

UC DAVIS

Physics Department

INJURY AND ILLNESS PREVENTION PROGRAM



August 2017

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This Injury and Illness Prevention Program has been prepared by the University of California, Physics Department in accordance with University Policy (UCD Policy & Procedure Manual Section 290-15: Safety Management Program) and California Code of Regulations Title 8, Section 3203 (8 CCR, Section 3203).

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Department Information

Department Name: **PHYSICS**

Department Chair: **Professor Robert Svoboda**

Address: **Physics Department, Physics Building, One Shields Ave., Davis, CA 95616**

Telephone Number: **(530) 752-5989**

Buildings Occupied by Department

1. Building: **Physics Building**

Room(s): 01, 02-04, 05, 06-10, 13, 18-18A, 17-19, 23, 33, 34, 37-37A, 40, 41, 48, 49, 75-77, 78, 79, 80, 81, 82, 82A, 83, 84, 85, 86, 87, 88, 89-89A, 90, 91, 92, 93, 95, 96, 98, 101, 102, 104, 106, 107, 111, 112, 113, 114, 130, 140, 148, 173, 174-174A-174B, 175-175A-175B, 181, 182, 182B, 185, 186, 195-195A, 196, 197, 201, 202, 203, 204-206-210, 205, 207, 209, 213, 214-216, 215, 217, 218, 219, 221-225, 228, 230-232, 231, 233, 235, 234, 236-240-248, 237, 239, 241, 243, 245, 249, 273-273A, 274-274A 275-275A, 281, 282-282A 284-284A 285, 286-286A, 288-288A, 289-289A, 290-290A, 295, 296-296A, 301, 304, 305, 306, 307, 311, 313, 314, 315, 316, 317, 318-318A, 319, 321, 325, 327, 326A, 328, 329, 330, 331, 332, 334, 335, 337, 339, 336-340-348, 341, 343, 349, 373, 375, 376, 378, 379, 380, 381, 382, 383A, 384, 385, 386, 387-387A, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397-397A, 398, 401, 402, 403, 404, 405, 406, 407, 409, 410, 414-416, 415, 417, 418, 419, 421, 425, 427, 428, 429, 431, 432, 433, 434, 435, 436, 437, 440, 441, 443, 448, 449, 505, 506, 507, 508-508A, 509, 511, 512-512A, 513, 514-514A-514B, 515, 517, 518-518A, 519, 520, 521, 525, 528, 529, 531, 532, 533, 534-534A-534B, 535, 536-536A, 537, 539, 540, 541, 542-542A, 549

Contact: Professor Robert Svoboda
Phone: (530) 752-5989

2. Building: **Roessler Hall**

Room(s): 50, 52, 55, 66, 152, 154, 156, 156A, 158, 160, 162, 164, 166, 168, East Stairwell

Contact: Professor Robert Svoboda
Phone: (530) 752-5989

3. Building: **Earth and Physical Sciences (EPS) Building**

Room(s): 2307, 2309, 2312, 2314, 2317, 2319, 2322, 2351

Contact: Professor Robert Svoboda
Phone: (530) 752-5989

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 (8 CCR, Section 3203) and is held by the following individuals:

1. Name: **Robert Svoboda**

Title: **Professor and Physics Department Chair**

Authority: Authority and responsibility for ensuring implementation of this IIPP

Signature: _____ Date: _____

2. Name: **David Barnes**

Title: **Physics Department Safety Coordinator**

Authority: Assist Department Chair in implementing and maintaining this IIPP

Signature: _____ Date: _____

3. Name: **Tracy Lade**

Title: **Department CAO**

Authority: Assist Department Chair and Safety Coordinator in implementing and maintaining this IIPP

Signature: _____ Date: _____

All Principal Investigators and supervisors 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 Communications

1. Effective communications with **Physics Department** employees have been established using the following methods:

- Standard Operating Procedures Manual
- Safety Data Sheets ([available online at ucsds.com](http://ucsd.com))
- Monthly departmental operations meetings
- Internal media (department intranet)
- EH&S Safety Nets (<http://safetyservices.ucdavis.edu/safetynet>)
- Handouts
- Building Evacuation Plan
- E-mail
- Posters and warning labels
- Job Safety Analysis – Initial Hire
- Job Safety Analysis – Annual Review
- Other (list):

UC Davis Laboratory Safety Manual, which contains the campus **Chemical Hygiene Plan (CHP)** for chemical laboratories

[See: http://safetyservices.ucdavis.edu/article/laboratory-safety-manual](http://safetyservices.ucdavis.edu/article/laboratory-safety-manual)

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. Employees have the option to remain anonymous when making a report.
3. Employees have been advised of adherence to safe work practices and the proper use of required personal protective equipment. 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](#)).

III. System for Assuring Employee Compliance with Safe Work Practices

Employees have been advised to adhere to safe work practices and the proper use of required personal protective equipment. 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.

ADDITIONAL DEPARTMENT METHODS

The Physics Department provides initial training for all employees through the distribution of the department's safety manual that includes general safety rules. In addition, the department maintains job Safety Analysis forms for each employee (on file in Room 174 Physics). Annual refresher safety training related to specific tasks is recommended for all employees. New information is posted on the department bulletin board or circulated by e-mail announcements.

Employees utilizing the department's machine shop are cleared through the shop manager. All users are required to take a shop class that is offered each year by the shop manager, and a certificate of completion is provided to each class member. The shop class instructs users in the safe operation of equipment and tools, and also discusses important safety issues. Exemptions to the class are given on an individual basis by the shop manager and are based on the individual's past experience and knowledge of shop tools and

safety practices. All users are asked to review their projects with the shop personnel prior to beginning work. During normal business hours, the activities are monitored in the student shop by the machine shop staff. No one is permitted to work alone in the machine shop after normal business hours without documented authorization from the shop supervisor.

Laboratory safety is designed around the requirements of individual research groups. Personnel are trained to the standards outlined in the Chemical Hygiene Plan for the laboratory. This training is the responsibility of the Principal Investigator in charge of the research laboratory.

Radiation and Analytical X-Ray training is provided by EH&S as required by campus policies. Individuals named on an RUA or MUA attend training courses every three years. Reminders are mailed to the individual by EH&S office; files of this training are maintained by EH&S.

Users of laser instrumentation are required to take the laser safety course offered by EH&S. The Principal Investigators shall establish Standard Operating Procedures for safe use of laser instrumentation in their laboratories that complies with regulations.

Safety training classes are offered by UC Davis Safety Services (EH&S). The general laboratory safety class is recommended for personnel working in a Chemical Hygiene Plan laboratory. Classes in cryogen safety, hazardous waste management, radiation safety and many others are available through EH&S. Further information can be found on the UC Davis website: <http://safetyservices.ucdavis.edu/>

Laboratory personnel shall receive training when assigned a new task. Laboratory supervisors (person responsible for chemical hygiene and the Chemical Hygiene Plan in the laboratory) must document their own training as well as the training of other laboratory personnel. Identifying potential hazards in the laboratory and facilitating a safe work environment is the responsibility of all personnel.

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 individual employee work functions, potential health or injury hazards, and specifies appropriate safe practices, personal protective equipment, and tools/equipment. JSA's have been completed for the following job categories:

A. Physics Building-faculty/researchers/staff/student offices

98, 101, 102, 104, 106, 107, 111, 112, 113, 114, 174-174A-174B, 175-175A-175B, 181, 182, 195-195A, 196, 197, 201, 203, 295, 207, 209, 213, 215, 217, 219, 221-225, 231, 233, 235, 234, 237, 239, 241, 243, 245, 249, 284-284A, 295, 296-296A, 301, 305, 311, 313, 315, 316, 317, 319, 321, 325, 327, 329, 331, 335, 337, 339, 341, 343, 349, 378, 380, 382, 384, 386, 387A, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397A, 401, 402, 403, 404, 405, 406, 407, 409, 410, 415, 417, 419, 421, 425, 427, 428, 429, 431, 432, 433, 434, 435, 436, 437, 436, 440, 441, 443, 448, 449, 505, 506, 507, 508-508A, 509, 511, 512-512A, 513, 514-514A-514B, 515, 517, 518A, 519, 521, 529, 531, 532, 533, 534-534A-534B, 536, 537, 539, 541, 542-542A, 549

Roessler 50, 160

Earth and Physical Sciences 2351

- General office environment

B. Physics Building-Machine shop area

23, 33, 34, 37, 40, 41, 48

- Physical Hazards (power tools)
- Chemical hazards

C. Physics Building-Chemical Laboratories (Chemical Hygiene Plan)

02-04, 05, 06-10, 17-19, 18, 86, 88, 90, 92, 95, 202, 204-206-210, 214-216, 230-232, 236-240-248, 274-274A, 282-282A, 288, 290-290A, 295, 304, 306, 307, 314, 318-318A 330, 332, 336-340-348, 373, 375, 376, 379, 381, 385, 387, 397, 398, 518, 535, 540

Roessler Hall: 52, 160

Earth and Physical Sciences Building: 2309

- Physical Hazards (compressed gas, lasers, radioactive, cryogenics)
- Chemical Hazards

Physics Building- Instrumentation Laboratories

13, 48, 75-77, 78, 79, 80, 81, 82, 82A, 84, 87, 89-89A, 91, 93, 95, 96, 228, 234, 273-273A, 275-275A, 281, 286-286A, 288A, 295, 305-307, 314, 330, 334, 375, 376, 379, 383A, 387, 536A

Roessler Hall 152, 154, 156, 156A, 162, 164, 166, 168

Earth and Physical Sciences Building 2307, 2312, 2314, 2317, 2322

Template **Job Safety Analyses** are located in **Appendix B**. Completed Job Safety Analyses are located in the **IIPP Addendum Binder** (Room 174 Physics).

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: **Physics Building Research Labs**
Frequency: Annual
Responsible Person: Karen Gagnon (Safety Services)
Records Location: Online Safety Inspection Tool (Karen Gagnon)

- 2) Location: **Physics Building**
Frequency: As needed, and ongoing
Responsible Person: **David Barnes**
Records Location: **Room 295 Physics**

- 3) Location: **Roessler Hall**
Frequency: As needed, and ongoing
Responsible Person: **Brian Barnett**
Records Location: **Room 160 Roessler**

Template **Worksite Inspection Forms** are located in **Appendix C**. Completed Worksite Inspection Forms are located in the **IIPP Addendum Binder** (Room 174 Physics).

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.

1. **Physics Department employees** will immediately notify their supervisor when occupationally-related injuries and illnesses occur, or when employees first become aware of such problems.
2. **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.

Proper injury reporting procedures can be found at <http://safetyervices.ucdavis.edu/article/injury-reporting-procedure>. This includes the use of the Employer's First Report (EFR) from the online UC Safety Tools.

The **Injury and Illness Investigation Form (Appendix D)** shall be completed to record pertinent information and a copy retained with the department, to serve as proper documentation.

The **Accident Investigation Form (Appendix D1)** shall be completed for near-miss incidents which do not result in an Injury or Illness.

3. **Note:** Serious occupational injuries, illnesses, or exposures must be reported to Cal/OSHA by an EH&S representative within eight hours after they have become known to the supervisor. These include injuries/illnesses/exposures that cause permanent disfigurement, amputation, fatality or require hospitalization for a period in excess of 24 hours.

Call UC Davis Health and Safety at 530-752-1493 if a serious injury event occurs, the Safety Services Representative on Call will insure proper notification of Cal/OSHA as required.

Refer to Safety Services SafetyNet #121 for OSHA notification instructions.

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 personal protective equipment 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.

VII. Health and Safety Training

Health and safety training, covering both general work practices and job-specific hazard training is the responsibility of the **Principal Investigator(s)** 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 the **Physics Department** main office:

Room 174, Physics Building.

The following documents will be maintained within the **IIPP Addendum Binder** for at least the length of time indicated below:

1. Hazard Alert/Correction Forms (Appendix A form).
Retain for three (3) years.
2. Employee Job Safety Analysis forms (Appendix B form)
Retain for the duration of each individual's employment.
3. Worksite Inspection Forms (Appendix C form).
Retain for three (3) years.
4. Injury and Illness Investigation Form or Accident Investigation Form (Appendix D form).
Retain for three (3) years.

The following documents will be maintained within the **IIPP Training Records Binder** for at least the length of time indicated below:

1. Employee Safety Training Attendance Records (Appendix E form).
Retain for three (3) years.

IX. Resources

1. UC Office of the President: [University Policy on Environmental Health and Safety](#), 2014
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, UCD Procedure 62
5. University of California Policy on Management of Health, Safety and the Environment, <http://www.ucop.edu/risk-services/loss-prevention-control/index.html>
6. UC Davis Environmental Health & Safety
 - [EH&S Website](#)
 - [EH&S SafetyNets](#)
 - [Safety Data Sheets](#)
7. Department Safety Coordinator