



FACULTY OF ENERGY SYSTEMS AND  
NUCLEAR SCIENCE

TEACHING LABORATORY  
GUIDELINES AND PROCEDURES

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## Introduction

This manual provides a framework for safely operating laboratories, specifically in terms of the undergraduate teaching labs within the Faculty of Energy Systems and Nuclear Science (FESNS). The document aims to provide the faculty-specific context in keeping with the university-wide safety and security protocols for all undergraduate students.

The Faculty of Energy Systems and Nuclear Science faces unique safety challenges within the teaching laboratories since many experiments include radioactive sources that are subject to controls by the Canadian Nuclear Safety Commission (CNSC). Some programs offered by FESNS are multi-disciplinary and laboratories may also include electrical, chemical and mechanical safety issues.

Failure to comply with the guidelines and procedures in this manual or associated documentation can lead to remedial actions on the part of UOIT. As such, this may also result in dismissal from laboratories and or possible legal action if findings reveal negligence and or malicious intent.

## Associated Documentation & Regulations

This Laboratory Safety Manual should always be assumed to supplementary to the following safety documents:

### **University of Ontario Institute of Technology**

Laboratory Safety Manual for General Laboratory Operations

[https://shared.uoit.ca/shared/department/healthandsafety/documents/laboratory\\_safety\\_manual.pdf](https://shared.uoit.ca/shared/department/healthandsafety/documents/laboratory_safety_manual.pdf)

Emergency Preparedness Plan and Policy

[http://www.durhamcollege.ca/wp-content/uploads/Emergency\\_preparedness\\_plan\\_policy-DC-final.pdf](http://www.durhamcollege.ca/wp-content/uploads/Emergency_preparedness_plan_policy-DC-final.pdf)

Radiation Safety Manual

<https://shared.uoit.ca/shared/department/research/documents/RADIATION%20SAFETY%20MANUAL%20R4%20%20APR%202011.pdf>

Lab Hazardous Waste Manual

[https://shared.uoit.ca/shared/department/healthandsafety/documents/Hazardous\\_Waste\\_Manual.pdf](https://shared.uoit.ca/shared/department/healthandsafety/documents/Hazardous_Waste_Manual.pdf)

Faculty of Engineering and Applied Science Safety Manual

<https://shared.uoit.ca/shared/faculty/feas/documents/Safety-Manual-Current.pdf>

Engineering Laboratory Policies and Safety Protocol Reference Manual

<https://shared.uoit.ca/shared/faculty/feas/documents/FEAS-Lab-Policies-and-Protocols-Manual-Current.pdf>

All people accessing laboratories are also subject to all applicable safe occupation regulations, including but not limited to the following authorities:

- Ontario Ministry of Labour (<http://www.labour.gov.on.ca/english/hs/>)

- Canadian Centre for Occupational Health and Safety (<http://www.ccohs.ca/>)
- Ontario Ministry of Safety & Correctional Services - Office of the Fire Marshal ([http://www.mcscs.jus.gov.on.ca/english/FireMarshal/OFMLanding/OFM\\_main.html](http://www.mcscs.jus.gov.on.ca/english/FireMarshal/OFMLanding/OFM_main.html))
- Electrical Safety Authority (<http://www.esasafe.com>)
- Technical Standards & Safety Authority (<http://www.tssa.org>)
- Health Canada (<http://www.hc-sc.gc.ca/index-eng.php>)
- Environment Canada (<https://www.ec.gc.ca/>)

Note: All documentation and regulations are subject to change.

## Authority

The stricter and or more specific of these guidelines, as stated, in whole or in part, within this manual and or any other associated UOIT safety-related documentation, and or regulations will supersede anything deemed less specific.

## Definitions

**FESNS Laboratory Jurisdictions:** Any area or areas including but not limited to teaching laboratories, student sample collection expeditions and or student site visits on or off UOIT campus properties or rooms designated as support resources for teaching laboratories.

**Teaching Laboratory:**

**Experiment:** Any structured use of a laboratory designated for use by faculty, staff and students in the process of providing any and all space, equipment to include all necessary resources for the purpose of conducting prescribed course-related instructional activities for UOIT students, staff, and faculty and authorized visitors.

**Laboratory Manager:** The Laboratory Manager is responsible for managing the activities of all students, staff and faculty members who need to work-related activities within the teaching laboratories. The Lab Manager is also responsible for periodically reviewing and improving any and all safety programs instituted for the teaching laboratories as well as other FESNS jurisdictions designated for the purpose of carrying out instructional laboratory activities.

**Laboratory Technician:** Laboratory Technicians report to the Laboratory Manager. The Technician's main responsibilities are to ensure the safety of all laboratory users, including students, other staff, faculty, teaching assistants and visitors. Laboratory Technicians are also responsible for training Teaching Assistants and or Work Study Students pursuant to the safe operation and handling of all laboratory equipment and with particular emphasis on the safe use and operation of experiments and experiment related apparatus. Technicians usually assume the role of Laboratory Supervisor while laboratories are in session. Technicians may be called upon by the Lab Manager to review any known safety issues and or implement any such changes deemed necessary by the Laboratory Manager. Laboratory Technicians are also responsible for carrying out periodic inspections of and for all FESN Laboratory Jurisdictions.

**Laboratory Specialist/Engineering Specialist:** The Laboratory/Engineering Specialist may be called upon to assist the Laboratory Manager and or Laboratory Technicians with projects relating to the development and or implementation of laboratory safety guidelines. The

Laboratory/Engineering Specialist also assists Lab Technicians with ensuring equipment and procedures are in compliance with all relevant safety guidelines. The Laboratory/Engineering Specialist may be called upon to assist with safety inspections.

**Laboratory Supervisor:** The Laboratory Supervisor is any individual or group of individuals responsible for the safety of the teaching Laboratory particularly when experiments are being performed or prepared. Laboratory Supervisors' primary function is to establish and maintain safety within an ongoing laboratory session, to be in possession of the required safety training and to effectively apply this training whenever the need arises. A laboratory may have several Laboratory Supervisors acting at any one time; for example, during a given teaching laboratory session, the Laboratory Manager, a Laboratory Technician, a Professor and a Teaching Assistant may all be present. All such persons are expected to assume the roles and responsibilities of Laboratory Supervisors.

## Responsibilities

### Responsibilities of all users of laboratories

All personnel making use of teaching laboratories, including supervisors, students, employees and faculty are required to assume the following responsibilities while in any laboratory spaces:

- Always assume safety to be the highest level priority while conducting any activities within a teaching laboratory.
- Read and understand all safety documentation that are presented or provided by the Laboratory Manager, Laboratory Supervisor or Laboratory Technicians.
- Attend and or participate in all relevant safety demonstrations and or safety training seminars.
- Immediately report any safety violations, equipment malfunctions, or any potential safety issues to the Laboratory Supervisor.
- Know the locations of and proper use and handling of safety equipment, including but not limited to; eyewash stations, fire extinguishers, telephones, emergency gas shut off valves, first-aid kits, defibrillators and safety showers.

### Additional Responsibilities of Laboratory Supervisors, Laboratory Technicians, Teaching Assistants, and Professors.

Under the direction of the Laboratory Manager, those noted above will assume the following additional responsibilities:

- Have completed all mandatory training seminars and has or will, upon request, provide the Mandatory Training Records to the Laboratory Manager, or designate, within the first two weeks of hire, before assuming any active responsibilities as Laboratory Supervisor.
- Ensure all laboratory users have received the necessary training and have signed any necessary acknowledgement forms prior to having access to the laboratories.
- Ensure laboratories are safe for use before allowing access to any user; this includes checking of eyewash stations just prior to the beginning of every laboratory session.
- Report any safety violations, equipment malfunctions, or potential safety issues to the Laboratory Manager.

- Disallow access to anyone not conforming to the safety requirements of the laboratory until or unless he or she can demonstrate full compliance.

The mandatory training seminars for all Laboratory Supervisors will include:

1. COVID-19 training  
<https://healthandsafety.ontariotechu.ca/training/infectious-disease-training-covid-19.php>
2. Basic Lab Safety seminars conducted by FESNS (valid for three years)
3. Basic Radiation Safety seminar (also valid for three years)
4. WHMIS Training  
<http://healthandsafety.uoit.ca/training/whmis.php>
5. Health and Safety Orientation Training  
<http://healthandsafety.uoit.ca/training/>
6. AODA Customer Service Module  
<http://accessibility.uoit.ca/tutorials/index.php>
7. AODA Accessible Instruction Module (mandatory for educators at UOIT)  
<http://apa.uoit.ca/aoda/>
8. Workplace Violence and Harassment Prevention  
[https://sbsp.mycampus.ca/prod/www\\_hso.hsovhp.p\\_main](https://sbsp.mycampus.ca/prod/www_hso.hsovhp.p_main)

Certain seminar certificates must be renewed over time. New hires must complete the attached training Record form (see Appendix A) and must forward this to the Lab Manager as well as to UOIT Human Resources offices, within the first two weeks of employment.

## Laboratory Policies

### Spaces defined as laboratories

The spaces defined as teaching laboratories, under the control of FESNS, are all fully subject to the policies and procedures are given within this manual. Laboratories situated within the jurisdictions of the campus of UOIT are, for the most part, clearly labelled. On some occasions, teaching laboratory activities and or site visits will need to be carried out in locations external to the UOIT campus, possibly indoors or outdoors. Even though these spaces are not teaching laboratories, by definition, all applicable safety guidelines and procedures apply.

### Supervision

#### Designated Laboratory Supervisor and Delegates

An emergency contact sign consisting of at least three qualified Laboratory Supervisors must be posted outside each and every teaching laboratory. Furthermore, each Laboratory Supervisors' name must include their contact phone numbers where these persons can usually be reached. See Appendix B for a sample of a contact posting.

#### Undergraduate Laboratories

Laboratory Supervisors are any employees of the Faculty that are directing a particular class or experiment within a teaching Laboratory.

When a teaching laboratory is in use by undergraduate students, as part of a normal scheduled laboratory session, at least one Laboratory Supervisor assigned to that course and or Laboratory must be present for the duration of the laboratory session.

When a laboratory is in use by undergraduate students comprised of smaller groups, for example for project work as with undergraduate thesis students, a Laboratory Supervisor assigned to that group should be present for the duration of the laboratory session or experiment.

The Laboratory Supervisor must take into account and point out any safety risks inherent to the experimentation or laboratory space.

No experiment being conducted by an undergraduate shall be performed alone. If the Laboratory Supervisor deems an experiment to be safe, and not requiring direct supervision, the student must still be accompanied by, at minimum, a second student.

## Access to laboratories and equipment

### Equipment

Only individuals who are deemed competent by the Laboratory Supervisor may make use of a piece of equipment housed in a laboratory. In many cases, training will be available for any unfamiliar equipment. Students are not allowed to handle or attempt to operate any equipment they have not been adequately trained to operate or handle. Personal will be available to provide training, especially for equipment that is deemed as having safety issues.

### Undergraduate access to laboratories

Prior to access to any laboratory and at the start of a new academic year, students must complete the following:

- Read and understand the FESNS Laboratory Guidelines and Procedures manual.
- Read, understand and sign the FESNS Laboratories Laboratory Guidelines and Procedures Acknowledgement Form (See Appendix C). This form must be submitted to the Course Teaching Assistant or Laboratory Supervisor prior to commencing any work within a given course laboratory session.
- Be present at for and understand the lab-specific safety training that will be presented at the start of each lab by the Laboratory Supervisor.

Students must be present at the beginning of each lab where the lab-specific safety requirements and any designated personal safety equipment will be detailed. Without proper safety training, students will not be allowed to continue with the lab unless or until the Laboratory Supervisor can provide direct training.

For regularly scheduled teaching activities scheduled to take-place within a laboratory, the laboratory must remain locked and closed prior to the official start time. Students must not enter the laboratory without explicit authorization from the Laboratory Supervisor.

For access to laboratories apart from regularly scheduled classes and or laboratory sessions, students must request their intended access with a Laboratory Supervisor at least 24 hours in advance.

Reasonable access to labs will be given to students except where scheduling conflicts or overwhelming safety concerns apply.

### Restricted Laboratories

If a laboratory requires stricter access due to inherent dangers, a sign must be posted on each entrance to the laboratory indicating “ACCESS RESTRICTED” or “RESTRICTED ACCESS” along with a brief description of the cause of danger.

### Hours of operation

All UOIT buildings have the following official university operating hours: from 7:00 am to 11:00 pm, Monday through Friday.

Personnel working on campus, outside of regular university operating hours, should always inform security, 905.721.8668 Ext. 2400, with their location(s) and times.

Laboratories should be accessible from 9:00 am through 5:00 pm, Monday through Friday, on days where the University assumes normal operating hours. Access may be denied outside of these hours, especially if where supervision is necessary yet unavailable.

### Clothing and Personal Protective Equipment (PPE)

#### Clothing requirements and exclusions

The following clothing requirements and exclusions apply to all laboratories whenever conducting or observing any experiment activities:

- Appropriate clothing should be worn so that no skin is exposed beside the hands and face.
- No open toed shoes or sandals.
- No jewelry including rings, necklaces, and bracelets.
- No neckties.
- Long hair must be tied back.

Approved lab coats are recommended for all labs to minimize the risk of injury resulting from clothing catching in machines.

#### PPE requirements and availability

Personal protective equipment (PPE) requirements for each teaching lab must be relayed to students in advance of the lab. No student will be permitted to begin any experiment without the proper PPE as prescribed by the Laboratory Supervisor.

PPE requirements for other laboratory uses must be agreed upon by between the student and Laboratory Supervisor.

Normal PPE requirements include the following:

- Eye protection
  - Safety glasses with side shields must be worn around during any experiments where chemical splashes may occur or where airborne particles may be moving quickly. This includes any experiment involving a wind chamber or wind tunnel.

- Safety goggles/respirators/face shields may be required for more dangerous experiments and their requirement for use will be the discretion of the Laboratory Supervisor.
- Regular prescription glasses, sunglasses, and contact lenses are not considered suitable safety eyewear. If an experimenter has purpose-built safety prescription glasses, they can be used at the discretion of the Laboratory Supervisor. Safety sun-glasses are not permitted for use under normal indoor lighting conditions.
- Refer to the **UOIT Laboratory Safety Manual for General Laboratory Operations, Section 22.1 Eye Protection** for information on choosing the right material for safety eyewear.
- Hand protection
  - Appropriate Safety gloves must be worn for any experiment that may pose a risk of physical harm, or chemical exposure or burns to hands.
  - Refer to the **UOIT Laboratory Safety Manual for General Laboratory Operations, Section 22.2 Hand Protection** for information on choosing the right material for safety gloves.
  - Be aware that some people are allergic to latex gloves.
- Foot protection
  - No open toe footwear is allowed in teaching labs.
  - For experiments involving corrosive materials or mechanical impact, alternate footwear must be worn that protects against those dangers.
  - Refer to the **UOIT Laboratory Safety Manual for General Laboratory Operations, Section 22.3 Foot Protection** for information on choosing the right material for safety footwear.
- Hearing protection
  - Experiments involving machinery may require hearing protection; use requirement will be at the discretion of the Laboratory Supervisor.
  - Refer to the **UOIT Laboratory Safety Manual for General Laboratory Operations, Section 22.4 Hearing Protection** for information on choosing the right material for hearing protection.
  - Refer to the **UOIT Laboratory Safety Manual for General Laboratory Operations, Section 18 Noise** for information on associated with noise levels that are permissible in laboratories.

### Laboratory conduct

- As safety is the primary concern of UOIT and FESNS, any perceived threat to the safety of students, staff, Lab Supervisors, Faculty or FESNS equipment will not be tolerated.
- Horseplay is prohibited, and individuals conducting themselves in this any such inappropriate manner may be asked to leave the laboratory.
- No student is permitted to use any equipment without the permission of the Laboratory Supervisor, who will assess the student's competence regarding the safe use and handling of the equipment safely.

- No food or drinks may be consumed inside FESNS teaching labs unless an exception is granted by the Laboratory Supervisor. Food and or drinks are not permitted to be present, under any circumstances, in any labs containing radioactive sources.

## Safety Equipment and Signage

### Signage

- At a minimum, all laboratories must display the following signage:
  - At the entrance of a laboratory, an Emergency Contact list with a minimum three approved contact names (approved by the Laboratory Manager) must be posted, including their (active) contact telephone numbers; this sign must also include the 24-hour UOIT security contact number.
  - At the entrance to a laboratory, room advisory signs must be placed in clear view, depicting lab-specific dangers, including but not limited to laser, radiation, machinery, and/or chemical.
  - A sign, in clear view, designating the location of eyewash stations. Close by this sign, a tracking sheet must be displayed showing weekly operational inspections. Also, bi-annual maintenance, inspection and test tag must be affixed to each eyewash station.
  - As above, Fire extinguishers must also include location signs as well as annual maintenance, inspection tags.
  - An “Emergency Guidelines” poster, provided by UOIT, will be posted, in clear view, inside and near the entrance of each teaching laboratory.
- All water and gas sources must have appropriate labels. Water sources must be labeled as “Potable” or “Non-Potable”.
- Active experiments that are left unattended must be labeled with an appropriate contact name and phone number.

### Availability of safety equipment in laboratories

Laboratories must, at a minimum, contain appropriate safety equipment in good operating condition as follows:

- A fire extinguisher, located where it is easily accessible. A ‘location’ sign must be posted such that the fire extinguisher and sign can be easily seen from any location within the laboratory (within reason). The space around the fire extinguisher must remain free of obstacles at all times.
- Access to step stool than can be used to safely store and remove items from hard to reach areas.
- An eyewash station or eyewash bottles, located where easily accessible. A ‘location’ sign must also be posted where it can be seen from any location in the laboratory (within reason). The space around the eyewash station must remain free of obstacles at all times.
- Access to safety shower in the lab or the adjacent hallway.
- Access to first-aid kits that are located in the North-West hallway of the ERC building corridors.
- Access to the Defibrillator located on the ERC, 2<sup>nd</sup>-floor alcove (in front of room ERC 2029) to your left if exiting the elevators.

- A sink to wash hands as well to use for safe disposal of low toxicity and water soluble chemicals. Any such disposal must happen only in full compliance with all applicable environmental standards. Please refer to the Lab Hazardous Waste manual.
- A labeled 'sharps' container for safe disposal of any sharp instruments or broken glass.
- Labs that contain chemicals must include a spill control kit.
- Labs that contain chemicals must include appropriate chemical disposal containers.
- Labs that have radiation sources must always have access to a calibrated radiation survey meter.
- Labs that carry liquid radioactive substances must have operational fume hood/s with dedicated ventilation systems and or drain/s that connect directly to the main sewer line. This is to facilitate the dispose of controlled amounts of radioactive materials according to environmental regulations.
- Labs that have gas sources must have a gas shut-off valve-located outside the lab. Some labs will have audible alarms to warn of low oxygen levels (below safe limits) such as wherever liquid nitrogen is being stored and or used.
- Class 2 radiation facilities have visible warning lights to indicate that an experiment is in progress.

#### Maintenance

- It is the responsibility of the designated Laboratory Technician to ensure that the laboratories are clean and safe for use and that safety equipment is maintained and checked.
- Eyewash stations must be checked weekly by a designated Laboratory Technician to confirm they are in good working order, and the results recorded and kept visible near the eyewash station; UOIT facilities management will inspect and perform maintenance on eyewash stations and showers twice a year.
- Fire extinguishers are checked by UOIT facilities management on a monthly basis.

#### Use and storage of chemicals

##### Liquid and solid chemicals

- Any laboratory containing dangerous chemicals (as defined in **UOIT Laboratory Safety Manual for General Laboratory Operations, Sections 7, 8, 9, 11, 12 (Flammable and Combustible Materials, Dangerously Reactive Materials, Corrosive Materials, Designated and Controlled Substances, Biohazardous Infectious Materials)** ([https://shared.uoit.ca/shared/departement/healthandsafety/documents/laboratory\\_safety\\_manual.pdf](https://shared.uoit.ca/shared/departement/healthandsafety/documents/laboratory_safety_manual.pdf) ) must display chemical hazard signage outside of the laboratory.
- All chemicals, dangerous or not, must be labelled in an appropriate container.
- All chemicals contained in a laboratory must have an associated Material Safety Data Sheet (MSDS) stored in a binder in an accessible location within the same laboratory.

##### Compressed gasses and liquid nitrogen

- The Laboratory Supervisor is responsible for inspecting compressed gas containers prior to use by students.
- The Laboratory Supervisor is responsible for ensuring compressed gas containers are properly closed-off after use.

- Entry to any teaching labs is not permitted if and whenever a visible alarm can be seen or an audible alarm can be heard. Teaching labs may require the use of liquid nitrogen and an alarm will sound when oxygen levels inside the labs fall below safe limits. Caution: Refrain from entering any such laboratory and inform the Laboratory Supervisor or UOIT security immediately if an unattended alarm is suspected.
- Always wear the appropriate PPE when handling compressed air/cryogenic gas/liquid.

### Use and storage of ionizing radioactive materials

- All storage of ionizing radioactive substances except Naturally Occurring Radioactive Materials (NORM) is governed by the Canadian Nuclear Safety Commission (CNSC) and internally by the University Radiation Safety Committee (URSC). Please refer to the UOIT radiation safety manual for additional documentation).

## Laboratory Procedures

### Emergency Response

Response to medical emergencies, the discovery of fire, secure-and-hold situations, campus threat/suspicious package situations, and lockdown situations, are all prescribed by the UOIT's "Emergency Guidelines" poster, which is located inside every laboratory. The following additional procedures apply.

#### All emergencies

1. If any danger still exists within a laboratory, evacuate the laboratory immediately.
2. Call UOIT Security (preferably **from a University phone**), at extension 2400, or from any other suitable phone or by using one of the emergency phones that are located next to all elevators (**905-721-8668 ext. 2400**) and calmly explain the situation. Security will call 911 if and when additional assistance is needed.

#### Fire Alarms

UOIT has a two-stage fire alarm system. Stage 'one' will consist of one beep-tone every second, and a stage 'two' alarm will have two beep-tone every second. If a fire is already confirmed, the Stage 'one' alarm might be bypassed directly with a Stage 'two' alarm.

1. During a Stage 'one' alarm, prepare but do not evacuate; discontinue whatever activities are going on; if possible close any open doors and windows.
2. During a Stage 'two' alarm, evacuate the building and gather at the designated Assembly Area. The assembly area for the ERC building is Simoce parking unless notified otherwise.
  - Do not run through halls, downstairs or attempt to use the elevators during a fire emergency.
  - Exit using the stairwells located in the corners of the ERC building. If possible, avoid using the central stairwell located on the West side of the building between the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> floor.
  - Evacuation orders by the Laboratory Supervisors or by designated fire wardens (who are identified by bright orange safety vests and/or bright orange armbands) must be obeyed.

3. Remain in the Assembly Area. Do not leave the premises or re-enter the building until the “all-clear” signal is given by the fire marshal or one of the firewardens.

#### Equipment malfunctions

1. In the event of an equipment malfunction, taking into account any existing or potential safety risks, stop work and unplug the equipment immediately.
2. Notify the Laboratory Supervisor of the malfunctioning equipment.
3. The Laboratory Supervisor should clearly tag (using only an approved tag) the equipment “NOT TO BE USED UNTIL FURTHER NOTICE” and must notify a Laboratory Supervisor and or Laboratory Technician who will further investigate the equipment problem.

Detailed procedures for additional threats types can be found in **UOIT’s Safety and Security Policies and Procedures** (<https://ontariotechu.ca/campus-services/safety-security/policies-and-procedures/index.php> )

#### Preventative Maintenance and Repair

Equipment must be inspected, maintained and repaired on a regular schedule, minimally once each year.

1. Only qualified personnel authorized by the Laboratory Manager may perform maintenance or repairs on any equipment belonging to the teaching laboratory.
2. Turn off and or de-energize any suspect equipment if necessary.
  - Unplug detachable and or power corded equipment.
  - Lock-out and tag-out any equipment that must be de-energized from a breaker or other interrupter device. The breaker or other interrupter must also be locked out so it may not be re-energized while maintenance is on-going. Tags must include the time and date of lock-out and the name and contact number of the person who implements the lock-out.
3. Perform the required maintenance of equipment.
4. If the equipment is accompanied by and or requires a maintenance ‘record’ sheet, record the action, date, time, and person who implements the maintenance.
5. Remove any lock-out and re-energize the equipment if where necessary.
6. Test equipment and recheck to ensure any and all required safety features are in place, that there are no remaining safety issues to ensure the equipment is ready for use.

#### Damaged or Malfunctioning Equipment or Facilities

##### Damaged or Malfunctioning equipment, including PPE

1. Immediately discontinue the use of the equipment.
2. If it can be done safely, where appropriate, de-energize the malfunctioning equipment.
3. Students must report any malfunctioning equipment to the Laboratory Supervisor. Laboratory Supervisors must disable and tag any malfunctioning equipment and inform the Laboratory Manager.
4. The equipment must be tagged as non-working and then secured against possible further use. For electrical equipment, the power cable should be removed wherever possible, stored in a secure location, as well as any and all circuit breaker(s) disengaged.

### Malfunctioning facilities such as gas or water

1. If any immediate threat to safety is suspected, the room must be immediately evacuated.
2. If no immediate threat to safety is suspected, attempt to turn off the valve supplying the gas or water.
3. If a gas supply malfunction occurs, close the gas shut off tap located outside of each laboratory.
4. All malfunctioning facilities issues must be reported to the Laboratory Supervisor.

### Gaining Access to Laboratories

#### Undergraduate access to laboratories

Occasionally students or student groups will require access to laboratories for project work.

1. The student must request from their Supervisor (Instructor or Project Supervisor) desire for laboratory access, including the names of all group members, the dates and times requested, as well as a comprehensive description of the experiment and or activities being performed and together with a listing of any required equipment.
2. The Supervisor will coordinate with the Laboratory Manager or a suitable Delegate to confirm the availability of the space and equipment and relay this information back to the Laboratory Supervisor.
3. The Laboratory Technician assigned to the student or student group may provide access to the laboratory and equipment. Supervision requirements are determined by the student's Supervisor and in agreement with any requirements set by the Laboratory Technician.

### Keys

Keys for laboratories must be requested through the Laboratory Manager for all teaching labs.



## Appendix A – Mandatory Training Record

### Mandatory Training for Lab Supervisors

#### Introduction:

Supervisors are strongly encouraged to use the following as a guide for all full time and limited term academic and non-academic hires. It is recommended that all items be completed within the first two weeks of hire. You may wish to keep a copy of this record in the employees file for future reference.

<b>Date:</b>	<b>Employee Name:</b>	
<b>Date of Hire:</b>	<b>Title:</b>	
<b>Department/Faculty:</b>		
<b>Supervisor's Name:</b>		
<b>Requirement:</b>	<b>Date Completed</b>	
COVID- 19 Training <a href="https://healthandsafety.ontariotechu.ca/training/infectious-disease-training-covid-19.php">https://healthandsafety.ontariotechu.ca/training/infectious-disease-training-covid-19.php</a>		
Basic Lab Safety Training (valid for 3 yrs.)		
Basic Radiation Safety Training (valid for 3 yrs.)		
WHMIS Training (copy of the certificate to be sent to Human Resources) <a href="http://healthandsafety.uoit.ca/training/whmis.php">http://healthandsafety.uoit.ca/training/whmis.php</a>		
Health and Safety Orientation Training <a href="http://healthandsafety.uoit.ca/training/">http://healthandsafety.uoit.ca/training/</a>		
AODA Customer Service Module <a href="http://accessibility.uoit.ca/tutorials/index.php">http://accessibility.uoit.ca/tutorials/index.php</a>		
AODA Accessible Instruction Module (mandatory for educators at UOIT) <a href="http://apa.uoit.ca/aoda/">http://apa.uoit.ca/aoda/</a>		
Workplace Violence and Harassment Prevention <a href="https://ssbp.mycampus.ca/prod/www_hso.hsovhp.p_main">https://ssbp.mycampus.ca/prod/www_hso.hsovhp.p_main</a>		

**In the Event of an Emergency in ERC 3094,  
please contact:**

Mr. Sharman Perera 905.721.8668 ext. 5505

Dr. Edward J. Waller 905.721.8668 ext. 5521

Mr. Bradley MacInnis 905.721.8668 ext. 5487

**For 24 hour assistance:**

Security 905.721.8668 ext. 2400

## FESNS Laboratories Laboratory Guidelines and Procedures Acknowledgement Form

I, \_\_\_\_\_ (Name of Student) have read and understood all the laboratory guidelines, safety protocols, and responsibilities as a student, which have been outlined in the FESNS Laboratory Guidelines and Procedures Manual when using the undergraduate laboratories.

I, \_\_\_\_\_ (Name of Student) hereby accept the terms and conditions set out in the FESNS Laboratory Guidelines and Procedures Manual and verify that I may subject to suspension of laboratory privileges, dismissal, or legal action if violation of any of the guidelines and/or protocols outlined in the manual is found.

Student (Banner) ID#: \_\_\_\_\_

Signature of Student: \_\_\_\_\_

Signature of Teaching Assistant: \_\_\_\_\_

Date: \_\_\_\_\_

To be retained by the faculty member. The student should make a copy for herself/himself.

Personal information on this form is collected under the authority of the University Of Ontario Institute Of Technology Act (2002), and will be used to ensure that all students are aware of laboratory guidelines and safety protocols at UOIT. Questions about this collection should be directed to the Manager of Administrative Services, Faculty of Energy Systems & Nuclear Science, UOIT, 2000 Simcoe Street North, Oshawa, ON L1H 7K4, (905) 721-3268.