SAN DIEGO
Community College District

San Diego Community College District
Risk Management Office

Hazard Assessment

PROGRAM AUTHORIZATION

_____ Chancellor	
_____ Trustee _____ Trustee _____ Trustee	_____ Trustee _____ Trustee
_____ Vice Chancellor, Facilities	_____ Vice Chancellor, Human Resources
_____ Risk Manager	
Date:_____	

REVISION RECORD

Revision Date	Revision #	Initials	Contents of Revision
05/17	1705	TAW	New program
01/25	2501	MFC	Comprehensive Update; Style Guide

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I. PURPOSE

The San Diego Community College District, recognizing that the health, safety, and well-being of its employees are of paramount importance in the management of the District, affirms its commitment to create and maintain a safe and healthful working environment.

The San Diego Community College District *Hazard Assessment Program (HAP*) provides a process to identify and evaluate the severity of potential workplace hazards as well as identifying available control measures to mitigate them. Other terms used for this process include 'hazard analysis' and 'job hazard assessment.'

The results of this assessment are then associated with a calculated risk factor in a process termed 'risk assessment' or 'job safety analysis.' The risk assessment assigns a numerical risk factor to each hazard identified in the preliminary assessment. The goal of the risk assessment is to rank the hazards based on the likelihood of causing an injury, the anticipated severity of that potential injury, and the employee exposure to the hazard in an effort to prioritize hazard remediation for each Facility.

Although specifically required for identifying appropriate personal protective equipment, the process can be more broadly applied to the selection of any hazard control measures.

II. REGULATORY CITATIONS

California Code of Regulations, Title 8, § 3203
California Code of Regulations, Title 8, § 3380
California Code of Regulations, Title 8, § 3380, Appendix A
Code of Federal Regulations, Title 29, § 1910.132

III. DISTRICT POLICIES AND PROCEDURES

SDCCD Board Policy 6800

IV. AUTHORITY

The Chancellor has ultimate authority and responsibility for the health and safety programs within the District. Creating broad-based safety accountability is the responsibility of the Chancellor and District leadership.

The Chancellor has designated the Vice Presidents of Administrative Services and the Regional Facilities Officers to act as the *Hazard Assessment Program* administrators at each College within the District. At the District Office, the designees are the Risk Manager and District Architect while at the District Facilities Service Center; it is the Director of Facilities.

To ensure effective implementation of this *Program*, all personnel with designated specific responsibilities are expected to understand and implement the procedures outlined in this

document, together with the specific contents of this *Hazard Assessment Program* for their assigned facility.

A. Chancellor's Designees

The Vice Presidents of Administrative Services and Facility Directors have the authority and are responsible for the implementation and maintenance of this program, including:

1. Developing or adopting the necessary policies and programs to adequately maintain a safe and healthful work and learning environment at the facilities of their responsibility
2. Providing resources for all aspects of this *Program*
3. Reviewing the completed Hazard Assessments and, as Chair of the Site Safety Committee, prioritizing control measures and providing resources to correct identified hazards
4. Providing for training to those employees required to abide by this *Program*
5. Assigning designees to fulfill all aspects of this *Program*.

B. Risk Management Office

The District Risk Management Office is responsible for the oversight and maintenance of this *Program*, including:

1. Reviewing the *Program* annually and updating, as necessary
2. Evaluating the adequacy and consistency of hazard assessment process training as necessary
3. Providing technical expertise to all Chancellor's Designees, as requested and required
4. Monitoring Cal/OSHA standards for relevant regulatory changes
5. Recommending, by way of the Site Safety Committee, areas that may require hazard assessments based on regulatory agency recommendations, injury or illness clusters, audits, inspections, or District mandate
6. Conducting periodic program audits and inspections at District facilities to evaluate compliance with all Federal, State, County, District, Facility, and College safety regulations
7. Providing assistance to designees to fulfill all aspects of this *Program*

C. Supervisors

Supervisors are responsible for implementing and enforcing the provisions of this *Program*, including:

1. Identifying occupations, activities, or tasks that may require a hazard assessment and control measures
    a. Conducting hazard assessments
    b. Ensuring implementation of control measures
    c. Identifying circumstances that require a hazard/risk assessment

   d. Training employees on proper implementation and use of control measures
2. Assigning designees to fulfill all aspects of this *Program*.

D. Employees

Employees are responsible for

1. Alerting management to imminent hazards and hazardous activities
2. Complying with all aspects of the *Hazard Assessment Program*
3. Working with management to identify workplace hazards and propose potential control measures
4. Proactively and objectively assisting in conducting workplace hazard/risk assessments
5. Reporting all injuries, illnesses, and near misses to the appropriate supervisor
6. Reporting any program deficiencies to their supervisor or the Risk Management Office.

V. DEFINITIONS

1. *Assessment:* a process of gathering, analyzing, and documenting;
2. *Control measure:* a method of reducing the potential exposure to an occupational hazard; using the National Institute of Occupational Safety and Health's *Hierarchy of Hazard Controls*, control measures are to be evaluated for implementation, whenever possible, in the following order
   a. Elimination- physically remove the hazard
      1) Example: remove materials from a high shelf, surplus old equipment
   b. Substitution- replace the hazard with one of lower consequence
      1) Example: using low VOC paint, using a non-toxic cleanser
   c. Engineering- isolate or remove the hazard at the source
      1) Example: installing a cover for a fan blade, installing local exhaust ventilation
   d. Administrative- change the way employees interact with the hazard
      1) Example: change work schedules to cooler part of the day, reduce number of employees exposed to hazard
   e. Personal Protective Equipment- specialized items worn by employees to protect them from hazards that could not otherwise be controlled;
      1) Example: work gloves, respirators
3. *Exposure:* contact with a chemical, physical, radiological, or biological agent;
4. *Hazard:* the intrinsic property of an item or substance to cause harm; a source of potential damage, harm, or adverse health effect; may be physical, chemical, or biological; a circumstance, action, or activity that has the potential to cause harm to an employee or student;
5. *Hazard assessment/Hazard analysis/Job hazard assessment (JHA):* a technique to identify hazards from an activity before they cause harm; the assessment involves three elements
   a. Dividing the activity into steps or tasks

   b. Identifying the hazards associated with each task
   c. Identifying controls for each hazard;
6. *Job:* an activity that is accomplished as a matter of employment; a duty, role, or function assigned to be completed by a higher authority within the District, typically to fulfill the District's Mission;
7. *Risk:* the likelihood of a hazard creating a negative health effect; often expressed as a function of severity, likelihood, and exposure;
8. *Risk Assessment:* the systematic process of determining the relative risk of workplace hazards causing harm as well as identifying possible control methods in an effort to reduce workplace risks to an acceptable level;
9. *Similar Exposure Group (SEG):* a group of workers that, through job assignment and not necessarily time or location, are exposed to similar hazards by way of performing similar tasks or jobs; an employee is not restricted to being allocated to only one SEG;
10. *Task:* a fundamental step or element of an activity; a task is a discrete, continuous action that is taken in the accomplishment of a job or activity;

VI. HAZARD ASSESSMENT

Hazard assessments are required under the Personal Protective Devices standard (8 CCR 3380(f)(1)) as a means to identify what occupational hazards may be present in a workplace and which may necessitate the use of personal protective equipment. In a broader sense, the District will use hazard assessments, coupled with risk determinations, to evaluate the need for any and all potential control methods at the District's disposal. The hazard assessment is the first stage of conducting the risk assessment.

A. Hazard Assessments

1. A hazard assessment must be conducted when
   a. New substances, process, procedures, or equipment are introduced into the workplace
   b. There are substantial changes to any existing process, procedure, or equipment
   c. A previously unrecognized hazard is brought to the attention of a Facility
   d. New controls are implemented to an existing process, procedure, or equipment.
2. The need for a hazard assessment can be identified during inspections, audits, or employee input.
   a. The Department or the Site Safety Committee may request a hazard assessment be conducted.
   b. The Risk Management Office may request a hazard assessment due to reported near misses, an injury or illness, an identified cluster of illnesses or injuries, and other reasons, as appropriate.
3. Hazard assessments will be conducted by the supervisor or their designee who has received appropriate instruction on the process.
   a. Hazard assessments shall include at least one employee from the identified similar exposure group.

b. The Risk Management Office may be consulted for assistance in the process.

4. Assessments must be written and documented. The assessment must record
   a. The workplace evaluated, including District Facility, location, and job classification
   b. The individual performing the assessment
   c. The date of the assessment.
      1) Appendix A contains an example of a Hazard Assessment.

B. Process

The hazard assessment is a systematic process of identifying workplace hazards. A thorough assessment requires a survey of the work area as well as an observation of the task being performed to identify all potential hazards.

1. Training

The first step in the process is to train all involved parties.

   a. Supervisors and employees must be trained in the process.
      1) Employees and supervisors must be trained prior to participating in the hazard/risk assessment process.
      2) Managers should also receive training in order to understand the process and final product.
   b. The training will address:
      1) The reasoning behind hazard/risk assessments
      2) The process of hazard/risk assessment
      3) Hazard categories
      4) Control categories
      5) Risk scores
      6) Risk ratings
      7) Intent of the process
      8) Continual improvement.

2. Inventory occupations

   a. The supervisor must create a record of the occupation(s) who are direct reports to them.
      1) This can often be accomplished by listing the job classifications for which they direct activities.
   b. The supervisor should also identify Similar Exposure Groups (SEG) under their authority.
      1) An SEG is a process by which employees are grouped based on the activities that expose them to similar hazards and not necessarily by occupation.
         a) For example, maintenance, grounds, custodial, and athletic trainers operate low-speed vehicles.

b) Another example could be that both Chemistry faculty and instructional laboratory technicians are exposed to chemicals.

3. List of jobs

a. For each job classification, the supervisor should identify the associated job(s).
    1) A job is a series of tasks conducted to accomplish a goal.
    2) Each occupation will likely have multiple jobs.
        a) For example, a custodian empties waste baskets, cleans floors, applies wax, cleans restrooms, etc.
        b) Another example could be that instructional lab assistants prepare experiments, empty chemical waste, clean glassware, etc.
b. The supervisor should also identify any SEGs based on jobs performed.
c. All jobs have occupational hazards associated with them; however, not all jobs have risk associated with those hazards.

4. Divide job into tasks

a. Each job is then sub-divided into tasks.
    1) A task is a step that must be completed in order to complete a job.
    2) A task is an action has a distinct beginning and an end.
        a) For example, the job of cleaning the floor entails the tasks of filling bucket, moving bucket, setting up signs, mopping floor, emptying bucket, removing signs.
        b) A task will always begin with a verb.
    3) Breaking a job into tasks can incorporate the concept of employee breaks- any point where an employee can interrupt the job to take a break without compromising the activity may be a complete 'task' element.
b. It is recommended that jobs not include more than ten (10) tasks.
    1) If a job requires more than ten (10) tasks, then the following should be evaluated
        a) Whether the tasks listed are too detailed
        b) Whether the job can be further sub-divided before tasks are determined (e.g., job X, parts I and II)
    2) Some jobs may simply entail more than ten (10) tasks.
c. Task identification should include observing the employee performing the job.
    1) Observation of employees performing tasks is an opportunity for the assessor to provide immediate feedback to correct potential unsafe or ergonomically hazardous actions.
d. Task identification should be reviewed with the employee to ensure all steps were documented.

5. Identify hazards

    a. For each task, any possible hazards associated are identified.
        1) For the purposes of this process, the hazards identified should be likely potential hazards, from history or experience, which could cause an injury or illness.
    b. Hazard categories include, but are not limited to
        1) Biological
            a) Microorganisms, plants, animals, and insects
        2) Chemical
            a) Corrosives, toxics, irritants
        3) Ergonomic
            a) Hazards that involve body motion and repetitive motion
        4) Organizational
            a) Psychological stressors from the occupation
        5) Physical
            a) Hazards that cause harm to the body without making physical contact, such as noise, temperature, and illumination
        6) Safety
            a) Hazards that can cause harm to the body, such as hazardous energies (e.g., electricity and pressurized fluids), heights, and materials handling.
        7) Environmental
            a) Air quality, natural disasters, water contamination

    c. When possible and applicable, hazards should be measured and their level documented as the degree of protection is designated by the level (e.g., electrical circuits less than 30 volts do not require lockout/tagout procedures).
        1) Hazards that can be quantified include, but are not limited to
            a) Electrical (voltage and amperage)
            b) Noise
            c) Airborne contaminants
            d) Temperature
            e) Repetitive motions
    d. Hazard identification should be reviewed or conducted with the employee to ensure all hazards are identified.

6. Identify controls

    a. For each hazard, any existing control measure must be documented.
        1) For example, chemical hazard- Control- PPE (gloves, goggles, lab coat)
        2) Another example, electrical hazard- Control- engineering (Lock out/tag out)
    b. A single hazard may have multiple hazard controls that can or are

implemented
1) For example, an electrical circuit is shut off, insulated tools are used, and insulated gloves are worn.

c. In consultation with the employees and Risk Management, additional controls may be identified using the *Hierarchy of Hazard Control*.
d. After controls are identified or selected, the control method(s) must be communicated to the employees by way of documented training.
    1) Training shall address
        a) When the controls are necessary
        b) What controls are necessary
        c) How to properly don, doff, adjust, and wear PPE
        d) How to use the selected hazard controls
        e) How to verify the controls are functioning and in place
        f) Limitations of the controls
        g) Proper care and maintenance of the controls, including useful life and proper disposal of PPE

VII. RISK ASSESSMENT

Risk assessment uses the information collected from the hazard assessment and assigns numerical values to the frequency, severity, and likelihood of an employee realizing the negative effects of the hazard. For each identified hazard, a value is calculated which can provide a relative assessment of severity and a prioritization list for management to address hazardous conditions. The values, apart from frequency, are based on original work by Kinney and Wiruth.

A. Risk Assessment

1. Frequency

The District will use a frequency calculation that considers how many employees are exposed to a particular hazard, how often they are exposed, and how long they are exposed. This is based on the University of Melbourne's (Australia) method.

a. The frequency score will be the sum of three values.
    1) These selections must be documented in the risk assessment.
    2) The associated risk values were determined using the Kinney-Wiruth values divided by three (3) to accommodate the Melbourne frequency methodology.
b. The number of employees identified in the SEG that could be exposed to the hazard during the course of their regular duties.

Number of employees	Risk Value
1	0.17
2	0.3

3-5	0.6
5-10	1
10-50	2
50+	3.3

c. A determination as to how often the job is performed, under regular circumstances.

Frequency of activity	**Risk Value**
Once per year	0.17
> 2 times per year	0.3
> Once per month	0.6
> Once per week	1
Once per day	2
> Once per day	3.3

d. An estimation as to how long an employee typically needs to complete the job

Duration of activity	**Risk Value**
<5 min	0.17
5-15 min	0.3
15-60 min	0.6
1-2 hours	1
2-4 hours	2
4-8 hrs	3.3

2. Severity

Severity is a measure of the adverse health effect to an employee or the monetary damage to District property that could occur if the hazard is realized. Note- in this case, monetary damage is not related to the cost of medical treatment or compensation to an employee but is an estimation of repair costs for District property, including facilities, in the event of an occupational accident involving property damage.

a. Health effects that could reasonably be expected from an employee realizing the hazard

Health Effect	**Risk Value**
First aid (minor cuts, bruising, illness <2 days)	1

Important (outpatient hospital visit, treatment by nurse or physician, illness <5 days)	5
Serious (loss of consciousness, burns, broken bones, ambulance transport, overnight hospital stay, illness <10 days)	15
Very serious (emergency medical treatment required, multiple-day hospitalization, amputation, loss of eye, permanent disability, illness <30 days)	25
Fatality	50
Catastrophe (multiple fatalities)	100

b. Cost to repair the damages cause during an industrial accident, mainly to fixed assets

Property Damage	Risk Value
<$500	1
$500-2500	5
$2500-10,000	15
$10,000-100,000	25
100,000- 999,999	50
1,000,000+	100

3. Likelihood

Likelihood is a subjective assessment of the probability that a negative aspect of the hazard will be realized. The subjectivity of the likelihood values is reduced when the assessment is conducted by a group and the process is consistently moderated by either the same person or individuals with similar background and training.

Likelihood	Risk Value
Practically impossible (no knowledge of occurrence at any facility, 1 in 10,000 chance)	0.1

Conceivable (possible, but has not happened in several years if ever, 1 in 1000 chance)	0.5
Remote (1 in 100 chance)	1
Unusual (1 in 10 chance)	3
Likely (1 in 2 chance, may have happened in the past)	6
Very likely (most likely outcome, has happened more than once)	10

B. Calculation

The Risk Score is calculated using the following formula:

Risk = *f* x *s* x *l*, where *f* =how many + how often + how long

C. Risk Rating

The resultant answer will then generate a risk score and an associated Risk Rating which is a relative measure of the degree of the risk presented by the hazard.

1. The ranges are as follows:

Risk Score	Risk Rating
< 90	Low
90-299	Medium
300-599	High
>600	Very High

2. It must be noted that the risk score does not contain factors or consideration of control measures.
    a. Existing control measures are incorporated into the assigned 'likelihood' value.
    b. New control measures should only be implemented if they reduce the likelihood or severity of the hazard and shall be implemented using the *Hierarchy of Controls*.
        1) The risk assessment should be updated to reflect any changes.
        2) A record of all risk assessments should be kept indefinitely to demonstrate improvement.

D. Updates

1. Risk assessments must be updated whenever
    a. New hazards are introduced into the workplace
    b. New processes or jobs are introduced into the workplace
    c. New hazard controls are introduced into the workplace
    d. More than one injury or illness occurs performing the same job or a serious injury (loss of consciousness, hospitalization for more than twenty-four (24) hours, amputation (loss of bone), permanent disfigurement, multiple simultaneous injuries, or fatality).

E. Documentation

Risk assessments shall be documented and may use an electronic system that combines the results of the hazard assessment and the calculation of the Risk Rating. An example of a spreadsheet is located in Appendix B.

1. Hazard and risk assessments shall be kept until replaced by a more current version.
2. Risk assessments that are updated should be kept in an archive file indefinitely.

VIII. TRAINING

Vision Resource training portal provides courses in Hazard Recognition, Hazard Classification and Common Workplace Hazards

A. Employee Training

1. Employees shall receive training regarding the process prior to their involvement in conducting or assisting in hazard/risk assessments.
2. Training records shall be kept for at least three (3) years.

APPENDIX A: Hazard Assessment Form

Job:		
College/Facility:	Department:	Supervisor:
Date:	Individual Conducting Analysis:	
Applicable Job Classification(s):		

Tasks	Potential Hazards	Degree of Hazard	Control Method(s)
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8			
9.			
10.			

APPENDIX A: Hazard Analysis Form (example)

Job: Replace light fixture		
College/Facility: Citymar College	Department: Fac Main	Supervisor: D. Smith
Date: March 4, 2017	Individual Conducting Analysis: Joe Black	
Applicable Job Classification(s): Electrician, painter		

Tasks	Potential Hazards	Degree of Hazard	Control Method(s)
1. Open breaker switch for circuit	Electrical	220 V	Insulated gloves, Volt meter Lockout device
2. Access elevated fixture	Fall	Low	A-frame ladder
3. Remove bulb	Heat	Low	Work gloves
4. Check fixture for power	Electrical	220 V	Volt meter, insulated gloves, hard hat
5. Remove and replace fixture	Fall (drop fixture)	Low	Bucket for fixture
6. Close breaker switch for circuit	Electrical	220 V	Insulated gloves
7.			
8.			
9.			
10.			

APPENDIX B: Risk Assessment Worksheet

SAN DIEGO Community College District	District Facility:		Assessment performed by: Date:
Job Classification:			
Activity/Job:			

TASKS	HAZARDS		
	Hazard Class	Hazard Type	Hazard detail
1)			
2)			
3)			
4)			
5)			
6)			
7)			
8)			
9)			
10)			

APPENDIX B (cont.)

[Enter name here]
[Enter date here]

		CONTROLS				
Hazard description	Degree of hazard	PPE available?	PPE type	Types of PPE used	Other controls	Describe

APPENDIX B (cont.)

RISK							
Exposure							
# employees	Frequency	Duration	Damage	Severity	Likelihood	Risk Score	Risk Rating
						1	Low
						1	Low
						1	Low
						1	Low
						1	Low
						1	Low
						1	Low
						1	Low
						1	Low
						1	Low
						1	Low
						1	Low
						1	Low
						1	Low
						1	Low
						1	Low
						1	Low
						1	Low
						1	Low
						1	Low

APPENDIX B: Risk Assessment Worksheet (Example)

SAN DIEGO Community College District	District Facility:	Miramar College	Assessment performed by: Date:
Job Classification:	Electrician, painter		
Activity/Job:	Replace light fixture		

TASKS	HAZARDS		
	Hazard Class	Hazard Type	Hazard detail
1) Open breaker for circuit	Safety	Energy	Electrical >50 V, < 1,000 V
2) Access elevated fixture	Safety	Heights	Work at heights
3) Remove bulb	Physical	Temperature	Working near hot or heated objects
4) Check fixture for power	Safety	Energy	Electrical >50 V, < 1,000 V
	Safety	Energy	Electrical >50 V, < 1,000 V
5) Remove and replace fixture	Safety	Heights	Falling objects
6) Close breaker	Safety	Energy	Electrical >50 V, < 1,000 V
	Safety	Energy	Electrical >50 V, < 1,000 V
7)	Ergonomic	Poorly designed tools	Single finger actuation
8)			
9)			
10)			

APPENDIX B:
Risk Assessment Worksheet (Example, cont.)

D. Smith
1/25/2025

		CONTROLS				
Hazard description	**Degree of hazard**	**PPE available?**	**PPE type**	**Types of PPE used**	**Other controls**	**Describe**
possible shock from panel	220 V	Yes	Hands	Insulated gloves- electrical	Administrative	SOP to wear PPE
fall from ladder	6 ft	No	N/A			
burn hand		Yes	Hands	Work gloves		
shock from wires	220 V	Yes	Hands	Insulated gloves- electrical		
shock from wires	220 V				Engineering	Volt meter
drop fixture		No				
possible shock from panel	220 V	Yes	Hands	Insulated gloves- electrical	Administrative	wear PPE
possible shock from panel	220 V	Yes	Head	Hard hat		

APPENDIX B:
Risk Assessment Worksheet (Example, cont.)

RISK							
Exposure							
# employees	Frequency	Duration	Damage	Severity	Likelihood	Risk Score	Risk Rating
10-50	> Once per week	15-60 min	Injury	Important	Unusual (1/10)	54	Low
10-50	> Once per week	15-60 min	Injury	Serious	Unusual (1/10)	162	Medium
10-50	> Once per week	15-60 min	Injury	First aid	Conceivable (1/1000)	2	Low
10-50	> Once per week	15-60 min	Injury	Important	Remote (1/100)	18	Low
10-50	> Once per week	15-60 min	Injury	Important	Practically impossible (1/10,000)	2	Low
10-50	> Once per week	15-60 min	Property	<$500	Unusual (1/10)	11	Low
10-50	> Once per week	15-60 min	Injury	Important	Unusual (1/10)	54	Low
10-50	> Once per week	15-60 min	Injury	Important	Unusual (1/10)	54	Low
						1	Low
						1	Low
						1	Low
						1	Low
						1	Low
						1	Low
						1	Low
						1	Low

TRAINING RECORD

Facility: _____

Date	Time	Instructor

Name (print)	Signature	Department	Supervisor