

Safety Program Guidelines for Principal Investigators

SafetyNet #: 131

Principal Investigators (PIs) are a critical link in the safety management program at UC Davis. As the front line manager for their research group, they play a vital role in implementing the campus safety management program. To meet this challenge, it is important that PIs have access to all the information and training they need. A brief summary of the elements of the Safety Management program are included in this SafetyNet. A checklist follows as a quick overview of PI safety responsibilities under campus policy.

- Evaluate and identify workplace hazards
- Assure research group/laboratory workers (including employees, visiting scholars, post doctoral fellows, students) are properly trained and the training documented
- Develop, review and update, as necessary, standard operating procedures
- Develop, review and update, as necessary, the laboratory-specific Chemical Hygiene Plan (applicable only to laboratories)
- Pay fines resulting from citations for failure to comply with health, safety and/or environmental laws and regulations

SAFETY PROGRAM COMPONENTS

[UC Davis Policy and Procedure 290-15](#) [1] outlines the UC Davis Safety Management Program and defines the PI responsibilities for this program. The basic safety program responsibilities of the Principal Investigator are defined in this P&P, however departments may further define expectations and/or specific responsibilities, over and above the Policy and Procedure.

[Illness and Injury Prevention Program \(IIPP\)](#): [2] Each Department on campus is required to have an IIPP in place. This plan defines the key elements of a department's safety program. EH&S provides a basic [IIPP template](#) [3] on our web site that each department must individualize depending on the work activities and hazards present in their department. In many departments, the development of the department-specific IIPP is the responsibility of the Department Safety Coordinator. All department employees must have training on the provisions of the IIPP.

[Emergency Action & Evacuation Plan](#) [4]: It is extremely important that employees know how to get out of their building and where they should gather if they are evacuated from the building. Every room is required to have an evacuation map posted in a prominent place. PIs must assure that their employees are familiar with the Departmental Emergency Action Plan and its details. A lab-specific emergency action plan must be included in the chemical hygiene plan.

Incident Investigation: In the event of an incident or injury, PIs need to contact their department office and refer to their department's IIPP for proper response. EH&S will assist PIs/departments in notifying Cal-OSHA whenever there is an illness or injury that must be reported to Cal/OSHA. Please refer to [SafetyNet # 121](#) [5] for further details on these reporting requirements. PIs may be asked to conduct a detailed investigation following an injury or illness. The purpose of the investigation is to identify direct and contributory causes for the incident and define and assign preventative actions. Department Chairs are responsible for reviewing and signing the completed [Employers First Report of Occupational Injury or Illness](#) [6]. Implementation of preventative action must also be documented in the lab-specific Chemical Hygiene Plan.

Research Group/Laboratory Meetings: Within the research group, regular meetings to discuss safety topics, potential issues, hazardous activities by research personnel, etc. are an important component of research group/laboratory safety program. These meetings are also a training opportunity and should be documented.

Safety Training for Research Group/Laboratory Employees: One of the key elements of a department's Safety Management program is to define training that is required for each employee or category of employee in the department. Each supervisor has responsibility for defining, implementing, and documenting training for their employees. DSCs may be asked to provide assistance to supervisors in meeting this requirement. The campus [Ergonomics Program](#) [7] policy outlines the roles and responsibilities of PIs in reducing musculoskeletal injuries.

Field Safety: Field research activities range from on-campus agricultural or animal research to off-campus research sites of nearly infinite variety. The field safety issues for a research group/laboratory may entail very unique hazards related to specialized research. Principal Investigators and the Department Safety Coordinator review these hazards to ensure that the department's IIPP includes all known hazards and is updated whenever new hazards are introduced or recognized. If boat-supported research is planned, visit the [boating safety webpage](#) [8]. For scientific diving activities, [P&PM 290-80](#) [9] describes those requirements.

REQUIREMENTS FOR DEPARTMENTS WITH LABORATORIES

- **Chemical Hygiene Plan:** A laboratory-specific Chemical Hygiene Plan is required under P&PM 290-15. This plan defines the safety program in the lab and describes lab-specific requirements for hazardous materials use. Detailed requirements of this plan and a template can be found in the [Chemical Safety Manual](#) [10] published by EH&S on the EH&S website.

- **Chemical Inventory System (CIS) and CUPA Self-Audit Program:** Hazardous materials located in laboratories and chemical storage areas on campus must be included in the Chemical Inventory System. See the [CIS web page](#) [11] for more information on these requirements. Annual hazardous materials inventory reporting is required for the laboratory, through the CIS program. The Yolo County CUPA program monitors this inventory and inspects campus laboratories to verify compliance with hazardous materials and waste storage and handling as well as required training. The [CUPA Self-Audit program](#) [12] detailed on the EH&S website was established to help campus facilities comply with these requirements.
- **Authorization Program:** If the research will include radioactive or biological materials, or research lasers, a [Radiation Use Authorization](#) [13](RUA), a [Biological Use Authorization](#) [14] (BUA), or a [Laser Use Authorization](#) [15] (LUA) may be required. Please contact EH&S for assistance. If the research includes animal use, an [animal use protocol](#) [16] may be required. Contact the Institutional Animal Use and Care Committee for assistance.ca
- **Carcinogen Use Program:** The campus is required to report use of California-regulated carcinogens annually. Laboratories possessing [campus recognized carcinogens](#) [17] are required to report carcinogen use through the CIS program. PIs will then be required to perform a self-audit to help the lab comply with the regulatory requirements.
- **Hazardous Waste Disposal:** Hazardous waste on campus is picked up for disposal by EH&S. The EH&S website provides information on [hazardous waste disposal](#) [18] and how to request a pick-up. The EH&S website also provides information on allowable drain disposal including links to the [waste water treatment plant local limits program](#) [19] which addresses permitted sewer disposal.
- **Safety Data Sheets:** Access to SDSs is required for all employees who might use chemicals. EH&S recommends hard copy SDSs be maintained in the lab for chemicals that are used routinely or in large quantities and for those chemicals that are particularly hazardous or toxic. All employees must be trained on how to access SDSs. The University of California Office of the President maintains a subscription to a comprehensive on-line [SDS database](#) [20]. Access is free to any UC Davis IP address. If an SDS doesn't appear to exist for a chemical, please contact EH&S.
- **Shipping Hazardous Materials:**
 - Mail Services offers shipping service limited to non-infectious human/animal samples, dry ice shipments and hazardous materials in excepted quantities. All other hazardous materials shipping is facilitated by Environmental Health and Safety. To request shipping services for all other hazardous please email a completed [Hazardous Material Information Sheet](#) [21] to Environmental Health and Safety at hazshipping@ucdavis.edu [22]. Environmental Health and Safety will assist with classification, packaging and transportation of your hazardous materials shipment to Mail Services for shipment.
 - Hazardous materials (including dry ice) must be packaged, marked, labeled, and certified to meet Federal regulations. In addition, there are federally mandated training requirements for those individuals involved in the packaging and shipment of hazardous materials. For more information please visit the [Department of Transportation's webpage](#) [23] (ICAO) regulations. In addition, any person preparing, packaging or offering dry ice for transport must be certified to do so under [Title 49, Subpart H, §172.700-172.704](#) [24].

- Once training has been completed you may reference the [Dry Ice Job Aid](#) [25] for additional/refresher information on the packaging and shipping of dry ice.
- **Safety Training for Laboratory Employees:** All employees must be trained, at least annually, on the hazards to which they might be exposed and how to protect themselves from those hazards. Employees also need to be trained on the provisions of the lab-specific chemical hygiene plan. Regular lab meetings are an excellent opportunity to provide needed training. All training must be documented – even “informal” training sessions, lab meetings, etc. EH&S recommends that all new lab employees take [Chemical and Laboratory Safety Training](#) [10], offered through EH&S.

Hazardous Materials Training and Management FOR NON-LAB DEPARTMENTS

- **Hazard Communication Program:** Employees shall have training on the chemical hazards to which they might be exposed. This training must include how to access and interpret a safety data sheet (SDS), where to get help for chemical hazards and how to respond to chemical emergencies. Access to SDSs is required for all employees who might use chemicals. EH&S recommends hard copy SDSs be maintained in the work area for chemicals that are used routinely or in large quantities and for those chemicals that are particularly hazardous or toxic. The University of California Office of the President maintains a subscription to a comprehensive on-line [SDS database](#) [20]. Access is free to any UC Davis IP address. If an SDS doesn't appear to exist for a chemical, please contact EH&S.

SAFETY PROGRAM SUPPORT AND RESOURCES

EH&S Web Site: The EH&S website is continually being updated to include the latest information in a user-friendly format. In addition to serving as the source for all EH&S program documents, there are also useful links to other sites to help PIs get answers to a wide variety of questions.

SafetyNets: Over one hundred [SafetyNets](#) [26] are available at the EH&S website to provide detailed information on many typical safety questions. New SafetyNets are frequently developed based on safety needs of the campus community. FireNets are now part of SafetyNets and provide detailed information on a variety of fire-related safety topics and requirements. FireNets are updated and developed based on information needs of the campus.

UC Davis Police Department Resources: The [Police Department website](#) [27] provides information on crime prevention, recent criminal activity on campus, and other Police Department services. Alert bulletins are distributed to campus via department mail and fax, and posted on the [Crime Prevention website](#) [28]. To subscribe to receive alert bulletins via email, send a message to crimeprevention@ucdavis.edu [29].

Equipment Specific Requirements: Some equipment used by your department may have additional regulatory requirements for permitting, certifications or inspections.

Training Provided by EH&S: EH&S also offers a wide range of classes on Animal Safety, Biological Safety, Chemical/Laboratory Safety, Ergonomics, Hazardous Waste Management, Physical Hazards, Radiological Safety and much more. Pls and their employees/students can sign up for these classes on the Safety Services web site. All EH&S classes are free to UC Davis staff, students and faculty.

Contact

Environmental Health and Safety

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Source URL (modified on 07/05/18 12:27pm): <https://safetyervices.ucdavis.edu/safetynet/safety-program-guidelines-principal-investigators>

Links

- [1] <https://ucdavispolicy.ellucid.com/documents/view/273>
- [2] <https://safetyervices.ucdavis.edu/article/injury-illness-prevention-program-iipp>
- [3] <https://safetyervices.ucdavis.edu/sites/default/files/documents/IIPP%20Template.docx>
- [4] <https://safetyervices.ucdavis.edu/article/emergency-action-plan-eap>
- [5] <https://safetyervices.ucdavis.edu/safetynet/reporting-work-related-fatalities-and-serious-injuries-or-illnesses>
- [6] <https://safetyervices.ucdavis.edu/article/injury-reporting-procedure>
- [7] <http://manuals.ucdavis.edu/PPM/290/290-16.pdf>
- [8] <http://bml.ucdavis.edu/facilities/boating-safety/>
- [9] <https://ucdavispolicy.ellucid.com/documents/view/321>
- [10] <https://safetyervices.ucdavis.edu/article/chemical-laboratory-safety>
- [11] <https://safetyervices.ucdavis.edu/article/chemical-inventory-system-cis>
- [12] <https://safetyervices.ucdavis.edu/article/cupa-self-audit-program-summary>
- [13] <https://safetyervices.ucdavis.edu/article/radiation-safety-manual-forms>
- [14] <https://safetyervices.ucdavis.edu/article/biological-use-authorization-bua>
- [15] <https://safetyervices.ucdavis.edu/article/laser-safety-and-use-authorization-formssop>
- [16] <https://iacuc.ucdavis.edu/protocol/index.cfm>
- [17] <https://safetyervices.ucdavis.edu/article/carcinogen-use>
- [18] <https://safetyervices.ucdavis.edu/article/hazardous-materials-hazardous-waste-management>
- [19] <http://protectputahcreek.ucdavis.edu/>
- [20] <http://www.actiocms.com/chemquik/mainpage.cfm>
- [21] http://afs.ucdavis.edu/our_services/distribution-services/mail-services/our-services/folder-not_used_by_navigation/HazardousInfoSheet.pdf
- [22] <mailto:hazshipping@ucdavis.edu>
- [23] <http://www.ecfr.gov/cgi-bin/ECFR?page=browse>
- [24] <http://www.phmsa.dot.gov/hazmat/training/requirements>
- [25] http://afs.ucdavis.edu/our_services/distribution-services/mail-services/our-services/folder-not_used_by_navigation/Dry_Ice_Job_Aid.pdf
- [26] <https://safetyervices.ucdavis.edu/safetynet>
- [27] <http://police.ucdavis.edu/>
- [28] <http://police.ucdavis.edu/crime/prevention>
- [29] <mailto:crimeprevention@ucdavis.edu>