INJURY AND ILLNESS PREVENTION PROGRAM

UNIVERSITY OF CALIFORNIA, DAVIS

ENGINEERING: BIOMEDICAL

UC Davis

ENGINEERING: BIOMEDICAL□ □

INJURY AND ILLNESS PREVENTION PROGRAM

This Injury and Illness Prevention Program has been prepared by the University of California, Davis,

Department: ENGINEERING: BIOMEDICAL□ □

This written program is in accordance with UC Davis Policy (Policy and Procedures Manual Section 290-15: Safety Management Program) and California Code of Regulations Title 8, Section 3203 (8CCR§3203: Injury and Illness Prevention Program).

TABLE OF CONTENTS

PREFACE

DEPARTMENT NAME: ENGINEERING: BIOMEDICAL□ □

DEPARTMENT DIRECTOR: Steven George

DEPARTMENT ADDRESS: GBSF 2303 451 Health Sciences Dr. Davis, CA 95616

DEPARTMENT TELEPHONE NUMBER: 530-752-8513

BUILDINGS OCCUPIED BY DEPARTMENT

1. Building: Genome and Biomedical Sciences Facility
   Unit(s): Basement, 1st, 2nd and 3rd Floor

   Contact: Megan Villasenor
   Phone: 530-752-9051

2. Building: Ghausi Hall
   Unit(s): 2nd and 3rd Floor

   Contact: Megan Villasenor
   Phone: 530-752-9051

3. Building: Academic Surge
   Unit(s): 2nd Floor

   Contact: Megan Villasenor
   Phone: 530-752-9051

4. Building: Tupper Hall
   Unit(s): Multiple Floors

   Contact: Megan Villasenor
   Phone: 530-752-9051

I. AUTHORITIES AND RESPONSIBLE PARTIES

The authority and responsibility for the implementation and maintenance of the Injury and Illness Prevention Program (IIPP) is in accordance with University Policy (UCD Policy & Procedure Manual Section 290-15: Safety Management Program) and California Code of Regulations (8CCR, Section 3203) and is held by the following individuals:

1. Responsible Authority

Name: Steven George

Title: Professor & Department Chair

Authority: Authority and responsibility for **ensuring** implementation of this IIPP

Signature: DocuSigned by: Steven George B4993360A6FE4D6... Date: 3/24/2023

2. Department Designated Authority

Name: Anthony Passerini

Title: Chair of Departmental Safety Committee

Authority: Given by Responsible Authority for implementation of this IIPP

Signature: DocuSigned by: Anthony Passerini 9919723699F34DC... Date: 3/17/2023

All Principal Investigators/supervisors/managers are responsible for the implementation and enforcement of this IIPP in their areas of responsibility in accordance with University Policy (UCD Policy & Procedure Manual Section 290-15: Safety Management Program).

II. SYSTEM OF COMMUNICATION

1. Effective communications with employees have been established using the following methods. Check all boxes that apply, list additional department methods in space provided.

- [x] Standard Operating Procedures Manual
- [x] Safety Data Sheets
- [x] Monthly departmental operations meetings
- [ ] Internal media (department intranet)
- [x] EH&S Safety Nets
- [ ] Training videos
- [x] Safety Newsletter
- [x] Handouts
- [x] Building Evacuation Plan
- [x] E-mail
- [x] Posters and warning labels
- [x] Job Safety Analysis
- [x] Departmental Website
- [x] Other (list): Departmental Faculty meetings, regular staff meetings and research group meetings for each faculty member

2. Employees are encouraged to report any potential health and safety hazard that may exist in the workplace. Hazard Alert/Correction Forms (Appendix A) are available to employees for this purpose. Forms are to be placed in the Safety Coordinator's departmental mail box or emailed to them. Employees have the option to remain anonymous when making a report.

III. SYSTEM FOR ASSURING EMPLOYEE COMPLIANCE WITH SAFE WORK PRACTICES

Employees have been advised of adherence to safe work practices and the proper use of required personal protective equipment (PPE). Conformance will be reinforced by discipline for non-compliance in accordance with University policy (UC Davis Personnel Policies for Staff Members- Section 62, Corrective Action).

The following methods are used to reinforce conformance with this program:

1. Distribution of Policies
2. Training Programs
3. Safety Performance Evaluations

   Performance evaluations at all levels must include an assessment of the individual's commitment to and performance of the accident prevention requirements of his/her position. The following are examples of factors considered when evaluating an employee's safety performance.

   - Adherence to defined safety practices.
   - Use of provided safety equipment.
   - Reporting unsafe acts, conditions, and equipment.
   - Offering suggestions for solutions to safety problems.
   - Planning work to include checking safety of equipment and procedures before starting.
   - Early reporting of illness or injury that may arise as a result of the job.
   - Providing support to safety programs.
4. Statement of non-compliance will be placed in performance evaluations if employee neglects to follow proper safety procedures, and documented records are on file that clearly indicate training was provided for the specific topic, and that the employee understood the training and potential hazards.
5. Corrective action for non-compliance will take place when documentation exists that proper training was provided, the employee understood the training, and the employee knowingly neglected to follow proper safety procedures. Corrective action includes, but is not limited to, the following: letter of warning, suspension, or dismissal.

Does your department use any additional methods for assuring employee compliance with safe work practices?

YES NO X

IV. HAZARD IDENTIFICATION, EVALUATION AND INSPECTION

Job Hazard Analyses and worksite inspections have been established to identify and evaluate occupational safety and health hazards.

1. Job Safety Analysis:

Job Safety Analysis (JSA) identifies and evaluates employee work functions, potential health or injury hazards, and specifies appropriate safe practices, PPE, and tools/equipment. JSA's can be completed for worksites, an individual employee's job description, or a class of employees' job description. Completed JSA's are located in Appendix B.

The following resources are available for assistance in completing JSA's:

- Laboratory personnel, please refer to the Laboratory Hazard Assessment Tool
- Non-Laboratory personnel, please refer to the JSA/PPE Certification Forms
  (Example JSAs are located in Appendix B1 and Appendix B2 of this template)

2. Worksite Inspections

Worksite inspections are conducted to identify and evaluate potential hazards. Types of worksite inspections include both periodic scheduled worksite inspections as well as those required for accident investigations, injury and illness cases, and unusual occurrences. Inspections are conducted at the following worksites:

1) Location: Genome and Biomedical Sciences Facility
   Frequency: Annual
   Responsible Person: Brett Smith
   Records Location: GBSF, Room 2303

2) Location: Ghausi Hall Frequency
   Frequency: Annual
   Responsible Person: Brett Smith
   Records Location: GBSF, Room 2303

3) Location: Academic Surge
   Frequency: Annual
   Responsible Person: Brett Smith
   Records Location: GBSF, Room 2303

Worksite Inspections Continued

4) Location: Tupper Hall
Frequency: Annual
Responsible Person: Brett Smith
Records Location: GBSF, Room 2303

Worksite Inspection Forms

- C1 - General Office (Available in Appendix C)
- C2 – Laboratory

V. ACCIDENT INVESTIGATION

University Policy requires that work-related injuries and illnesses be reported to Workers' Compensation within 24 hours of occurrence and state regulation requires all accidents be investigated.
Employees will immediately notify their supervisor when occupationally-related injuries and illnesses occur, or when employees first become aware of such problems.

1. **Supervisors** will investigate all accidents, injuries, occupational illnesses, and near-miss incidents to identify the causal factors or attendant hazards. Appropriate repairs or procedural changes will be implemented promptly to mitigate the hazards implicated in these events. Injury reporting procedures can be found at the Safety Services Website: Injury Reporting.

2. The **Injury and Illness Investigation Form** (see Appendix D) shall be completed to record pertinent information and a copy retained to serve as documentation. It can be completed by either the supervisor or the Department Safety Coordinator.

3. Departments must notify EH&S immediately if there is any possibility an employee has been seriously injured. Please refer to EH&S SafetyNet 121 for further information.
    - **Immediately:** As soon as practically possible, but no longer than eight hours after the employer knows, or with diligent inquiry, would have known of the death of serious injury or illness
    - **Serious injury or illness:** Any injury or illness occurring in a place of employment, or in connection with employment, which required inpatient hospitalization for other than medical observation or diagnostic testing, or in which an employee suffers and amputation, the loss of an eye, or any serious degree of permanent disfigurement, but does not include any injury, illness, or death caused by an accident on a public street or highway, unless the accident occurred in a construction zone.

VI. HAZARD CORRECTION

Hazards discovered either as a result of a scheduled periodic inspection or during normal operations must be corrected by the supervisor in control of the work area, or by cooperation between the department in control of the work area and the supervisor of the employees working in that area. Supervisors of affected employees are expected to correct unsafe conditions as quickly as possible after discovery of a hazard, based on the severity of the hazard.

Specific procedures that can be used to correct hazards include, but are not limited to, the following:

- Tagging unsafe equipment “Do Not Use Until Repaired,” and providing a list of alternatives for employees to use until the equipment is repaired.
- Stopping unsafe work practices and providing retraining on proper procedures before work resumes.
- Reinforcing and explaining the need for proper PPE and ensuring its availability.
- Barricading areas that have chemical spills or other hazards and reporting the hazardous conditions to appropriate parties.

Supervisors should use the **Hazard Alert/Correction Report (Appendix A)** to document corrective actions, including projected and actual completion dates.

If an imminent hazard exists, work in the area must cease, and the appropriate supervisor must be contacted immediately. If the hazard cannot be immediately corrected without endangering employees or property, all personnel need to leave the area except those qualified and necessary to correct the condition. These qualified individuals will be equipped with necessary safeguards before addressing the situation.

Does your department have any additional Hazard Correction Procedures?

YES NO x

VII. HEALTH AND SAFETY TRAINING

Health and safety training, covering both general work practices and job-specific hazard training is the responsibility of:

Steven George

and immediate Supervisor(s) as applicable to the following criteria:

1. Supervisors are provided with training to become familiar with the safety and health hazards to which employees under their immediate direction and control may be exposed.
2. All new employees receive training prior to engaging in responsibilities that pose potential hazard(s).
3. All employees given new job assignments receive training on the hazards of their new responsibilities prior to actually assuming those responsibilities.
4. Training is provided whenever new substances, processes, procedures or equipment (which represent a new hazard) are introduced to the workplace.
5. Whenever the employer is made aware of a new or previously unrecognized hazard, training is provided.

The **Safety Training Attendance Record** form is located in **Appendix E**.

VIII. RECORDKEEPING AND DOCUMENTATION

Documents related to the IIPP are maintained in/at/on:

GBSF, Room 2303

The following documents will be maintained within the department's IIPP Binder or accessible online folder for at least the length of time indicated below:

1. Hazard Alert/Correction Forms (Appendix A form). Retain for three years.
2. Employee Job Safety Analysis form (Example JSA's in Appendix B).
3. Worksite Inspection Forms (Appendix C form). Retain for three years.
4. Injury and Illness Investigation Forms (see Appendix D). Retain for three years.
5. Employee Safety Training Attendance Records (Appendix E form). Retain for three years.

IX. RESOURCES

1. UC Office of the President: Management of Health, Safety and the Environment, 10/28/05
2. UC Davis Policy and Procedure Manual, Section 290-15, Safety Management Program
3. California Code of Regulations Title 8, Section 3203, (8CCR §3203), Injury and Illness Prevention Program
4. Personnel Policies for Staff Members, Corrective Action, UC PPSM 62
5. UC Davis Environmental Health & Safety

   Safety Services Website

   EH&S SafetyNets

   Safety Data Sheets

   Campus COVID-19 Prevention Plan
6. Does your department have any additional resources?

   YES NO x

X. COMPLETED TASKS

All tasks are required to be addressed in order to submit this E-IIPP for approval:				
JSA Reviewed:	YES	x	NO	
Annual Worksite Inspection completed:	YES	x	NO	
IIPP Reviewed:	YES	x	NO	
Annual IIPP Training completed:	YES	x	NO	

Approve **Well done Brett!**

HAZARD ALERT / CORRECTION FORM

Alert Identification No. _____
Department: _____

I. Unsafe Condition or Hazard

Name: (optional) _____ Job: _____

Title: (optional) _____

Location of Hazard: _____

Building: _____ Floor: _____ Room: _____

Date and time the condition or hazard was observed:

_____

Description of unsafe condition or hazard: _____

_____

_____

What changes would you recommend to correct the condition or hazard?

_____

_____

Employee Signature: (optional) _____

Date: _____

II. Management/Safety Committee Investigation

Name of person investigating unsafe condition or hazard:

_____

Results of investigation (What was found? Was condition unsafe or a hazard?): (Attach additional sheets if necessary.)

_____

_____

_____

_____

Proposed action to be taken to correct hazard or unsafe condition: (Complete and attach a Hazard Correction Report)

_____

_____

_____

Signature of Investigating Party: _____

Date: _____

Completed copies of this form should be routed to the appropriate supervisor and department Safety Coordinator, and must be maintained in department files for at least three years.

HAZARD ALERT / CORRECTION REPORT

Alert Identification No. _____

Department: _____

This form should be used in conjunction with the "Hazard Alert Form" as appropriate, to track the correction of identified hazards.

All hazards should be corrected as soon as possible, based on the severity of the hazard. If a serious imminent hazard cannot be immediately corrected, evacuate personnel from the area and restrict access until the hazard can be addressed.

Supervisor/Safety Coordinator Name: _____ Telephone: _____

Supervisor/Safety Coordinator Signature: _____ Date: _____

Description and Location of Unsafe Condition	Date Discovered	Required Action and Responsible Party	Completion Date	
			Projected	Actual

Completed copies of this form should be routed to the department Safety Coordinator and kept in department files for at least three years.

UC DAVIS
UNIVERSITY OF CALIFORNIA

Job Safety Analysis (Part I)

Instructions:
1. Select assessment category.
2. List tasks/activities: Develop a list of activities, tasks, equipment/tools (group similar tasks/activities).
3. Identify and list potential hazards: for each task, activity or equipment/tools, list and describe the potential hazards.
4. Identify and list controls: for each task, activity, equipment/tools, document controls (i.e. training, equipment, written procedures, PPE…).
5. ***If PPE is required, complete Part II- PPE Hazard Assessment and Certification.***
6. Train affected employees on the final assessment and document the training.

Repeat assessment when new hazards are identified or introduced into the workplace or at least every three (3) years.
Laboratory workers must use the online Laboratory Hazard Assessment Tool (LHAT) for PPE hazard assessment.

I am reviewing (check the appropriate box)	☐ A worksite	Specify location:
	☐ A single employee's job description	Name of employee: Position title:
	☒ A job description for a class of employees	Position titles: Administrative personnel Location: **Business Office**
	Hazard Evaluator	Signature/Date:

TASK/ACTIVITY	POTENTIAL HAZARD	CONTROL	PPE Required? Y/N
General office work	Back strain, eyestrain, repetitive motion injury. Physical injuries due to slips, trips and falls, and falling objects. Electrical hazards. Physical injuries due to fires, earthquakes, bomb threats and workplace violence.	Ensure that workstations are ergonomically correct. Keep floors clear of debris and liquid spills. Keep furniture, boxes, etc. from blocking doorways, halls and walking space. Do not stand on chairs of any kind, use proper foot stools or ladders. Do not store heavy objects overhead. Do not top load filing cabinets, fill bottom to top. Do not open more than one file drawer at a time. Brace tall bookcases and file cabinets to walls. Do not use extension cords in lieu of permanent wiring. Ensure that high wattage appliances do not overload circuits. Use GFCIs in receptacles in potentially wet areas. Replace frayed or damaged electrical cords. Ensure that electrical cords are not damaged by being wedged against furniture or pinched in doors. All personnel to receive annual training to the Emergency Action Plan (EAP) and Injury and Illness Prevention Plan (IIPP).	No
Operation of motor vehicles	Motor vehicle accidents involving personal injury, or property damage.	All drivers of University vehicles must possess a valid California drivers license and receive the Driver Safety Awareness Course offered by Fleet Services during the first 6 months of employment and renewed every three years. Hazardous materials may not be transported in personally owned vehicles.	No

UC DAVIS
UNIVERSITY OF CALIFORNIA

Job Safety Analysis (Part I)

Training Record

Designated Trainer: (signature is required)

I have read and acknowledge the contents, requirements, and responsibilities outlined in this document:

Name	Signature	Date

UC DAVIS
UNIVERSITY OF CALIFORNIA

Job Safety Analysis (Part I)

Instructions:
1. Select assessment category.
2. List tasks/activities: Develop a list of activities, tasks, equipment/tools (group similar tasks/activities).
3. Identify and list potential hazards: for each task, activity or equipment/tools, list and describe the potential hazards.
4. Identify and list controls: for each task, activity, equipment/tools, document controls (i.e. training, equipment, written procedures, PPE…).
5. ***If PPE is required, complete Part II- PPE Hazard Assessment and Certification.***
6. Train affected employees on the final assessment and document the training.

Repeat assessment when new hazards are identified or introduced into the workplace or at least every three (3) years.
Laboratory workers must use the online Laboratory Hazard Assessment Tool (LHAT) for PPE hazard assessment.

I am reviewing (check the appropriate box)	☐ A worksite	Specify location:
	☐ A single employee's job description	Name of employee:
		Position title:
	☒ A job description for a class of employees	Position titles: Health and Safety Specialists
		Location: Industrial Safety
	Hazard Evaluator	Signature/Date:

TASK/ACTIVITY	POTENTIAL HAZARD	CONTROL	PPE Required? Y/N
Working in laboratories containing chemicals.	Exposure to chemicals via inhalation, contact, ingestion or injection.	Avoid all unnecessary exposures. Reduce exposures that cannot be avoided by minimizing exposure duration and concentration. Proper selection and use of personal protective equipment including gloves, protective eyewear, lab coats, and in some instances respiratory protection. Implementation of proper personal hygiene habits, including washing hands before eating. All personnel to receive on the job and classroom training including UC Lab Safety Fundamentals, Hazardous Waste Management and Minimization and other applicable courses. This will be completed during the first 6 months of employment and renewed every three years.	Lab coat, protective eyewear. Gloves and respiratory protection as needed
Working in laboratories containing radiological materials.	Exposure to radiological agents via inhalation, contact, ingestion or injection.	Avoid all unnecessary exposures. Reduce exposures that cannot be avoided by minimizing exposure duration and concentration. Proper selection and use of personal protective equipment including gloves, protective eyewear, lab coats, and in some instances respiratory protection. Implementation of proper personal hygiene habits, including washing hands and face before eating. All personnel to receive on the job and classroom training including UC Lab Safety Fundamentals, Hazardous Waste Management	Lab coat, protective eyewear. Gloves and respiratory protection as needed

		and Minimization, Radiation Safety and other applicable courses. This will be completed during the first 6 months of employment and renewed every three years.	
Working in laboratories containing biological materials.	Exposure to biological agents via inhalation, contact, ingestion or injection.	Avoid unnecessary exposures. Proper selection and use of personal protective equipment including gloves, protective eyewear, lab coats, and in some instances respiratory protection. Proper adherence to bloodborne pathogen handling protocols. Implementation of proper personal hygiene habits, including washing hands before eating. Voluntary participation in Hepatitis B vaccination program. Proper adherence to biological waste handling procedures. All personnel to receive Bloodborne Pathogen Program training during the first 6 months of employment and renewed annually. Participation in Facilities- specific medical clearances as required.	Lab coat, protective eyewear. Gloves and respiratory protection as needed
Working in laboratories, shops and spaces containing physical hazards.	Injury from physical hazards including high voltage, lasers and ultraviolet light, compressed gases and liquids, cryogenic materials, and specialized equipment as well as falling objects.	Avoid unnecessary exposures. Proper selection and use of personal protective equipment including gloves, protective eyewear and specialized equipment. Employees are not to enter restricted areas unless accompanied by a properly trained individual familiar with the hazards of the area. Employees are not to operate specialized equipment without proper training and documentation. Watch for overhead hazards and wear head protection if needed. Personnel auditing or routinely entering areas where lasers are used will receive laser safety training within 6 months of employment and renewed every three years.	Lab coat, protective eyewear. Gloves, respiratory protection, protective headwear, and specialized equipment as needed
Working in laboratories and animal housing facilities containing animals.	Exposure to animals and animal allergies via inhalation and contact.	Avoid unnecessary exposures. Proper selection and use of personal protective equipment including gloves, protective eyewear, lab coats, and in some instances respiratory protection. Proper adherence to animal care	Lab coat, protective eyewear. Gloves and respiratory protection as needed

		and use protocols. Implementation of proper personal hygiene habits, including washing hands before eating. Participation in the occupational health program for animal workers. All personnel to receive the IACUC Animal Care and Use 101 training during the first 6 months of employment and renewed every three years. Participation in Facilities-specific medical clearances as required.	
Handling and moving heavy items and equipment.	Ergonomic hazards including heavy lifting, repetitive motions, awkward motions, crushing or pinching injuries, etc.	Get help with all loads that cannot be safely lifted by one person. Use mechanical means to lift and move heavy items, push carts and dolly rather than pull, and employ proper lifting techniques at all times. Set up work operations as ergonomically safe as practical. Wear proper hand and foot protection to protect against crushing or pinching injuries. Personnel to receive Back Safety and Injury Prevention training prior to being assigned job task involving handling and moving heavy items/equipment.	Hand and foot protection as needed
Exposure to noise hazards.	Hearing loss due to noise exposure.	Voluntarily participate in the Hearing Conservation Program. Use hearing protection as required. All personnel to receive Hearing Conservation training within 6 months of employment and renewed annually.	Hearing protection (ear plugs and muffs, etc.)
General office work.	Back strain, eyestrain, repetitive motion injury. Physical injuries due to slips, trips and falls, and falling objects. Electrical hazards. Physical injuries due to fires, earthquakes, bomb threats and workplace violence.	Ensure that workstations are ergonomically correct. Keep floors clear of debris and liquid spills. Keep furniture, boxes, etc. from blocking doorways, halls and walking space. Do not stand on chairs of any kind, use proper foot stools or ladders. Do not store heavy objects overhead. Do not top load filing cabinets, fill bottom to top. Do not open more than one file drawer at a time. Brace tall bookcases and file cabinets to walls. Do not use extension cords in lieu of permanent wiring. Ensure that high wattage appliances do not overload circuits. Use GFCIs in receptacles in	No

		potentially wet areas. Replace frayed or damaged electrical cords. Ensure that electrical cords are not damaged by being wedged against furniture or pinched in doors. All personnel to receive annual training to the Emergency Action Plan (EAP) and Injury and Illness Prevention Plan (IIPP).	
Operation of motor vehicles.	Motor vehicle accidents involving personal injury, or property damage.	All drivers of University vehicles must possess a valid California drivers license and receive the Driver Safety Awareness Course offered by Fleet Services during the first 6 months of employment and renewed every three years. Hazardous materials may not be transported in personally owned vehicles.	No

UC DAVIS
UNIVERSITY OF CALIFORNIA

Job Safety Analysis (Part I)

Training Record

Designated Trainer: (signature is required)

I have read and acknowledge the contents, requirements, and responsibilities outlined in this document:

Name	Signature	Date

WORKSITE INSPECTION FORM

General Office Environment

Location: _____ Date: _____

Inspector: _____ Phone: _____

Department: _____

Administration and Training

Yes ☐ No ☐ NA ☐	1.	Are all safety records maintained in a centralized file for easy access? Are training records current?
Yes ☐ No ☐ NA ☐	2.	Have all employees attended Injury & Illness Prevention Program training? Has the training been documented?
Yes ☐ No ☐ NA ☐	3.	Does the department have a completed Emergency Action Plan? Are employees trained on its contents and training documented?
Yes ☐ No ☐ NA ☐	4.	Are chemical products used in the office being purchased in small quantities? Are Safety Data Sheets available/accessible?
Yes ☐ No ☐ NA ☐	5.	Are mandatory employment notices and posters posted: https://www.hr.ucdavis.edu/supervisors/posters-required-by-law ?
Yes ☐ No ☐ NA ☐	6.	Are annual workplace inspections performed and documented?

General Safety

Yes ☐ No ☐ NA ☐	7.	Are exits, fire alarms, pullboxes clearly marked and unobstructed?
Yes ☐ No ☐ NA ☐	8.	Are aisles and corridors unobstructed to allow unimpeded evacuations?
Yes ☐ No ☐ NA ☐	9.	Is a clearly identified, unobstructed, charged, currently inspected and tagged, wall-mounted fire extinguisher available as required by UC Davis Fire?
Yes ☐ No ☐ NA ☐	10.	Are ergonomic issues being addressed for employees using computers or at risk of repetitive motion injuries?
Yes ☐ No ☐ NA ☐	11.	Is a fully stocked first-aid kit available? Is the location known to all employees in the area?
Yes ☐ No ☐ NA ☐	12.	Are cabinets, shelves, and furniture over five feet tall secured to prevent toppling during earthquakes?
Yes ☐ No ☐ NA ☐	13.	Are books and heavy items and equipment stored on low shelves and secured to prevent them from falling on people during earthquakes?
Yes ☐ No ☐ NA ☐	14.	Is the office kept clean of trash and recyclables promptly removed?

Electrical Safety

Yes ☐ No ☐ NA ☐	15.	Are plugs, cords, electrical panels, and receptacles in good condition? No exposed conductors or broken insulation?
Yes ☐ No ☐ NA ☐	16.	Are circuit breaker panels accessible and labeled?
Yes ☐ No ☐ NA ☐	17.	Are surge protectors being used? If so, they must be equipped with an automatic circuit breaker, have cords no longer than 15 feet in length, and be plugged directly into a wall outlet.
Yes ☐ No ☐ NA ☐	18.	Is lighting adequate throughout the work environment?
Yes ☐ No ☐ NA ☐	19.	Are extension cords being used correctly? They must not run through walls, doors, ceiling, or present a trip hazard.
Yes ☐ No ☐ NA ☐	20.	Are portable electric heaters being used? If so, they must be UL listed, plugged directly into a wall outlet, and located away from combustible materials.

Completed copies of this form should be routed to the department Safety Coordinator and must be maintained in department files for at least three years.

IIPP – Appendix D

Please access the **Injury Reporting Procedure** page on the Safety Services website.

http://safetyservices.ucdavis.edu/article/injury-reporting-procedure

Complete the electronic **Employer's First Report** as soon as practicable.

Completed copies of this form should be routed to the department Safety Coordinator and must be maintained in department files for at least three years.

SAFETY TRAINING ATTENDANCE RECORD

Training Topic: _____ Date: _____
(*attach a copy of the training session curriculum*)

Instructor: _____ Training Aids: _____

Location: _____ Time: _____

Attendees – Please print and sign your name legibly. Use additional sheets if necessary.

No.	Print Name	Signature/Date
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		
21.		
21.		
22.		
23.		
24.		
25.		
26.		
27.		
28.		
29.		
30.		

IIPP-Appendix E
January 2022

Completed copies of this form should be routed to the department Safety Coordinator and must be maintained in department files for at least three years.

UC DAVIS HEALTH

EFFECTIVE: 2020	JOB SAFETY ANALYSIS IIPP-Appendix B	DEPARTMENT BIOMEDICAL ENGINEERING	LOCATION GBSF, Ghausi Hall, Tupper Hall, Academic Surge	JOB TYPE OFFICE & COMPUTER WORK
JOB FUNCTION	**POTENTIAL HEALTH OR INJURY HAZARD(S)**	**RISK ASSESSMENT, SAFE WORK PRACTICES, PPE & ENGINEERING CONTROLS**		
General office work.	1. Back strain, eyestrain, repetitive motion injury. 2. Physical injuries due to slips, trips and falls, and falling objects. 3. Electrical hazards. 4. Physical injuries due to fires, earthquakes, bomb threats and workplace violence.	1. Ensure that workstations are ergonomically correct. Refer to EH&S SafetyNet #'s 17, 41, 46 and 96. Training and enforcement are under the direction of the Chief Administrative Officer. 2. Keep floors clear of debris and liquid spills. If a spill can't be cleaned immediately, use the "wet floor" sign to warn others of the potential hazard. Keep furniture boxes, etc. from blocking doorways, halls and walking space. Do not stand on chairs of any kind; use proper footstools or ladders. Do not store heavy objects overhead. Do not top-load filing cabinets, fill from bottom to top. Do not open more than one file drawer at a time. Brace tall bookcases and tall file cabinets to walls. Refer to EH&S SafetyNet # 46 and 83. Training and enforcement are under the direction of the Chief Administrative Officer. 3. Do not use extension cords in lieu of permanent wiring. Ensure that high wattage appliances do not overload circuits. Replace frayed or damaged electrical cords. Ensure that electrical cords are not wedged against furniture or pinched by doors. Refer to EH&S SafetyNet #'s 20 and 109. Training and enforcement are under the direction of the Chief Administrative Officer. 4. Attend emergency action and fire prevention plan training including emergency escape drills. Attend Workplace Violence training offered by UC Davis Police Department. Refer to https://safetyservices.ucdavis.edu/training/personal-workplace-safety. Training and enforcement are under the direction of the Chief Admin Officer.		
Handling and moving heavy items and equipment.	Ergonomic hazards including heavy lifting, repetitive motions, awkward motions, crushing or pinching injuries, etc.	Get help with all loads that cannot be safely lifted by one person. Use mechanical means to lift and move heavy items, push carts and dolly rather than pull, employ proper lifting techniques at all times. Wear proper hand and foot protection to protect against crushing or pinching injuries. Refer to EH&S SafetyNet #'s 29, 41 and 46. Training and enforcement are under the direction of the Chief Admin Officer.		
Operation of motor vehicles	Motor vehicle accidents involving personal injury, or property damage.	All drivers of University vehicles must attend the Driver Safety Awareness Course offered by Fleet Services and possess a valid California driver's license. Hazardous materials may not be transported in personally owned vehicles.		
	DATE	**SIGNATURE**		

UC DAVIS HEALTH

EFFECTIVE: 2020	JOB SAFETY ANALYSIS IIPP-Appendix B	DEPARTMENT BIOMEDICAL ENGINEERING	LOCATION GBSF, Ghausi Hall, Tupper Hall, Academic Surge	JOB TYPE FIELD RESEARCH
JOB FUNCTION	**POTENTIAL HEALTH OR INJURY HAZARD(S)**	**RISK ASSESSMENT, SAFE WORK PRACTICES, PPE & ENGINEERING CONTROLS**		
Field Research	Exposure to sun/weather.	Wear sunscreen. Maintain adequate fluid intake. Wear protective clothing as needed (hat, raincoat, gloves, appropriate footwear). Take cover during a thunderstorm. Take breaks as needed in well-shaded areas when hot.		
	Access to field sites.	Drive defensively. Avoid driving when tired. Be prepared for delays. Carry adequate food, water, clothing, first aid equipment and tools.		
	Field Activities.	Wear appropriate footgear, especially when traveling through rough or rocky terrain. Obtain appropriate training on equipment use. Travel with another individual when accessing remote locations. Provide supervisor with itinerary prior to trip.		
	Valley Fever: Valley fever is another name for the sometimes deadly infection coccidioidomycosis. It is called Valley Fever because the organism that causes it is commonly found in the soil of the southwestern United States, Mexico, and parts of Central and South America. Valley Fever usually affects the lungs. When it affects other parts of the body, it is called Disseminated Valley Fever. Valley Fever is spread through the air. If soil containing the Valley Fever fungus is disturbed by construction, natural disasters, or wind, the fungus spores get into the air. People can breathe in the spores and get Valley Fever. The disease is not spread from person to person. Anyone can get Valley Fever, but people who engage in activities that disturb the soil are at an increased risk. People with weakened immune systems are at increased risk for disseminated disease.	Persons at risk for Valley Fever should avoid exposure to dust and dry soil in areas where Valley Fever is common.		
	DATE	**SIGNATURE**		

UC DAVIS HEALTH

EFFECTIVE: 2020	JOB SAFETY ANALYSIS IIPP-Appendix B	DEPARTMENT BIOMEDICAL ENGINEERING	LOCATION GBSF, Ghausi Hall, Tupper Hall, Academic Surge	JOB TYPE CLINICAL LABS
JOB FUNCTION	**POTENTIAL HEALTH OR INJURY HAZARD(S)**	**RISK ASSESSMENT, SAFE WORK PRACTICES, PPE AND ENGINEERING CONTROLS**		
PATIENT LIFTING: Work with patients/human subjects may involve lifting and moving of patients.	Exposure to physical injury from lifting and moving of patients/human subjects.	Avoid unnecessary exposures. Use the lift team, when appropriate. Proper selection and use of equipment to minimize risk of injury. Proper adherence to lifting fundamentals. Participation in facility specific medical clearances may be required.		
INTERACTION WITH PATIENTS WITH AEROSOL TRANSMISSIBLE DISEASES: Work may involve interaction with patients/human subjects with aerosol transmissible diseases.	Exposure to patients/human subjects with aerosol transmissible diseases. Potential for contracting aerosol transmissible diseases via inhalation, contact, or ingestion.	Avoid exposures and minimize interaction time. Maximize interaction distance when feasible. Read the Material Safety Data Sheets (Biological MSDSs). Depending on the worker's potential for exposure, this may require participation in the aerosol transmissible disease program. Proper selection and use of personal protective equipment is required when entering isolation rooms. This may include respiratory protection, eye protection, layers of disposable gloves, disposable gowns and booties; read and follow the posted isolation room signs. Proper selection and use of personal protective equipment is vital when working with infectious patients. This should include respiratory protection, eye protection, and disposable gloves. Implementation of proper personal hygiene habits, including washing hands and face after leaving isolation rooms and removing personal protective equipment. Wash hands before eating.		
BLOODBORNE PATHOGENS AND BIOLOGICAL MATERIALS: Work with patients/human subjects may involve biological materials and wastes (including but not limited to infectious agents, recombinant agents, cell culture, stem cells, tissue culture, bloodborne pathogens, human tissues or fluids, toxins, body fluids, body parts and cadavers). All clinic workers are potentially exposed to these hazards.	Exposure to biological agents via inhalation, contact, ingestion or injection.	Avoid unnecessary exposures. Proper selection and use of personal protective equipment including gloves, protective eyewear, lab coats, and in some instances, respiratory protection. Adhere to bloodborne pathogen handling protocols. Implementation of proper personal hygiene habits, including washing hands and face before eating. Voluntary participation in Hepatitis B vaccination program. Adhere to proper biological waste handling procedures. All personnel are to attend EH&S Bloodborne Pathogen Program training. Participation in facility specific medical clearances may be required.		
HANDLING OF CRYOGENIC LIQUIDS	Exposure to cryogenic liquids	Avoid unnecessary exposures. Proper selection and use of tools and personal protective equipment including gloves, aprons and protective eyewear. Adhere to cryogenic procedures.		
	DATE	**SIGNATURE**		

EFFECTIVE: 2020	JOB SAFETY ANALYSIS IIPP-Appendix B	DEPARTMENT BIOMEDICAL ENGINEERING	LOCATION GBSF, Ghausi Hall, Tupper Hall, Academic Surge	JOB TYPE CLINICAL LABS
JOB FUNCTION	**POTENTIAL HEALTH OR INJURY HAZARD(S)**	**RISK ASSESSMENT, SAFE WORK PRACTICES, PPE AND ENGINEERING CONTROLS**		
TRANSPLANTS AND ANIMAL PARTS: Work in clinics may involve transplants organs, tissues and parts including animal parts.	Exposure to animals and animal allergies via inhalation and contact	Avoid unnecessary exposures. Proper selection and use of personal protective equipment including gloves, protective eyewear, lab coats, and in some instances respiratory protection. Proper adherence to protocols. Implementation of proper personal hygiene habits, including washing hands and face before eating. Participation in facilities- specific medical clearances as required.		
SELECT AGENTS: Work in laboratories containing select agents. Select agents in any quantity are registered with the Biosafety Officer. All lab workers who work in a lab with select agents and wastes are potentially exposed to these hazards during a fire or other emergency. Those workers who are registered as working with select agents are trained on safe procedures by the Biosafety Officer.	Exposure to select agents via inhalation, contact, ingestion or injection.	Avoid all exposures. Read the Material Safety Data Sheets (MSDSs). Design experiments for zero exposure. Proper selection and use of personal protective equipment including layers of disposable gloves, disposable lab wear and full-face respiratory protection. Implementation of proper personal hygiene habits, including washing hands and face before eating. All personnel to receive training from the Biosafety Officer.		
CHEMICALS: Work in clinical situations containing chemicals and chemical waste (including carcinogens). All workers who work in a clinic with chemicals and chemical waste are potentially exposed to these hazards.	Exposure to chemicals via inhalation, contact, ingestion or injection.	Avoid all unnecessary exposures. Read the Material Safety Data Sheets (MSDSs). Reduce exposures that cannot be avoided by minimizing exposure duration and concentration. Proper selection and use of personal protective equipment including gloves, protective eyewear, lab coats, and in some instances respiratory protection. Implementation of proper personal hygiene habits, including washing hands and face before eating. All personnel to receive training on Chemical Laboratory Safety, Hazardous Waste Management and Waste Minimization prior to conducting this type of work.		
BUSINESS PLAN: There is an inherent hazard in working in a building containing chemicals and workers are potentially exposed to these hazards.	Exposure to chemicals and associated hazards including explosion, fire, inhalation, contact, ingestion or injection.	Avoid all unnecessary exposures. Read the Material Safety Data Sheets (MSDSs) of materials that you work with and adhere to proper standard operating procedures. Reduce risk by notifying the Safety Officer of the hazards. Read and document training on the Building Fire Plan and the Building Evacuation Plan. Participate in building fire drills. No smoking permitted on campus.		
	DATE	**SIGNATURE**		

UC DAVIS HEALTH

EFFECTIVE: 2020	JOB SAFETY ANALYSIS IIPP-Appendix B	DEPARTMENT BIOMEDICAL ENGINEERING	LOCATION GBSF, Ghausi Hall, Tupper Hall, Academic Surge	JOB TYPE CLINICAL LABS
JOB FUNCTION	**POTENTIAL HEALTH OR INJURY HAZARD(S)**	**RISK ASSESSMENT, SAFE WORK PRACTICES, PPE AND ENGINEERING CONTROLS**		
CONTROLLED SUBSTANCES: Work in clinical situations handling controlled substances. All workers who work in a clinical situation with controlled substances are potentially exposed to these hazards.	Exposure to chemicals via inhalation, contact, ingestion or injection.	Avoid all unnecessary exposures. Reduce exposures that cannot be avoided by minimizing exposure duration and concentration. Proper selection and use of personal protective equipment including gloves, protective eyewear, lab coats, and in some instances respiratory protection. Implementation of proper personal hygiene habits, including washing hands and face before eating. All personnel to receive training on Chemical Laboratory Safety, Hazardous Waste Management and Waste Minimization prior to conducting this type of work.		
NUCLEAR MEDICINE AND RADIOACTIVE MATERIALS: Work in clinics containing radiological materials and wastes and work with patients who have been treated with and may contain radioactive materials. All workers are potentially exposed to these hazards. Those workers who conduct radioactive work have a higher potential for exposure and receive required training.	Exposure to radiological agents via inhalation, contact, ingestion or injection.	Avoid all unnecessary exposures. Adhere to radiological material handling procedures including limiting exposures through combination of minimizing time, maximizing distances and use of appropriate shielding. Proper selection and use of personal protective equipment including gloves, protective eyewear, lab coats, and in some instances respiratory protection Implementation of proper personal hygiene habits, including washing hands and face before eating. Participation in radiological monitoring program may be required. All personnel to conduct radioactive work will receive on the job and classroom training including Radiation Safety and other applicable courses prior to conducting this type of work.		
NANOPARTICLES: Work in laboratories, shops and spaces containing chemicals in nanoparticle sizes.	Exposure to nanoparticle chemicals via inhalation, contact, ingestion or injection. The hazards of a nanoparticle are unclear. There is some evidence that the hazard of nanoparticles may be more reflective of particle and fiber hazards rather than of the chemical hazards.	Avoid all unnecessary exposures. Read the Material Safety Data Sheets (MSDSs). Adhere to proper standard operating procedures for these materials. Reduce exposures that cannot be avoided by minimizing exposure duration and concentration. Proper selection and use of personal protective equipment including gloves, protective eyewear, lab coats, and in some instances respiratory protection. Implementation of proper personal hygiene habits, including washing hands and face before eating.		
LASERS: Work in clinics containing laser hazards. All workers who work in a clinic with lasers are potentially exposed to these hazards.	Injury from physical hazards including high voltage, lasers and compressed gases and liquids, and specialized equipment.	Avoid unnecessary exposures. Proper selection and use of personal protective eyewear and specialized equipment. Employees are not to enter restricted areas unless accompanied by a properly trained individual familiar with the hazards of the area. Employees are not to operate specialized equipment without proper training and documentation. Personnel routinely entering areas where lasers are used will receive laser safety training prior to conducting this type of work.		
	DATE	**SIGNATURE**		

UC DAVIS HEALTH

EFFECTIVE: 2020	JOB SAFETY ANALYSIS IIPP-Appendix B	DEPARTMENT BIOMEDICAL ENGINEERING	LOCATION GBSF, Ghausi Hall, Tupper Hall, Academic Surge	JOB TYPE CLINICAL LABS
JOB FUNCTION	**POTENTIAL HEALTH OR INJURY HAZARD(S)**	**RISK ASSESSMENT, SAFE WORK PRACTICES, PPE AND ENGINEERING CONTROLS**		
X-RAYS AND RADIATION PRODUCING MACHINES: Work in laboratories containing radiological machines. All lab workers who work in a lab with radiation producing equipment are potentially exposed to these hazards. Those workers who operate radioactive equipment and are added to the MUA have a higher potential for exposure and receive prescribed training.	Exposure to radiological agents via inhalation, contact, ingestion or injection.	Avoid all unnecessary exposures. Adhere to machine use procedures including limiting exposures through combination of minimizing time, maximizing distances and use of appropriate shielding. Proper selection and use of personal protective equipment including lead shielding, and lead aprons. Implementation of proper personal hygiene habits, including washing hands and face before eating. Participation in radiological monitoring program may be required. All personnel to operate radioactive equipment will receive on appropriate training as prescribed by the Radiation Safety Officer prior to conducting this type of work.		
HANDLING AND MOVING HEAVY ITEMS AND EQUIPMENT	Ergonomic hazards including heavy lifting, repetitive motions, awkward motions, crushing or pinching injuries etc.	Get help with all loads that cannot be safely lifted by one person. Use mechanical means to lift and move heavy items, push carts and dolly rather than pull, attend back safety class, employ proper lifting techniques at all times. Set up work operations as ergonomically safe as practical. Wear proper hand and foot protection to protect against crushing or pinching injuries.		
PHYSICAL HAZARDS: Work in clinics and spaces containing physical hazards	Injury from physical hazards including high voltage, lasers, ultraviolet light, compressed gases, liquids, cryogenic materials, and specialized equipment as well as falling objects.	Avoid unnecessary exposures. Proper selection and use of personal protective equipment including gloves, protective eyewear and specialized equipment. Employees are not to enter restricted areas unless accompanied by a properly trained individual familiar with the hazards of the area. Employees are not to operate specialized equipment without proper training and documentation. Watch for overhead hazards and wear head protection if needed. Personnel routinely entering areas where lasers are used will receive laser safety training prior to conducting this type of work.		
TRANSPORT: Transportation of samples, hazardous materials, radiological materials or wastes	Exposure to biological, chemical or radiological materials or waste during packaging and/or transport	All drivers of University vehicles must attend the Driver Safety Awareness Course offered by Fleet Services and possess a valid California drivers' license. Those who transport or prepare for transport in vehicles biological, chemical or radiological materials subject to DOT or IATA shipping requirements shall take the required Dangerous Goods Shipping Class. Hazardous materials may not be transported in personally owned vehicles. Transport of such materials between rooms and buildings shall be labeled and in double containment.		
	DATE	**SIGNATURE**		

UC DAVIS HEALTH

EFFECTIVE: 2020	JOB SAFETY ANALYSIS IIPP-Appendix B	DEPARTMENT BIOMEDICAL ENGINEERING	LOCATION GBSF, Ghausi Hall, Tupper Hall, Academic Surge	JOB TYPE RESEARCH LABS
JOB FUNCTION	**POTENTIAL HEALTH OR INJURY HAZARD(S)**	**RISK ASSESSMENT, SAFE WORK PRACTICES, PPE & ENGINEERING CONTROLS**		
ANIMAL WORK: Work in laboratories, procedure rooms, surgery rooms and animal housing facilities containing animals. Refer to specific Animal Care Protocols. All lab workers who work in a lab conducting animal research are potentially exposed to these hazards. Those workers who are added to the ACPs have a higher potential for exposure and receive prescribed training.	Exposure to animals and animal allergies via inhalation and contact	Avoid unnecessary exposures. Proper selection and use of personnel protective equipment including gloves, protective eyewear, lab coats, and in some instances respiratory protection. Proper adherence to animal care and use protocols. Implementation of proper personnel hygiene habits, including washing hands and face before eating. Participation in the occupational health program for animal workers. All personnel to conduct animal research and be added to an Animal Use and Care Protocol shall attend the IACUC Animal Care and Use 101 training prior to conducting this work. Participation in other facility-specific medical clearances as required.		
BIOLOGICAL MATERIALS: Work in laboratories containing biological materials and wastes (including but not limited to infectious agents, recombinant work, cell culture, stem cell work, tissue culture, bloodborne pathogens, human tissues or fluids, stem cells, toxins and body parts). BUA: _____ All lab workers who work in a lab with biological materials and wastes are potentially exposed to these hazards. Those workers who are added to the BUA have a higher potential for exposure and receive prescribed training.	Exposure to biological agents via inhalation, contact, ingestion or injection.	Avoid unnecessary exposures. Proper selection and use of personnel protective equipment including gloves, protective eyewear, lab coats, and in some instances respiratory protection. Proper adherence to bloodborne pathogen handling protocols. Implementation of proper personnel hygiene habits, including washing hands and face before eating. Voluntary participation in Hepatitis B vaccination program. Proper adherence to biological waste handling procedures. All personnel to conduct biological work and added to the BUA shall attend a class on Laboratory Biological Safety/Bloodborne Pathogen Program prior to conducting this type of work. Participation in Facility specific medical clearances may be required.		
	DATE	**SIGNATURE**		

UC DAVIS HEALTH

EFFECTIVE: 2020	JOB SAFETY ANALYSIS IIPP-Appendix B	DEPARTMENT BIOMEDICAL ENGINEERING	LOCATION GBSF, Ghausi Hall, Tupper Hall, Academic Surge	JOB TYPE RESEARCH LABS
JOB FUNCTION	**POTENTIAL HEALTH OR INJURY HAZARD(S)**	**RISK ASSESSMENT, SAFE WORK PRACTICES, PPE & ENGINEERING CONTROLS**		
BUSINESS PLAN: There is an inherent hazard in working in a building containing chemicals. **Bldg/Title:**_____ All lab workers who work in a building with chemicals and associated hazards are potentially exposed to these hazards.	Exposure to chemicals and associated hazards including explosion, fire, inhalation, contact, ingestion or injection.	Avoid all unnecessary exposures. Read the Material Safety Data Sheets (MSDS's) of materials that you work with. Reduce risk by notifying the Departmental Safety Coordinator and EH&S of hazards. Read and document training on the Building Fire Plan and the Building Evacuation Plan. Participate in building fire drills. No smoking is permitted on campus.		
CHEMICALS: Work in laboratories containing chemicals and chemical waste (including carcinogens). All lab workers who work in a lab with chemicals and chemical waste are potentially exposed to these hazards.	Exposure to chemicals via inhalation, contact, ingestion or injection.	Avoid all unnecessary exposures. Read the Material Safety Data Sheets (MSDS's). Reduce exposures that cannot be avoided by minimizing exposure duration and concentration. Proper selection and use of personnel protective equipment including gloves, protective eyewear, lab coats, and in some instances respiratory protection. Implementation of proper personnel hygiene habits, including washing hands and face before eating. All personnel to receive training on Chemical Laboratory Safety, Hazardous Waste Management and Waste Minimization prior to conducting this type of work.		
CONTROLLED SUBSTANCES: Work in laboratories and animal facilities handling controlled substances. **CSA:** _____ All lab workers who work in a lab with controlled substance authorization are potentially exposed to these hazards. Those workers who are added to the LUA have a higher potential for exposure and receive prescribed training.	Exposure to chemicals via inhalation, contact, ingestion or injection.	Avoid all unnecessary exposures. Reduce exposures that cannot be avoided by minimizing exposure duration and concentration. Proper selection and use of personnel protective equipment including gloves, protective eyewear, lab coats, and in some instances respiratory protection. Implementation of proper personnel hygiene habits, including washing hands and face before eating. All personnel to receive training on Chemical Laboratory Safety, Hazardous Waste Management and Waste Minimization prior to conducting this type of work.		
CRYOGENIC LIQUIDS:	Exposure to cryogenic liquids.	Avoid unnecessary exposures. Proper selection and use of tools and personnel protective equipment including gloves, aprons and protective eyewear. Proper adherence to cryogenic procedures.		
	DATE	**SIGNATURE**		

UC DAVIS HEALTH

EFFECTIVE: 2020	JOB SAFETY ANALYSIS IIPP-Appendix B	DEPARTMENT BIOMEDICAL ENGINEERING	LOCATION GBSF, Ghausi Hall, Tupper Hall, Academic Surge	JOB TYPE RESEARCH LABS
JOB FUNCTION	**POTENTIAL HEALTH OR INJURY HAZARD(S)**	**RISK ASSESSMENT, SAFE WORK PRACTICES, PPE & ENGINEERING CONTROLS**		
Heavy Equipment: handling and moving heavy items and equipment.	Ergonomic hazards including heavy lifting, repetitive motions, awkward motions, crushing or pinching injuries etc.	Get help with all loads that cannot be safely lifted by one person. Use mechanical means to lift and move heavy items, push carts and dolly rather than pull, attend back safety class, employ proper lifting techniques at all times. Set up work operations as ergonomically safe as practical. Wear proper hand and foot protection to protect against crushing or pinching injuries.		
HUMAN SUBJECTS: work with human subjects. **IRB PROTOCOLS:** All workers who work with human subjects or around those people who do are potentially exposed to these hazards. Those workers who are added to the IRB Protocol have a higher potential for exposure and receive HIPAA Training and HIPAA Research training.	Exposure to chemical, radiological, biological (infectious) agents via inhalation, contact, ingestion or injection. Exposure to physical hazards.	Avoid unnecessary exposures. Proper selection and use of personnel protective equipment including gloves, protective eyewear, lab coats, and in some instances respiratory protection. Proper adherence to bloodborne pathogen handling protocols. Implementation of proper personnel hygiene habits, including washing hands and face before eating. Voluntary participation in Hepatitis B vaccination program. Proper adherence to biological waste handling procedures. All personnel to conduct biological work and added to the BUA shall attend a class on Laboratory Biological Safety/Bloodborne Pathogen Program prior to conducting this type of work. Participation in Facility specific medical clearances may be required.		
LASERS: Work in laboratories, shops and spaces containing laser hazards. **LUA:** _____ All lab workers who work in a lab with lasers are potentially exposed to these hazards. Those workers who are added to the LUA have a higher potential for exposure and receive prescribed training.	Injury from physical hazards including high voltage, lasers and compressed gases and liquids, and specialized equipment.	Avoid unnecessary exposures. Proper selection and use of personnel protective eyewear and specialized equipment. Employees are not to enter restricted areas unless accompanied by a properly trained individual familiar with the hazards of the area. Employees are not to operate specialized equipment without proper training and documentation. Personnel routinely entering areas where lasers are used will receive laser safety training prior to conducting this type of work.		
Motor vehicle operation: university vehicle(s)	Motor vehicle accidents involving personnel injury, or property damage.	All drivers of University vehicles must attend the Driver Safety Awareness Course offered by Fleet Services and possess a valid California driver's license. Hazardous materials may not be transported in personnel owned vehicles.		
	DATE	**SIGNATURE**		

UC DAVIS HEALTH

EFFECTIVE: 2020	JOB SAFETY ANALYSIS IIPP-Appendix B	DEPARTMENT BIOMEDICAL ENGINEERING	LOCATION GBSF, Ghausi Hall, Tupper Hall, Academic Surge	JOB TYPE RESEARCH LABS
JOB FUNCTION	**POTENTIAL HEALTH OR INJURY HAZARD(S)**	**RISK ASSESSMENT, SAFE WORK PRACTICES, PPE & ENGINEERING CONTROLS**		
NANOPARTICLES: work in laboratories, shops and spaces containing chemicals in nanopartical sizes.	Exposure to nanoparticle chemicals via inhalation, contact, ingestion or injection. The hazard of nanoparticles is unclear. There is some evidence that the hazard of nanoparticles may more reflective of particle and fiber hazards than of the chemical hazards.	Avoid all unnecessary exposures. Read the Material Safety Data Sheets (MSDS's). Reduce exposures that cannot be avoided by minimizing exposure duration and concentration. Proper selection and use of personnel protective equipment including gloves, protective eyewear, lab coats, and in some instances respiratory protection. Implementation of proper personnel hygiene habits, including washing hands and face before eating.		
Physical Hazards: work in laboratories, shops and spaces containing physical hazards.	Injury from physical hazards including high voltage, lasers and ultraviolet light, compressed gases and liquids, cryogenic materials, and specialized equipment as well as falling objects.	Avoid unnecessary exposures. Proper selection and use of personnel protective equipment including gloves, protective eyewear and specialized equipment. Employees are not to enter restricted areas unless accompanied by a properly trained individual familiar with the hazards of the area. Employees are not to operate specialized equipment without proper training and documentation. Watch for overhead hazards and wear head protection if needed. Personnel routinely entering areas where lasers are used will receive laser safety training prior to conducting this type of work.		
RADIOACTIVE MATERIALS: work in laboratories containing radiological materials and wastes. **RUA:** _____ All lab workers who work in a lab with radiological materials and wastes are potentially exposed to these hazards. Those workers who conduct radioactive work and are added to the RUA have a higher potential for exposure and receive prescribed training.	Exposure to radiological agents via inhalation, contact, ingestion or injection.	Avoid all unnecessary exposures. Adhere to radiological material handling procedures including limiting exposures through combination of minimizing time, maximizing distances and use of appropriate shielding. Proper selection and use of personnel protective equipment including gloves, protective eyewear, lab coats, and in some instances respiratory protection Implementation of proper personnel hygiene habits, including washing hands and face before eating. Participation in radiological monitoring program may be required. All personnel to conduct radioactive work will receive on the job and classroom training including Radiation Safety prior to conducting this type of work.		
	DATE	**SIGNATURE**		

UC DAVIS HEALTH

EFFECTIVE: 2020	JOB SAFETY ANALYSIS IIPP-Appendix B	DEPARTMENT BIOMEDICAL ENGINEERING	LOCATION GBSF, Ghausi Hall, Tupper Hall, Academic Surge	JOB TYPE RESEARCH LABS
JOB FUNCTION	**POTENTIAL HEALTH OR INJURY HAZARD(S)**	**RISK ASSESSMENT, SAFE WORK PRACTICES, PPE & ENGINEERING CONTROLS**		
RADIATION PRODUCING MACHINES: work in laboratories containing radiological machines. **MUA:** _____ All lab workers who work in a lab with radiation producing equipment are potentially exposed to these hazards. Those workers who operate radioactive equipment and are added to the MUA have a higher potential for exposure and receive prescribed training.	Exposure to radiological agents via inhalation, contact, ingestion or injection.	Avoid all unnecessary exposures. Adhere to machine use procedures including limiting exposures through combination of minimizing time, maximizing distances and use of appropriate shielding. Proper selection and use of personnel protective equipment including lead shielding, and lead aprons. Implementation of proper personnel hygiene habits, including washing hands and face before eating. Participation in radiological monitoring program may be required. All personnel to operate radioactive equipment will receive on appropriate training as prescribed by the Radiation Safety Officer prior to conducting this type of work.		
SELECT AGENTS: work in laboratories containing select agents. Select agents in any quantity are registered with the Biosafety Officer. **Select Agent Quantities:** **> Exempt quantities** **< Exempt quantities** All lab workers who work in a lab with select agents and wastes are potentially exposed to these hazards during a fire or other emergency. Those workers that are working with select agents are trained on safe procedures by the Biosafety Officer.	Exposure to select agents via inhalation, contact, ingestion or injection.	Avoid all exposures. Read the Material Safety Data Sheets (MSDS's). Design experiments for zero exposure. Proper selection and use of personnel protective equipment including layers of disposable gloves, disposable lab wear and full-face respiratory protection. Implementation of proper personnel hygiene habits, including washing hands and face before eating. All personnel to receive training from the Biosafety Officer.		
	DATE	**SIGNATURE**		

UC DAVIS HEALTH

EFFECTIVE: 2020	JOB SAFETY ANALYSIS IIPP-Appendix B	DEPARTMENT BIOMEDICAL ENGINEERING	LOCATION GBSF, Ghausi Hall, Tupper Hall, Academic Surge	JOB TYPE ANIMAL HANDLER
JOB FUNCTION	**POTENTIAL HEALTH OR INJURY HAZARD(S)**	**RISK ASSESSMENT, SAFE WORK PRACTICES, PPE AND ENGINEERING CONTROLS**		
ANIMAL: handling and restraint:	• Mechanical/Physical Injuries from Animals. • Zoonotic Exposures: Zoonotic diseases are infections or infestations shared by humans and animals. Be aware that these diseases may also be transmitted via animal tissues (blood, neural tissue, etc.). • Zoonotic Exposure or Mechanical/Physical Injuries from Animals	• Before beginning work, review the UCD Animal Use and Care website at: https://research.ucdavis.edu/policiescompliance/animal-care-use/iacuc/ • In the Occupational Health Surveillance System section, under Zoonotic Resources, obtain current information on "Zoonotic Diseases and Risk Analysis" for the species with which you will be working. Also review the information on "Allergy to Animals". • Everyone who has exposure to animals must complete the "Health Surveillance Questionnaire". Health care professionals at Occupational Health Services will review the form and make individual recommendations as appropriate. • Training for handling animals can be obtained from the Laboratory Animal Skills Class or from your supervisor. • Do not perform a procedure for which you have not been trained or feel uncomfortable. Ask your supervisor for assistance. • Always keep in mind that animals may bite, scratch or grab (in the case of primates). Maintain a safe distance from them when possible. • When working with species other than primates, the minimum protective clothing requirement is a lab coat, gloves, long pants and closed-toed shoes. • Based on a risk assessment, the laboratory or experimental conditions dictate any other requirements. For instance, if dust or fluid is generated (or if there is a potential for splash), wear a mask and eye protection. • When working with animals wear appropriate PPE. • Closed-toed shoes are to be worn in the lab where hazards are present. • When working with animals, long pants and a lab coat with cuffed sleeves (or "sleeves" with an uncuffed lab coat) will help protect against scratches. In some situations, you may be required to wear thick, protective leather gloves. See the Zoonotic Exposure section for more information. • Follow any Standard Operating Procedures (SOP) that your supervisor provides. (If you are working with primates, you may be required to watch a video such as, "Working Safely with Nonhuman Primates" or attend an animal handling training course. Prior to beginning work in a lab, discuss this with your supervisor.) • Immediately report any accident or injury to your supervisor and to Employee Health Services (752-6051). • No food or drink is allowed in the work place that contains hazardous materials of any kind. • Wash hands with an antibacterial soap before exiting animal and lab areas. • Training and enforcement are under the direction of the laboratory's PI.	
	DATE	**SIGNATURE**		

UC DAVIS HEALTH

EFFECTIVE: 2020	JOB SAFETY ANALYSIS IIPP-Appendix B	DEPARTMENT BIOMEDICAL ENGINEERING	LOCATION GBSF, Ghausi Hall, Tupper Hall, Academic Surge	JOB TYPE ANIMAL HANDLER
JOB FUNCTION	**POTENTIAL HEALTH OR INJURY HAZARD(S)**	**RISK ASSESSMENT, SAFE WORK PRACTICES, PPE AND ENGINEERING CONTROLS**		
PRIMATE: handling and restraint	Nonhuman primates used in the research may be naturally infected with diseases that are transmissible to humans. Examples of natural diseases include enteric bacteria such as Campylobacter, Shigella, Yersinia, or Protozoa such as Giardia. Herpes B virus is endemic to macaques and potentially lethal to humans. Zoonotic exposures are possible from: Animal Exposures as described above, splashes of infectious material (blood, urine, feces) to mucous membranes (open wounds, nose, eyes, or mouth); improper personal hygiene (handwashing); aerosolization of infectious material; contact with contaminated fomites (inanimate objects, like an animal cage, which may be contaminated with disease- producing agents).	• Prior to entering lab corridor, check arms and wrists for cuts and scrapes. Cover cuts and scrapes with a band aid and double glove. • Wear appropriate protective clothing. Cover all bare skin: wear long pants, a lab coat with cuffs or coveralls with wrist cuffs or long-sleeved scrubs shirt with cuffs or any other long-sleeved protection that has a cuff and completely covers the arm and wrist, closed-toed shoes, latex or other similarly protective gloves, splash proof goggles (corrective eyeglasses alone are not acceptable, neither are shop goggles) or a full face shield, and a disposable face mask. Wear two pair of gloves when there is a high risk of exposure. If there is a potential for flying debris, impact resistant spectacles must be worn; having eye protection with the rating "Z8.7" stamped on it ensures that it will provide adequate protection as long as the eyewear is worn properly. When airborne droplets are a hazard, such as when a chair or cage is being cleaned with a hose, hair covering is required. When working with other species, protective clothing to be worn will depend on the situation; wear gear that minimizes exposure to any animal body fluids or tissues (splashes, etc.). • The individual who is working directly with a monkey is responsible for assuring that no other individual comes within 5 feet of that monkey (or 15 feet if the individual is a visitor) without protective clothing. If a monkey is being transported down the hallway in a chair, the person wheeling the monkey must visually check the hall for any other persons not wearing protective clothing. The person wheeling the monkey must issue a verbal warning so that a safe distance is maintained until the monkey has passed through. • After returning a monkey to its cage, make sure that the primate cage padlock is in its proper place and is locked. • IN THE EVENT OF A PRIMATE-RELATED INJURY OR POSSIBLE ZOONOTIC EXPOSURE, IMMEDIATELY FOLLOW THE INSTRUCTIONS ON THE WOUND TREATMENT PROTOCOL FOR PRIMATE-RELATED INJURIES. • View the video “Working Safely with Nonhuman Primates”, the UCD Animal Care and Use website, and follow all Standard Operating Procedures as required by your Principal Investigator (PI).		
	DATE	**SIGNATURE**		

LABORATORY SAFETY REVIEW CHECKLIST

ENVIRONMENTAL HEALTH & SAFETY
ONE SHIELDS AVENUE
DAVIS, CA 95616
(530) 752-1493

UCDAVIS

To fill out this checklist online from a tablet or phone, please use the SIT tool on UC Safety Suite.

Principal Investigator/Laboratory Supervisor: _____

Lab Contact: _____ **Building:** _____

Date: _____ **Room Number:** _____

Chemical	Yes	No	Corrected	NA
Abbreviations used on container labels are identified in a prominent place in the lab. **Description/Corrective Action:** Abbreviations and/or acronyms used in the laboratory shall be posted in a prominent place and available to all laboratory workers				
Chemical containers are clearly labeled with contents (in English) and primary hazard(s). **Description/Corrective Action:** Each container of hazardous substance is to be labeled with the identity of the hazardous substance and any appropriate hazard warnings.				
Chemical storage containers are in good condition and appropriate for contents. **Description/Corrective Action:** Hazardous substances shall be stored in containers which are chemically inert to and appropriate for the type and quantity of hazardous substance. Containers of hazardous substances shall not be stored in such locations or manner as to result in physical damage to, or deterioration of, the container.				
Containers of hazardous chemicals are not stored on the floor. **Description/Corrective Action:** Floor storage is not recommended for hazardous materials. If it is necessary to do so, secondary containment is required.				
Corrosive or potentially hazardous liquid chemicals are stored below eye level. **Description/Corrective Action:** To reduce potential for spill or splash injury to face and eyes, corrosives and other potentially hazardous liquids should be stored below eye level (< 56”).				
Flammable chemicals are stored separately from combustible materials. **Description/Corrective Action:** Storage of flammable liquids shall be separated from incompatible materials, including combustible materials.				
Flammable liquid (including waste) storage outside of the flammable storage cabinet is less than 10 gallons. **Description/Corrective Action:** The maximum amount of flammable liquids (including waste) in a laboratory allowed outside a flammable storage cabinet is 10 gallons. If no flammable storage available, reduce inventory to less than 10 gallons.				
Flammable liquid storage in the lab is below allowable quantities as determined by the campus Fire Marshal (60 gallons per fire-rated area). **Description/Corrective Action:** Flammable liquids in the laboratory must not exceed 60 gallons per fire rated area.				

ENVIRONMENTAL HEALTH & SAFETY
ONE SHIELDS AVENUE
DAVIS, CA 95616
(530) 752-1493

UCDAVIS

Flammables liquids are not stored in containers that exceed 1 gallon containers (or 2 gallons for approved safety can). **Description/Corrective Action:** Flammable liquid storage containers must not exceed 1 gallon, with the exception of 2 gallon if container is a safety can.				
Flammables liquids are not used in close proximity to ignition sources. **Description/Corrective Action:** Flammable liquids shall be kept as far as possible from open flames, but not less than 12 inches.				
Flammables are stored in "laboratory safe" refrigerator/freezer only. **Description/Corrective Action:** Flammables must be stored in refrigerators or freezers manufactured to be "laboratory safe" and properly labeled as safe for storage of flammables.				
Incompatible chemicals are properly segregated. **Description/Corrective Action:** Incompatible substances must be separated from each other by distance, partitions or secondary containment to prevent accidental contact. Store acids from bases, oxidizers from flammables, etc.				
Laboratory is free of expired or unneeded chemicals. **Description/Corrective Action:** Expired chemicals should be discarded following appropriate disposal procedures. All unneeded chemicals should be removed from the laboratory.				
Pyrophoric chemicals are segregated, properly contained, labeled and used only in buildings equipped with automatic sprinkler system. **Description/Corrective Action:** Pyrophoric chemicals must be segregated from incompatible materials by a distance of not less than 20 feet or by storing in hazardous material storage cabinets. Pyrophoric chemical use and storage is permissible only in buildings that are equipped throughout with an approved automatic sprinkler system.				
Storage cabinets are clearly labeled as to contents. **Description/Corrective Action:** Chemical storage cabinets must be conspicuously labeled as appropriate, i.e. “FLAMMABLE "or “CORROSIVES”.				
Strong acids and strong bases are stored in secondary containers. **Description/Corrective Action:** Secondary containment is required for the indoor storage of all corrosives.				
Time sensitive chemicals/peroxide formers are labeled with date received, stored away from light and disposed of within 18 months of purchase or expiration date, whichever is sooner. **Description/Corrective Action:** Peroxide formers are to be stored away from light and heat and labeled with the date they were received, opened and an expiration date to facilitate hazard control. Organic peroxides can decompose into various unstable compounds over time.				

ENVIRONMENTAL HEALTH & SAFETY
ONE SHIELDS AVENUE
DAVIS, CA 95616
(530) 752-1493

UCDAVIS

Water reactive chemicals are properly segregated, contained and labeled. **Description/Corrective Action:** Materials which will react with water shall not be stored in the same room with flammable or combustible liquids. Chemicals that may react violently with water must be stored in a moisture free environment and protected from accidental contact with water.				
Documentation	**Yes**	**No**	**Corrected**	**NA**
Appropriate hazard communication signage is posted at laboratory entrance(s). **Description/Corrective Action:** Hazard identification signs (biohazard, radiation, carcinogen, toxic, oxidizer, flammable, pyrophoric, water reactive, corrosive, magnetic fields, laser, etc.) are required at the entrances to locations where hazardous materials are stored, dispensed, used or handled.				
Building Emergency Evacuation Route is posted near the exit. **Description/Corrective Action:** Map of escape route shall be posted near exits.				
Chemical inventory has been completed or updated within past 12 months. **Description/Corrective Action:** An inventory of all hazardous substances known to be present in the workplace must be maintained and updated at least annually.				
Current emergency contacts and PI/supervisor contact are posted at the laboratory entrance. **Description/Corrective Action:** The names or regular job titles of persons who can be contacted for further information or explanations during an emergency should be posted at the entrances to all laboratories.				
Department Injury and Illness Prevention Plan is available and up-to-date. **Description/Corrective Action:** Every employer shall establish, implement and maintain an effective Injury and Illness Prevention Program. The program shall be in writing and updated at least annually.				
Emergency Action Plan is available. **Description/Corrective Action:** Every employer shall establish, implement and maintain an Emergency Action Plan. The plan shall be in writing and updated at least annually.				
Emergency assistance information is posted. **Description/Corrective Action:** Effective provisions shall be made in advance for prompt medical treatment in the event of serious injury or illness. This can be accomplished by a communications system for contacting a doctor or emergency medical service, such as access to 911 or equivalent telephone system. Emergency numbers must be posted near telephone.				
Hazard assessment is completed and reviewed annually. **Description/Corrective Action:** UCOP policy requires a hazard assessment to determine the appropriate personal protective equipment. Any completed hazard assessment that indicates less than the minimum PPE described requires review and approval from EH&S. Hazard assessment must be reviewed on an annual basis and roster must be kept up-to-date.				

If applicable, participation in the Medical Surveillance Program has been established and documented. **Description/Corrective Action:** For a Cal/OSHA regulated substance for which there are exposure monitoring and medical surveillance requirements, medical surveillance shall be established for employee as prescribed by the particular standard.				
Personnel is aware of location/existence of current campus-wide Chemical Hygiene Plan **Description/Corrective Action:** A written Chemical Hygiene Plan is required for any workplace that uses hazardous chemicals. Access to current Chemical Hygiene Plan must be available to all members of the lab. UC Davis campus-wide Chemical Hygiene Plan is contained within the Laboratory Safety Manual: http://safetyservices.ucdavis.edu/article/laboratory-safety-manual.				
Safety Data Sheets are accessible and available. **Description/Corrective Action:** Safety data sheets for each hazardous substance must be readily accessible. Electronic access and other alternatives to maintaining paper copies are permitted provided all lab workers have immediate access.				
Self-inspections are conducted and documented on an annual basis. **Description/Corrective Action:** Records of scheduled and periodic inspections (annual) to identify unsafe conditions and work practices, including person(s) conducting the inspection, the unsafe conditions and work practices that have been identified and action taken to correct the identified unsafe conditions and work practices are required.				
Staff is aware of how to report incidents and near-misses. **Description/Corrective Action:** Staff should be provided information on the reporting of incidents and near misses.				
Standard Operating Procedures are available. **Description/Corrective Action:** Written SOPs for hazardous operations in the laboratory, work with particularly hazardous substances, etc., and documented training are required. Consult manufacturers' Safety Data Sheets (SDS) for hazard classification information.				
Electrical	**Yes**	**No**	**Corrected**	**NA**
3-Prong plugs have not been modified to plug into 2-prong receptacle. **Description/Corrective Action:** Equipment must be properly grounded to operate safely.				
A minimum clearance of thirty-six inches in front of electric panel/breaker box is being maintained. **Description/Corrective Action:** A minimum clearance must be maintained around electrical panel for easy access in the event of an emergency.				
Electrical cords do not pose any trip hazards. **Description/Corrective Action:** Cords must be taped down or otherwise secured to prevent tripping.				

Equipment does not have any damaged cord, plug or other condition that constitutes an electrical hazard. **Description/Corrective Action:** Remove equipment from service until repaired or replaced.				
Extension cords are not being used as permanent or semi-permanent wiring. **Description/Corrective Action:** Extension cords may be used in temporary situations where permanent wiring is inappropriate or because equipment is frequently moved. If permanent wiring is required a circuit receptacle should be installed.				
Extension cords or power strip are plugged directly into outlet. **Description/Corrective Action:** Power strips or extension cords must be directly connected to a permanently installed circuit receptacle, not connected in series.				
High voltage equipment is clearly and appropriately labeled. **Description/Corrective Action:** "Danger – High Voltage" must be posted on all doors that lead to areas that contain equipment with high voltage (>600 volts). Equipment must be marked as high voltage with permanent, highly visible markings.				
High voltage equipment is properly guarded. **Description/Corrective Action:** High voltage conductors (>600 volts) must be effectively guarded against danger from accidental contact. All protective panels must be properly installed.				
Major appliances/equipment are plugged directly into outlet. **Description/Corrective Action:** Refrigerators, freezers, incubators, centrifuges, microwaves, analytical equipment, etc. must be plugged directly into the wall outlet.				
Personnel working on hard-wired equipment are trained to the Energy Isolation – Lock Out/Tag Out program. **Description/Corrective Action:** The employer's hazardous energy control procedure shall include separate procedural steps for the safe lockout/tagout of each machine or piece of equipment affected by the hazardous energy control procedure. Only trained individuals may work on hard-wired equipment.				
Power strips near liquids have surge protection. **Description/Corrective Action:** Surge protection is required for all power strips that are used near liquid.				
Equipment	**Yes**	**No**	**Corrected**	**NA**
Appropriate safety information is posted on equipment. **Description/Corrective Action:** Required safety information, including danger and hazard warning must be posted on equipment.				

Moving parts of equipment are properly guarded. **Description/Corrective Action:** Belts, pulleys, sprockets and chains, shafts or other rotating parts of mechanical equipment must be properly guarded (opening <1/2").				
Secondary containment for vacuum pumps that use oil is provided. **Description/Corrective Action:** Secondary containment must be provided for vacuum pumps to collect oil leakage.				
Fire	**Yes**	**No**	**Corrected**	**NA**
Aisles, exits and/or hallways are not obstructed. **Description/Corrective Action:** Aisles must meet minimum clearance guideline of 24" to facilitate departure in the event of an emergency.				
Fire Extinguisher is available in the room with flammable or combustible liquids. **Description/Corrective Action:** A portable fire extinguisher must be located in the area where flammable or combustible liquids are stored, used or dispensed.				
Fire extinguisher annual maintenance tag is present and up-to-date. **Description/Corrective Action:** Fire extinguisher must be inspected annually by Fire Prevention and documented on inspection tag. Contact Rocci Twitchell at rrtwitchell@ucdavis.edu to arrange for annual maintenance or replacement tag.				
Fire extinguisher is properly mounted. **Description/Corrective Action:** Fire extinguisher must be mounted and easily accessible in the event of an emergency.				
Fire extinguisher monthly visual inspection is documented and up-to-date. **Description/Corrective Action:** Fire extinguishers must be visually inspected monthly and documented.				
Fire extinguishers are available as required. **Description/Corrective Action:** Portable fire extinguishers must be available within 75’ or less for class A fires or within 50’ for class B fires (flammable liquids).				
Fire extinguishers are fully charged, pin and/or security seal is intact. **Description/Corrective Action** Fire extinguishers must be fully charged and operational at all times.				
Fire-rated doors are not propped open. **Description/Corrective Action:** Fire-rated doors must not be propped open. Magnetic hold-opens, linked to building alarm systems, are acceptable.				

Items stored such that minimum clearance of 18'' of sprinklers or 24" of ceiling without sprinklers is met. **Description/Corrective Action:** Title 8, §6170 requires 18" clearance between sprinklers and materials below and 24" from ceiling to materials below without sprinklers. Move items that prevent this required clearance.				
Fume Hoods	**Yes**	**No**	**Corrected**	**NA**
Audible/visual alarm is functional and/or visual airflow indicator is working. **Description/Corrective Action:** Fume hood must be equipped with a quantitative airflow monitor that continuously indicates air is flowing or an audible or visual alarm that is activated if airflow decreases to less than 80% of required airflow.				
Chemical work is conducted more than 6" from front of hood. **Description/Corrective Action:** To minimize potential for injury or exposure, hazardous chemicals and/or reactions should be kept at least 6" behind the plane of the sash.				
Fume hood has been certified within the past year. **Description/Corrective Action:** Annual check of fume hood is required to ensure the ability to maintain inward airflow.				
Fume hood illumination is functional. **Description/Corrective Action:** If fume hood illumination is available, it must be functional.				
Fume hood is not cluttered or used for storage. **Description/Corrective Action:** Fume hood should not be used for long-term storage of equipment, chemicals or supplies not regularly used. Fume hood should be kept clean and free of clutter at all times for improved airflow across the work surface.				
Fume hood users know how to check their airflow monitor to verify that the hood airflow is functioning properly. Users know how to check the certification sticker for annual testing. **Description/Corrective Action:** Fume hood operators must know where the quantitative airflow monitor or alarm system is located on the hood and how it is used to indicate an inward airflow during hood operation, and be able to determine the date of the last performance test and if the hood performance met the requirements.				
Proper sash height is indicated. Sash position does not exceed approved working height. Fume hood is kept closed when not in use. Description/Corrective Action: The sash and/or jamb of the fume hood must be marked to show the maximum opening at which the hood face velocity meets the required airflow. Fume hood should be kept closed when not in use.				

Gas	Yes	No	Corrected	NA
Compressed gas cylinders are adequately secured. **Description/Corrective Action:** Compressed cylinders must be stored upright and adequately secured. Two, non-combustible restraints (upper 1/3 and lower 1/3) are recommended. "C"-clamps are not adequate to secure large cylinders.				
Compressed gas cylinders are labeled with contents and hazards. **Description/Corrective Action:** Compressed gas cylinders are required to have a shoulder label that includes contents and hazard information.				
Oxygen and combustible cylinders are separated by an appropriate distance or barrier. **Description/Corrective Action:** Oxygen cylinders in use or in storage shall be separated from fuel gas cylinders or combustible materials a minimum distance of 20 feet or by a non-combustible barrier at least 5 feet high, or a minimum of 18 inches (46 centimeters) above the tallest cylinder and having a fire-resistance rating of at least one hour.				
Toxic gases are properly stored in a ventilated cabinet/fume hood. **Description/Corrective Action:** Cylinders shall not be kept in unventilated enclosures such as lockers and cupboards.				
Valves of gas cylinders are capped when not in use. **Description/Corrective Action:** Valve protection devices must be in place when cylinder is not in use. The regulator must not remain installed when cylinder is not in-use.				
General Safety	**Yes**	**No**	**Corrected**	**NA**
Ceiling tiles/panels are not missing and are in good condition. **Description/Corrective Action:** Individual ceiling tiles adjacent to sprinkler heads must be in place to ensure activation of the sprinkler system during a fire. Groups of three or more ceiling tiles missing in areas not adjacent to sprinkler heads must be replaced to ensure activation.				
Floor is free of defects that could cause slipping, tripping or falling. **Description/Corrective Action:** Laboratory floor needs to be free of defects that could cause slip, trips and falls.				
Hand wash sink is available with soap and paper towels. **Description/Corrective Action:** Employees must be able to wash and dry their hands after working with potentially hazardous materials, after removing gloves and prior to leaving laboratory.				

ENVIRONMENTAL HEALTH & SAFETY
ONE SHIELDS AVENUE
DAVIS, CA 95616
(530) 752-1493

UCDAVIS

Lab areas are clean and uncluttered. **Description/Corrective Action:** Lab area should be clean and uncluttered, excess materials should be stored in neat, secure manner that provides easy access and reduces the potential for falling, collapsing, rolling or spreading of the material. Equipment, chemicals, glassware and supplies not in regular use should be stored in areas other than workstations. Paper on work surfaces and walls should be kept to a minimum. There should be minimal glassware on bench top, in sink, and in fume hood.				
Laboratory sinks delivering non-potable water, are labeled "Industrial Water - Do Not Drink" **Description/Corrective Action:** Water for industrial purposes must be posted in a manner to indicate that the water is unsafe and is not to be used for drinking.				
Laboratory ventilation pressure is negative with respect to corridors and offices. **Description/Corrective Action:** Negative pressure should be maintained between the laboratory and adjacent non-laboratory spaces to prevent uncontrolled chemical vapors from leaving the laboratory.				
Refrigerators/freezers are labeled appropriately for the use of the refrigerator/freezer. i.e. "not for storage of food for consumption", "not for storage of flammable materials". **Description/Corrective Action:** Permanent warning labels against the storage of food and beverages must be affixed to all laboratory refrigerators and freezers, i.e., "not for storage of food for consumption," "not for storage of flammable materials," etc.				
Spills are promptly and properly cleaned. **Description/Corrective Action:** All spills shall be cleaned promptly, using appropriate protective apparel and equipment.				
There is no eating or drinking in the laboratory or food storage with hazardous materials. **Description/Corrective Action:** Eating and drinking in areas where laboratory chemicals are stored or handled is prohibited. Workers should be directed to consume food and beverages outside the laboratory.				
Vacuum systems (both house systems and stand-alone vacuum pumps) are fitted with traps and/or protection (HEPA/hydrophobic) filter, if required. **Description/Corrective Action:** Improper trapping can allow vapor to be emitted from the exhaust of the vacuum system, resulting in either reentry into the laboratory and building or potential exposure to maintenance workers.				
PPE	**Yes**	**No**	**Corrected**	**NA**
Appropriate gloves are available for use with hazardous activities conducted within the laboratory. **Description/Corrective Action:** Gloves that are appropriate for the activity must be available in the laboratory. Chemical resistant gloves are required for handling hazardous materials.				
Equipment or process sound levels do not exceed 85 dBA.				

Descriptive/Corrective Action: Protection against the effects of noise exposure shall be provided when the sound levels exceed 90 dBA for 8 hours. If the sound levels may exceed 85 dBA, a sound level check should be completed.				
Face shields are worn as appropriate. **Description/Corrective Action:** Face shields must be worn over safety glasses or chemical splash goggles when using cryogens, large amounts of corrosives, or other eye/face splash hazards.				
Gloves are worn for laboratory procedures where skin contact with hazards may occur. **Description/Corrective Action:** Gloves are required for employees whose work involves exposure of hands to cuts; burns; harmful physical or chemical agents; or radioactive materials.				
If applicable, respirator use has been evaluated by EH&S and users are included in the campus respiratory protection program. **Description/Corrective Action:** Every employee that is required to wear a respirator must participate in the respiratory protection program which includes a medical evaluation and fit-testing.				
If applicable, specialty PPE needed (i.e. UV/IR glasses, lab aprons, cryogenic gloves) is available in the laboratory. **Description/Corrective Action:** The employer shall assess the workplace to determine if hazards are present, or are likely to be present, which necessitate the use of personal protective equipment (PPE). If such hazards are present, or likely to be present, the employer shall select, and have each affected employee use, the types of PPE that will protect the affected employee from the hazards identified in the hazard assessment.				
Lab coats, appropriate to the activity, are worn. **Description/Corrective Action:** An appropriate lab coat must be worn when actively working in the laboratory unless an exemption to the UCOP PPE policy has been granted.				
Lab coats, properly fitted, are available. **Description/Corrective Action:** Employer is responsible for providing required PPE for protection against hazardous materials.				
Lab workers remove gloves before accessing common items, door knobs, elevator buttons, etc. **Description/Corrective Action:** Gloves should be removed before exiting the laboratory. In the event that hand protection is required for transport of chemical, one glove should be removed to access common items.				
Long pants (legs covered) and closed-toe/heel shoes are worn in the lab. **Description/Corrective Action:** UCOP PPE policy requires that long pants or equivalent and close-toed/close-heeled shoes be worn in the laboratory unless an exemption to the policy has been granted.				
Safety glasses or chemical splash goggles are worn in the laboratory when there is a risk of eye injury.				

Description/Corrective Action: Eye protection is required when there is a risk of eye injury, such as puncture, abrasion, contusion or burn as a result of contact with flying particles, hazardous substances, projections or injurious light rays.				
Safety Equipment	**Yes**	**No**	**Corrected**	**NA**
A plumbed emergency eyewash /safety shower or emergency eyewash is immediately available where corrosive liquids are handled or used. **Description/Corrective Action:** **Description/Corrective Action:** An emergency eyewash or emergency eyewash/safety shower must be available in the room where corrosive liquids are handled or used.				
A plumbed emergency eyewash/safety shower or emergency eyewash is available within 10 seconds. **Description/Corrective Action:** An emergency eyewash and deluge shower must be accessible within 10 seconds of all chemical splash or eye injurious hazards.				
Access to emergency eyewash/shower is free of items that obstruct their use. **Description/Corrective Action:** The area of the eyewash and shower equipment must be free of items that obstruct their use.				
Annual test of emergency eyewash/safety shower or emergency eyewash has been completed or documented. **Description/Corrective Action:** A flow verification test and inspection of plumbed eyewash and shower equipment must be completed annually.				
Appropriate chemical spill kit is available. **Description/Corrective Action:** Spill control kits tailored to deal with the potential risk associated with the materials being used in the laboratory are required.				
Calcium gluconate for Hydrofluoric acid (HF) exposure first aid is available. Calcium gluconate has not expired. Training on HF first aid is documented. **Description/Corrective Action:** Exposure to HF can lead to hypocalcemia. Therefore, hydrofluoric acid exposure is often treated with calcium gluconate, a source of Ca^{2+} that sequesters the fluoride ions. Non-expired calcium gluconate should be available and staff should be trained in HF first aid.				
First Aid Kit is available. **Description/Corrective Action:** Title 8, §3400 requires adequate first-aid materials be readily available for employees on every job. Purchase simple first aid kit and replenish as needed.				
Monthly activation of emergency eyewash/safety shower is documented. **Description/Corrective Action:** Plumbed eyewash and shower equipment must be activated at least monthly to flush the line and verify operation.				
Seismic	**Yes**	**No**	**Corrected**	**NA**

Heavy items and precariously situated items are not stored on higher shelves. **Description/Corrective Action:** For seismic concerns, heavier items must be secured or placed on lower shelves.				
Large equipment is seismically anchored. **Description/Corrective Action:** To reduce potential injury and the blocking of doors and/or exits during seismic events, items over 5' tall, i.e., file cabinets, bookcases and other tippable items, should be anchored.				
Overhead storage is secured. **Description/Corrective Action:** To decrease the potential for injury or blocking aisles during seismic events, items stored overhead must be secured. Either move overhead storage or secure.				
Shelves have restraints to prevent items from falling. **Description/Corrective Action:** Shelves used for the storage of hazardous materials must have a lip or guard to reduce the potential for chemical spills during a seismic event.				
Training	**Yes**	**No**	**Corrected**	**NA**
Laboratory personnel have completed UC Laboratory Safety Fundamentals training. **Description/Corrective Action:** All laboratory workers are required to complete the UC Laboratory Safety Fundamentals e-Course prior to beginning work in the laboratory and every three years thereafter. Log on to LMS and complete required e-Course.				
Specialized training for lab-specific hazards has been documented. **Description/Corrective Action:** Documented training is required for all hazardous substances, processes, procedures and equipment in the work area (regulated carcinogens, Blood borne Pathogens, radiation, lasers use, etc.). Site-specific orientation training is required for all new laboratory personnel.				
Spill response training is documented. **Description/Corrective Action:** All employees should be trained in the appropriate spill response procedures for both minor and major chemical spills. Annual retraining is required.				
Training on laboratory specific Standard Operating Procedures (SOP) is documented. **Description/Corrective Action:** Documented training on all SOPs is required and specific and unambiguous training records must be available upon request.				
Training on the Chemical Hygiene Plan is documented. **Description/Corrective Action:** Documented training is required for the Chemical Hygiene Plan.				
Training on the Emergency Action Plan is documented. **Description/Corrective Action:** Documented training is required for the Emergency Action Plan. Annual retraining is required.				

Training on the Injury and Illness Prevent Plan (IIPP) is documented. **Description/Corrective Action:** Documented training is required for the IIPP. Annual retraining is required.				
Training to manage or handle hazardous waste is documented. **Description/Corrective Action:** Laboratory workers that generate or handle hazardous waste must be trained in storing, labeling, proper disposal and accumulation times for hazardous waste.				
Waste	**Yes**	**No**	**Corrected**	**NA**
All containers holding hazardous waste are closed except when adding or removing waste. **Description/Corrective Action:** A container holding hazardous waste must be closed except when adding or removing waste.				
All hazardous waste containers are compatible with the contents and in good condition. **Description/Corrective Action:** All hazardous waste containers must be compatible with the contents and in good condition. If a container holding hazardous waste is not in good condition, or if it begins to leak, the contents shall be transferred into a container that is in good condition. A container shall be made of or lined with materials which will not react with and are otherwise compatible with, the hazardous waste to be transferred or stored, so that the ability of the container to contain the waste is not impaired.				
All sharps are disposed of in a sturdy container or a hard-walled sharps container (non-red without biohazard label or red with biohazard) as appropriate. **Description/Corrective Action:** All sharps must be disposed of in a sturdy container (clean lab glass) or a hard-walled sharps container (non-red without biohazard label or red with biohazard) as appropriate. Improper disposal of sharps can cause injury and can also be a source of infectious, chemical or radiological aerosol and surface contamination.				
Biomedical waste containers have a tight-fitting lid in place. **Description/Corrective Action:** Biomedical waste containers must have a tight-fitting lid in place to prevent leakage during collection, handling, processing, storage, transport or shipping.				
Biomedical waste in red bags is being properly disposed in accordance with UCD Policy. **Description/Corrective Action:** All red bag waste must be disposed of in accordance with the Medical Waste Management Act.				
Biomedical waste secondary containment is used. **Description/Corrective Action:** If the outside of the primary biomedical container is contaminated, the primary container shall be placed in a second container which prevents leakage during collection, handling, processing, storage, transport or shipping.				
Hazardous waste is being properly disposed through EH&S. **Description/Corrective Action:** All hazardous waste must be disposed of through EH&S not evaporated in fume hoods or disposed of in regular trash.				

Hazardous waste in secondary containment. **Description/Corrective Action:** All hazardous waste must be managed so as to ensure that incompatible laboratory wastes are not mixed, and are otherwise prevented from coming in contact with each other. All hazardous materials must be in secondary containment.				
Hazardous waste is not being accumulated beyond regulatory time limits (i.e., 90 days for extremely hazardous waste, 9 months for other hazardous waste). **Description/Corrective Action:** Extremely Hazardous waste may be accumulated for no greater than 90 days and other hazardous waste for no greater than one year. Due to EH&S waste processing time, hazardous waste can be held in laboratory no longer than 9 months.				
Hazardous waste is properly labeled. **Description/Corrective Action:** Hazardous waste must be labeled with "Hazardous Waste", the start date of accumulation, the contents, the hazard classification, the physical state and the name and address of the person producing the waste.				
Sharps containers are properly labeled, as to contents, hazard, etc. **Description/Corrective Action:** Sharps containers must be labeled with the words "sharps waste". Biohazard sharps containers must include the international biohazard symbol and the word "BIOHAZARD".				
Sharps container's contents are not past the fill line. **Description/Corrective Action:** Sharps containers must be prepared for disposal when ¾ full and be taped closed or tightly lidded to preclude loss of contents.				
Universal waste is properly labeled/discarded/contained. **Description/Corrective Action:** Universal waste must be contained in a manner that prevents breakage and release of components to the environment. The container shall be structurally sound and compatible with the contents. Universal waste must be labeled or marked to identify the type of universal waste (i.e. Universal Waste-Battery(ies), Universal Waste-Mercury-Containing Equipment, Universal Waste-CRT(s). Universal waste shall be accumulated for no longer than one year from the date the universal waste was generated, or received from another universal waste handler.				