ILLINOIS INSTITUTE OF TECHNOLOGY
SAFETY COMMITTEE

Instructional Laboratory and Workshop Safety Policy

Approved: October 10, 2005
Reviewed and Modified: November 21, 2011
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1. PURPOSE

In order to provide a safe and healthful laboratory and workshop experience for students, all departments at IIT offering laboratory and/or workshops course work must provide students with laboratory and/or workshop safety instruction. Such instruction should be offered prior to the students’ use of the laboratories and/or workshops. IIT requires each department to develop and maintain a written Student Laboratory Safety Program (“Program”), consistent with this Policy, that ensures students receive safety instruction relating to the unique risks and safety issues that they will face in the department’s laboratories and/or workshops. Each department’s Program should be developed in coordination with the University’s Director of Environmental and Occupational Health, who will review all Department Programs and will submit them, when he or she deems a Program acceptable, to the IIT Safety Committee for final approval. Departments are encouraged to coordinate this Program with the Plans that they develop pursuant to the IIT Chemical Hygiene Policy for Lab Safety Standards and the IIT Laboratory Safety Inspection Policy.

2. SCOPE

The Program should inform students of the nature of hazards that they are likely to encounter in instructional laboratories and/or workshops while pursuing their course work. It should describe how safe operating procedures will be defined in each facility and how the implementation of safe operating procedures will be enforced. By way of guidance, a Program should address hazards that include, but are not limited to, the following:

a. Handling cylinder gases;

b. Flammable materials, fire hazards, sparks and burn injuries;

c. Handling acids, bases and corrosive chemicals;

d. Handling toxic materials;

e. Radiation, laser and X-ray hazards;

f. Moving and lifting heavy objects and avoiding head injuries;

g. Handling cryogenic materials;

h. Handling extremely hot materials;

i. Exposure to ultraviolet light and welding hazards;

j. Exposure to dust and fumes;

k. Avoiding hearing loss due to high pitched and loud noises;

l. High voltage electrical hazards;

m. Fire safety and evacuation procedures; and

n. Hazard communication protocols.

3. DEFINITIONS

Students – Any currently enrolled, part-time or full-time IIT student who is enrolled in one of IIT’s instructional laboratories or workshops.
Hazards – Hazards include all objects and circumstances that pose a threat of direct bodily harm, such as sharp objects and equipment, and the threat of long term degradation of health, such as exposure to chemical and toxic substances.

Instructional Laboratories or Workshops – Any of the laboratories or workshops maintained by IIT’s colleges that are intended primarily for the instruction of students. These are distinct from those workshops and laboratories that are primarily used for research purposes.

University Laboratory Safety Coordinator (ULSC) – A faculty member appointed by the Provost to assist departments in developing, implementing and monitoring policies, procedures and standards that are consistent with this Policy.

Material Safety Data Sheet (MSDS) – An MSDS is a written electronic or printed document describing a hazardous chemical which is prepared in accordance with 29 CFR 1910.1200, paragraph (g). More generally, it is an informational tools generated by manufacturers and suppliers of chemicals to provide safety information. An MSDS is kept for each chemical used in a laboratory.

Personal protective equipment (PPE) – PPE is equipment employees wear to provide a protective barrier between themselves and a potential hazard. Examples include, but are not limited to, safety glasses, lab coats, goggles, face shields, disposable garments, respirators and gloves.

Work practice controls – Changes in the way an individual performs physical activities in order to reduce or control exposure or hazards. Work practice controls involve procedures and methods for safe work and include, but are not limited to:

- Use of neutral postures to perform tasks (straight wrists, lifting close to the body);
- Use of two-person lift teams;
- Technique or sequence of events for a process; and
- Wearing specific Personal Protective Equipment.

4. RESPONSIBILITIES

Designated Safety Officer (DSO) – A DSO must be appointed for each department from the faculty or staff of that unit. (A person appointed as DSO for this Policy may also act as a DSO for or under other programs and policies.) This officer will be responsible for identifying the hazards in that department’s instructional labs and workshops and will compile a written list of the identified hazards, on a form similar to that attached hereto as Appendix A. He or she will work with the faculty and staff who are in charge of the laboratories to develop programs of safety instruction and will report to the dean or chairman of their department and to the Director of Environmental and Occupational Safety (“Director”) concerning that department’s Program. A list of identified hazards will be delivered to the dean or chairman of the department, each professor in the department, Director and LSC.
**Instructor** – Professors who teach a class involving work in an instructional laboratory or workshop are responsible for instructing the students in his or her class about the hazards posed by working in that lab or workshop. A professor may delegate this responsibility to a qualified teaching assistant or staff person, but it is the professor’s responsibility to verify that this instruction is carried out. Verification will occur through the filing of an Instructional Safety Form, attached here as Appendix B, with the professor’s dean or chair.

**Lab Supervisor** – The person in charge of the laboratory or workshop, whether that person is a professor, a teaching assistant or a staff person, has responsibility for:

   a. Seeing that safe work practice controls are maintained in the facility;
   b. Denying access to students who have not received the required instruction;
   c. Denying access to students who refuse to use required work practice controls;
   d. Maintaining the facility in a safe operating condition; and
   e. Supplying and/or requiring the use of PPE.

5. **PROCEDURE**

   **A. Administration.** Each department’s DSO will coordinate and report on the department’s Program. Duties will include, but need not be limited to:

   1. The DSO will tour that department’s laboratories and workshops and, working with the relevant faculty and staff, will prepare an itemized list identifying the hazardous materials, equipment and processes to which students will be exposed.
   2. The DSO will work with the faculty and staff in charge of the instructional laboratories and workshops to develop a program of safety instruction for the students who use those labs and workshops.
   3. The DSO will document this safety program and make it available to the head of the department, Director and LSC.
   4. Instructors must document, using a form substantially similar to the Instructional Safety Form, Appendix B, the students who have received such instruction and who are thereby entitled to work in their laboratory or workshop.
   5. The DSO will collect accident reports documenting injuries that have occurred in each department’s laboratories and workshops. Copies of these reports should be provided to the Director.
   6. Instructors, together with the Lab Supervisor, will create a manual defining proper and safe working procedure in that lab or workshop, and define unsafe procedures as well.
   7. Instructors, the Lab Supervisor and DSO will work together to create a written emergency response plan outlining the response to possible accidents in the facility, including a list of offices and people to notify. A copy of this emergency response plan should be filed with the Director.
B. **Instruction.** Students must be informed of hazards that they may face in each laboratory or workshop before they are permitted to work in that facility. This instruction will include a description of the nature of the hazards, an explanation of how to protect one’s self from the hazards and an explanation of what procedures to observe in the event that an incident occurs. Instruction should include, at a minimum, the following:

1. Instructors must individually certify that each student understands the hazards and safe working practices connected with the equipment or process by requiring that each student pass a safety test of the instructor’s devising.
2. Instructors must furnish an up to date list of the students whom they have certified as having knowledge of hazards and safe working practices. Instructors will provide this list to the DSO and post a copy of this list in the respective facilities.
3. Instructors must demonstrate to students the proper use of PPE used in the laboratory or workshop, and they must specify which items of equipment the students must furnish for themselves.
4. Instructors will, as much as possible, provide “hands on” instruction to insure clarity of student understanding.

C. **Supervision.** Each laboratory or workshop will have a Lab Supervisor, who, in conjunction with possible assistants, will staff the facility whenever it is open for student use. Duties include, but are not limited to:

1. The Lab Supervisor will maintain a file of MSDS describing dangerous substances being used in each lab and will make this file accessible to anyone on request.
2. The Lab Supervisor will be responsible for maintaining the facility and its equipment in safe working order.
3. The Lab Supervisor will have, on hand, PPE that the students are required to use but that they are not required to furnish for themselves.
4. The Lab Supervisor and Instructor will require that students working in the laboratory or workshop are certified and that they comply with safe working procedures. The Lab Supervisor and/or Instructor will have the authority to expel uncertified and non-cooperating students from the facility.
5. The Lab Supervisor will acquire and maintain a general purpose first aid kit and other supplies that would be needed to respond to emergencies related to hazards particular to his or her laboratory or workshop.
6. The Lab Supervisor will produce accident reports documenting injuries that occur in the facility and maintain a file of these reports. Such reports will conform with IIT’s Safety Committee’s *Incident Investigation Policy*.

6. **UPDATE AND REVIEW**

A. **Review.** A department must review its Program as needed but in no event less than every two years to ensure that it is compliant with all applicable laws and IIT
policies and to evaluate its effectiveness. Revised plans must be submitted to the IIT Safety Committee for final approval.

B. **Updates.** A department must complete a new Hazardous Identification Form whenever the department has experienced a material change, such as, but not limited to, the use and/or introduction of a new piece of equipment which poses safety concerns or the addition of new chemicals, a substantial change in the quantity, quality or use of chemicals or the discontinuation of a previously used chemical.

7. **RECORDKEEPING REQUIREMENTS**

A. **List of Safety Certified Students.** The list of students who have been instructed and certified to work in each lab or workshop will be updated at least once a semester, and this list will be posted in each lab or workshop and in a file maintained by the department’s DSO.

B. **Material Safety Data Sheets.** MSDS sheets will be kept on file in each lab or workshop covering any hazardous materials used in that facility.

C. **Accident Reports.** Accident reports documenting injuries suffered in each lab or workshop will be kept in a file maintained by the department’s DSO.

D. **Plan and Procedure Manuals.** The department’s Plan and any written procedures defining approved work practice controls relevant to each laboratory or workshop will be stored in a file in that facility and in a file maintained by the department’s DSO and made available upon request.
8. APPROVAL

The IIT Safety Committee has reviewed and recommend the adoption of this Policy on September 19, 2005, and this Instructional Laboratory and Workshop Safety Policy is approved and effective this 10th day of October 2005. Modifications to this policy have been reviewed and approved and are effective as of the date noted on the cover page. The Safety Committee will review the contents, implementation and effectiveness of this Policy no less than annually (but as often as necessary) to ensure that it meets all required legal and regulatory requirements and is adequately providing a safe and healthful environment for IIT faculty, employees and students.

By: /s/ Alan W. Cramb
    Alan W. Cramb, Provost and Senior Vice President

By: /s/ John P. Collins
    John P. Collins, Vice President for Business & Operations
APPENDIX A
HAZARD IDENTIFICATION FORM

PLEASE INSERT ALL REQUESTED INFORMATION BELOW FOR EACH LABORATORY USED BY YOUR DEPARTMENT. A COPY THIS FORM SHOULD BE SENT TO THE DEPARTMENT’S DEAN/CHAIR, ITS PROFESSORS AND SENT THE DIRECTOR.

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<th>EQUIPMENT</th>
<th>MAKE &amp; MODEL</th>
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Compiled by:_______________________________________________________

Signature:__________________________________________________________

Date:______________________________________________________________
APPENDIX B
INSTRUCTIONAL SAFETY VERIFICATION FORM

This Form is to be delivered to the Department’s Designated Safety Officer, ___________________, prior to students performing any course work in a laboratory or workshop.

Department: ______________________________ Building & Room: __________________________
Class Title: _______________________________ Professors: ________________________________
Name and Position of Person Providing Safety Instructions: ________________________________
Date Safety Instruction Provided: __________________________

Verification

I, _____________________________, do hereby verify that Laboratory/Workshop Safety Instruction was provided to the students listed below in connection with their participation in the above-referenced class on the date and by the individual above-referenced and that the students listed below have demonstrated an understanding of the instruction provided. This Instruction was provided in a manner that is consistent with my Department’s procedures and policies relating to laboratory/workshop safety instruction and the IIT Policy on Instructional Laboratory and Workshop Safety.

Students

__________________________________ ____________________________________
__________________________________ ____________________________________
__________________________________ ____________________________________
__________________________________ ____________________________________
__________________________________ ____________________________________
__________________________________ ____________________________________
__________________________________ ____________________________________
__________________________________ ____________________________________

Name of Professor: _________________________________
Date: ____________________________________________