equipment including bulldozers backhoes, paving machines and trenching equipment. Basic project procedures are introduced. (FT) Associate Degree Credit only and not Transferable.

301B Construction Equipment Operator IB

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Heavy Equipment Operator 301A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade.

This course introduces the apprentice to soils. Basic project procedures are introduced. Course components offer the opportunity to apply knowledge and develop skills in the operation of dump trucks and tractors. Site-preparation, set-up and grade checking skills are also developed. (FT) Associate Degree Credit only and not Transferable.

302A Construction Equipment Operator IIA

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Heavy Equipment Operator 301B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course provides an overview of earth moving operations including clearing and grubbing, excavation, embankment construction, and backfilling and compaction. Safety training relevant to working with scrapers, bulldozers, front-end loaders and backhoes is emphasized. Students apply knowledge and develop skills in the use of rubber tire type earth moving equipment including scrapers and bulldozers. Project procedures and related math concepts are introduced and reinforced. (FT) Associate Degree Credit only and not Transferable.

302B Construction Equipment Operator IIB

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Heavy Equipment Operator 302A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course builds on the apprentice's basic knowledge of earth moving operations. Students apply knowledge and develop skills in the operation of rubber tire type earth moving equipment including front-end loaders and backhoes. Safety training relevant to working around equipment and other workers is reinforced. Soil characteristics and standards for working with soils and aggregates are introduced. Students learn to follow contract plans and properly grade a construction site. Project procedures and related math concepts are introduced and reinforced. (FT) Associate Degree Credit only and not Transferable.

303A Construction Equipment Operator IIIA
2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Heavy Equipment Operator 302B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course reinforces and further develops basic project procedures. Students apply knowledge and develop skills necessary to leadership role of the finish operator and the operation of telescoping excavators. Advanced safety training relevant to working around equipment and other workers is emphasized. Relevant math concepts and safety procedures are developed. (FT) Associate Degree Credit only and not Transferable.

303B Construction Equipment Operator IIIB
2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Heavy Equipment Operator 303A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course reinforces and further develops the student's understanding of basic project procedures. Crusher operations and grade setting and checking skills are developed. Safety training relevant to working around equipment and other workers is emphasized. Relevant math content and topics related to soil such as backfilling, stabilization, erosion, geotextiles, and moisture and density tests are developed. (FT) Associate Degree Credit only and not Transferable.

San Diego City College Community

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**SAN DIEGO CITY COLLEGE
FACULTY**
2011-2012
AASE, Jennifer

Associate Professor, Counseling/
Athletic Academic Advisor
B.A., M.S., California State
University, Fullerton

AKERS, Justin

Associate Professor, Chicano
Studies
B.A., M.A., Ed.D., San Diego
State University
Teaching Credential, University
of Phoenix

ALVAREZ, Rafael

Associate Professor,
MESA Program Director

ANDERSEN, Elizabeth C.

Professor, Adapted Physical
Education, College Articulation
Officer
B.A., M.A., San Diego State
University

ARMSTRONG, Dometrives

Associate Professor, Nursing
Education
A.S., San Diego City College
B.S., University of Phoenix
M.S., University of San Diego

BARON, Chris

Professor
B.A., M.F.A., San Diego State
University

BARNES, Randy

Dean, School of Business,
Information Technology, and
Cosmetology
B.A., University of California,
San Diego
M.B.A., National University
Ed.D. San Diego State
University

BENARD, Mary

Vice President of Instruction
B.S., State University of New
York, College at Buffalo
M.B.A., University of San Diego

BERG, Deborah Jo

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B.S.N., University of Michigan
M.S.N., San Diego State
University

BERNAL, Juan Manuel

Professor, Spanish
B.A., M.A., San Diego State
University

BODNAR, Dede

Professor, Physical Education
B.S., M.S., California Polytechnic
State University, San Luis
Obispo

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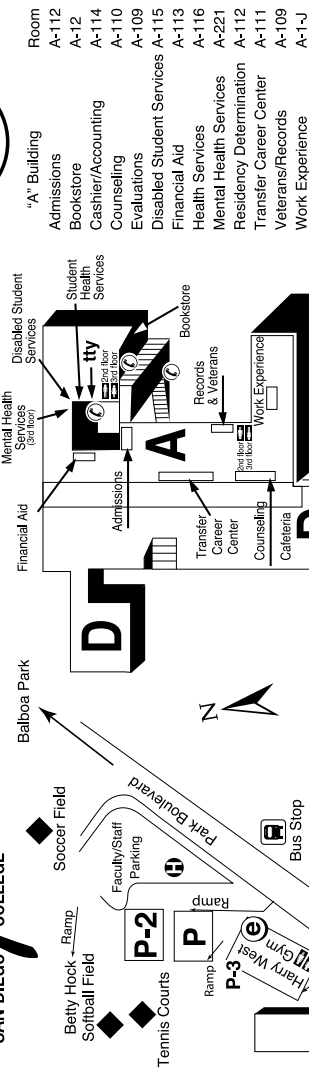
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SAN DIEGO CITY COLLEGE/BUILDING CODES

- A** See "A" inset on left
- B** Educational Technology Center/Classrooms
- C** Creative Arts/Fine Arts/Music/Radio-TV/KSDS/Saville Theatre
- D** Cafeteria (Reg-e Computers)/Student Affairs
- E** Administration/President/Deans
- F** Child Development Center
- I** Information Center Booth
- L** Academic Success Center—Assessment/CalWORKS/English Center/EOPS/Math Center/MESA/New Horizons/Outreach/Puente/First Year Services (Title V)/Tutorial Center/Umoja Mathematics/Science
- M** Health, Exercise Science & Athletics
- P** Fitness Center
- P-2** Harry West Gymnasium (HWG)
- P-3** Library/Independent Learning Center/Multimedia Center/City Site/ "R" Classrooms
- R** Military Education
- RM** CityTimes/CAD—CAM/Graphic Design/CACT/Computer Business Technology/Engineering & Technologies/Plant Operations/Technology Incubator/Stockroom
- T** Career Technology Center (CTC) — 16th Street
- V** Campus Police/Cosmetology/Nursing/Photography
- Ⓣ** Pay Telephone (tty available on phones near A-116 & L-114)
- Ⓜ** Elevators
- Ⓟ** Handicap Parking
- Ⓠ** Parking
- Ⓡ** Restrooms

CITY COLLEGE OFF-SITE CLASS LOCATIONS:

- **ECC** (Educational Cultural Complex)
4343 Ocean View Boulevard, SD 92113
- **KEARN** (Kearns Memorial Pool)
2229 Morley Field Drive, SD 92102
- **MORFD** (Morley Field)
2221 Morley Field Drive, SD 92104
- **MCRD** (Marine Corps Recruit Depot)
Pacific Highway and Barnett, SD 92140
- **USN32** (Naval Base San Diego)
32nd Street and Harbor Drive, SD 92136

- Room
- A-112 Admissions
- A-12 Bookstore
- A-114 Cashier/Accounting
- A-110 Counseling
- A-109 Evaluations
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- A-113 Financial Aid
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- A-111 Transfer Career Center
- A-109 Veterans/Records
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