MME safety protocols are guided by UW Policy 34 - Health, Safety and Environment.

MME requires all people who enter MME spaces to have appropriate training. This includes undergraduate students, graduate students, staff, faculty, other employees, and visitors. Appropriate and specific hazard training is prescribed based on the person’s activities as determined institutionally or by the supervisor and the individual.

This document is posted at hse.mme.uwaterloo.ca.

Listed below are the principal codes, standards, policies, and programs we follow and a description of our localized procedures. A training course summary with signup instructions are on the MME Safety Training Matrix at the end of this document.

### Accessibility for Ontarians with Disabilities Act

All UW workers must take AODA training as per Accessibility at Waterloo. Understanding accessibility can also be a critical component of safety.

note: The University’s AODA training is currently being revised and a new course will be published on December 3, 2019. When it becomes available all University employees will need to take or re-take this training.

### Biosafety

As per UW Safety Office - Biosafety Program. Program review and the online quiz are mandatory for all MME Technical Staff.

### Compressed Gas Cryogenic Liquid

As per UW Safety Office - Compressed Gas and Cryogenic Liquid Program. Program review and the online training and quiz are mandatory for all MME Technical Staff. Liquid nitrogen and dry ice must be obtained from Chem Stores where hands on dispensing training will be provided as applicable.

### Electrical Safety Certification

As per UW Safety Office - Electrical Equipment Approval. We log certification status in the MME Equipment Inventory inv.mme.uwaterloo.ca. The MME Technical Staff - Electrical Group are compliance resources. Review of the MME How to Get CSA Electrical Approval for Your Project (available at hse.mme.uwaterloo.ca) is mandatory for all students building projects with electrical components.
**Emergency Contacts**

As per [UW Safety Office - Emergency Contacts](https://www.uwaterloo.ca/safety/emergency-contacts).

An [online MME laboratory list](https://inv.mme.uwaterloo.ca) details emergency contact information including assigned technician and lab owner’s off-campus phone numbers. It’s critical that this information be kept up to date. Emergency Contact information will be used for incidents such as fire, floods, leaks, or break-ins so this number needs to be an out-of-the-office number such as your cell phone or home phone. This information is shared with the UW Police.

**Equipment Inventory**

The MME Equipment Inventory [inv.mme.uwaterloo.ca](https://inv.mme.uwaterloo.ca) keeps detailed equipment information such as electrical certification status, electronic copies of SOPs, and electronic copies of manuals. All research and teaching equipment must be in this inventory. Equipment owners must forward this information to their assigned technical staff for entry in the Inventory.

**Fire Extinguishers**

As per [UW Safety Office - Fire Safety](https://www.uwaterloo.ca/safety/fire-safety). Program review and [classroom training](https://www.uwaterloo.ca/safety/fire-safety) is mandatory for all MME Technical Staff.

**First Aid**

As per [UW Safety Office - First Aid](https://www.uwaterloo.ca/safety/first-aid). First aid training is encouraged for all employees. One day in-class [Emergency First Aid](https://www.uwaterloo.ca/safety/first-aid) is available for main campus employees. Two day in-class [Standard First Aid with CPR](https://www.uwaterloo.ca/safety/first-aid) is available for employees working at satellite campuses and employees supervising undergraduate student field work. First Aid Certification must be renewed every 3 years.

[Departmental First Aid Stations](https://hse.mme.uwaterloo.ca) are maintained at E3-2108H, E5-3111, ERC-3028, and FRF-1002.

**Forklift**

As per [UW Safety Office - Forklift Training](https://www.uwaterloo.ca/safety/forklift-training). Maintenance logs are kept online at [MME Forklift](https://mme.uwaterloo.ca). [Daily Inspection Logs](https://mme.uwaterloo.ca) are completed and physically kept on the forklift. Program review, classroom training, and certification are mandatory for MME Technical Staff - Mechanical Group. Certification must be renewed every 3 years.

**Hazard Disclosure**

All students working on physical projects must complete the [MME Hazard Disclosure](https://hse.mme.uwaterloo.ca) (available at [hse.mme.uwaterloo.ca](https://hse.mme.uwaterloo.ca)) and submit it to their supervisor.
Hazardous Materials Spills

As per **UW Safety Office - Hazardous Materials Spills**, Everyone who uses chemicals must be very familiar with the procedures relevant to their usage. **Oil Spill Kits** are maintained in E3-2137, E3-2105, DC-1709. **Mercury Spill Kits** are maintained in E3-2119.

Hazardous Waste

As per **UW Safety Office - Hazardous Waste Program**, Failures to properly manage Hazardous Waste have led to many serious incidents on campus and within MME. How you manage your Hazardous Waste must be documented in your Standard Operating Procedures.

Health and Safety Awareness

Everyone in MME must take the online **SO1001 Employee Safety Orientation** and the online **SO1081 Workplace Violence Awareness** training.

All MME Faculty and Regular Staff must take online **SO1100 Supervisor Orientation**.

All MME managers must take the in-class **SO1003 Supervisor Safety Training**.

Health, Safety and Environment Bulletin Boards

As per **UW Safety Office - Posting Requirements**, HSE bulletin board locations are E3-2108J, E5-3809, ERC-3028, and FRF-1002. An online MME HSE Bulletin Board [hse.mme.uwaterloo.ca](http://hse.mme.uwaterloo.ca) provides localized instructions and copies of posters.

Injury/Incident Reporting

As per **UW Safety Office - Incident And Hazard Reporting**.

All MME injuries and incidents must be immediately reported to your supervisor, the MME Lab Director, and the MME Safety Committee Chair.

All MME injuries or incidents must be reported to the Safety Office within 24 hours.

All MME reports must signed by the MME Chair before being submitted.
Laboratory Safety

As per UW Safety Office - Laboratory Safety Program. Program review and the online quiz are mandatory for all MME Technical Staff and anyone working in our research labs. In addition, all MME grad students must take the additional MME Lab Safety Course.

Laboratory Hazards Posters are located at the doors of all applicable laboratories.

Laser Safety

As per UW Safety Office - Laser Safety Program. All class 3b and class 4 lasers must have a permit issued by the Safety Office before the lasers are turned on. Program review and the online quiz are mandatory for all MME Technical Staff.

Lifting Devices

As per UW Safety Office - Lifting Device Program. Program review and Inspection of Slings & Chains classroom training are mandatory for all MME Technical Staff - Mechanical Group. All MME lifting devices are recorded in the MME Equipment Inventory inv.mme.uwaterloo.ca and include device details and last inspection date. All lifting devices are inspected annually via Plant Operations. All below-the-hook devices are inspected annually via the Safety Office.

Lockout Standard

As per UW Safety Office - Hazardous Energy Control. Equipment lockout procedures must be detailed in the equipment’s Standard Operating Procedures. Lockout hasps and padlocks for loan are kept by MME Technical Staff.

Nano Materials

As per UW Safety Office - Nano Materials Guide. Nano particles are relatively new and many nano safety procedures are not well defined. All nano users must be knowledgeable with CSA Z12885-12 (R2017) “Nanotechnologies - Exposure control program for engineered nanomaterials in occupational settings”

Portable Ladder Safety

Portable ladder safety classroom training is mandatory for all MME Technical Staff.

Radiation Safety

As per UW Safety Office - Radiation Safety Program. Program review and the online quiz are mandatory for all MME Technical Staff.
**Safeguarding of Machinery**

As per CSA standard **Z432-04 Safeguarding of Machinery**. The MME Technical Staff - Mechanical Group are compliance resources.

**Safety Basics**

All MME Undergrad Students must complete the **MME Safety Training Module and Quiz** on LEARN.

All other MME people including graduate students, staff, faculty, visiting faculty, post-docs, and TAs must complete the online **SO1001 Employee Safety Orientation**.

**Safety Posters**

As per **UW Safety Office - Posting Requirements**. An online HSE Bulletin Board [hse.mme.uwaterloo.ca](http://hse.mme.uwaterloo.ca) provides localized copies of all posters.

**Standard Operating Procedures (SOPs)**

SOPs must written for all equipment or procedures where a risk to the health and safety of students or employees has been identified and the **MME SOP template** should be used. SOP’s are stored online in the MME Equipment Inventory [inv.mme.uwaterloo.ca](http://inv.mme.uwaterloo.ca).

**Workplace Hazardous Materials Information System**

As per **UW Safety Office - WHMIS**. Safety Data Sheets and Workplace Labels are stored online at [msds.mme.uwaterloo.ca](http://msds.mme.uwaterloo.ca) and include location and MSDS issue date.

All employees must complete the **WHMIS 2015 for Employees training**. All students must complete the **WHMIS 2015 for Students training**.

**Workplace Inspections**

As per **UW Safety Office - Workplace Inspections**. Inspections are carried out as per the following:

<table>
<thead>
<tr>
<th>space</th>
<th>frequency</th>
<th>form</th>
</tr>
</thead>
<tbody>
<tr>
<td>labs*</td>
<td>monthly</td>
<td>UW Lab Inspection</td>
</tr>
<tr>
<td>rooms with first aid stations</td>
<td>monthly</td>
<td>UW Office/Classroom Inspection</td>
</tr>
<tr>
<td>storage rooms</td>
<td>monthly</td>
<td>UW Office/Classroom Inspection</td>
</tr>
<tr>
<td>classrooms</td>
<td>every term - 3 times per year</td>
<td>UW Office/Classroom Inspection</td>
</tr>
<tr>
<td>meeting rooms</td>
<td>every term - 3 times per year</td>
<td>UW Office/Classroom Inspection</td>
</tr>
<tr>
<td>offices</td>
<td>10% per year chosen randomly</td>
<td>UW Office/Classroom Inspection</td>
</tr>
</tbody>
</table>
* labs include any room where research is conducted, any room where student labs are run, computer labs, computer server and networking rooms

Inspections are assigned to staff as per an internal document. Any inspection that indicates actions are required is forwarded to the owner of the equipment and space. Serious hazards are dealt with immediately. Completed inspection reports are stored at wi.mme.uwaterloo.ca for 2 years.

**X-Ray Safety**

As per UW Safety Office - X-Ray Safety Program, Program review and the online quiz are mandatory for all MME Technical Staff.
# MME Safety Training Matrix v2019-11-01

<table>
<thead>
<tr>
<th>Course</th>
<th>ID</th>
<th>Type</th>
<th>Approximate Length</th>
<th>Admin Staff</th>
<th>Tech Staff</th>
<th>Faculty</th>
<th>Grads</th>
<th>Undergrads</th>
</tr>
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<tbody>
<tr>
<td>AODA</td>
<td>OPD101</td>
<td>online</td>
<td>1 hour</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Biosafety</td>
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<td>1 hour</td>
<td>x</td>
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<td>Compressed Gas Training</td>
<td>SO1030</td>
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<td>1 hour</td>
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<tr>
<td>Emergency First Aid</td>
<td>SO1038</td>
<td>classroom</td>
<td>8 hours</td>
<td>x</td>
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<tr>
<td>Employee Safety Orientation</td>
<td>SO1001</td>
<td>online</td>
<td>1 hour</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Fire Extinguisher Use</td>
<td>SO1088</td>
<td>classroom</td>
<td>1 hour</td>
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<td></td>
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</tr>
<tr>
<td>Forklift Training Theory</td>
<td>SO1027</td>
<td>classroom</td>
<td>4 hours</td>
<td>x *</td>
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<tr>
<td>Incident Investigation</td>
<td>SO1012</td>
<td>online</td>
<td>3 hours</td>
<td>x</td>
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<tr>
<td>Inspecting The Workplace</td>
<td>SO1007</td>
<td>classroom</td>
<td>3 hours</td>
<td>x</td>
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<tr>
<td>Inspection Of Slings And Chains</td>
<td>SO1035</td>
<td>classroom</td>
<td>1 hour</td>
<td>x *</td>
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<tr>
<td>Lab Safety</td>
<td>SO1010</td>
<td>online</td>
<td>1 hour</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Ladder Safety</td>
<td>SO1050</td>
<td>classroom</td>
<td>1 hour</td>
<td>x</td>
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</tr>
<tr>
<td>Laser Theory</td>
<td>SO1066</td>
<td>online</td>
<td>2 hours</td>
<td>x</td>
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<tr>
<td>MME Lab Safety</td>
<td>MME003</td>
<td>online</td>
<td>1 hour</td>
<td></td>
<td>x</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>MME Undergrad Safety</td>
<td>LEARN</td>
<td>online</td>
<td>1 hour</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Onsite Safety Inspection Training</td>
<td>MME001</td>
<td>online</td>
<td>1 hour</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radiation Open Source Safety</td>
<td>SO1013</td>
<td>online</td>
<td>1 hour</td>
<td>x</td>
<td></td>
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<tr>
<td>Radiation Safety Devices</td>
<td>SO1017</td>
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<td>1 hour</td>
<td>x</td>
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<tr>
<td>Radiation Safety Sealed Sources</td>
<td>SO1015</td>
<td>online</td>
<td>2 hours</td>
<td></td>
<td></td>
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<tr>
<td>Radiation Transportation</td>
<td>SO1021</td>
<td>online</td>
<td>2 hours</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Supervisor's Safety Awareness</td>
<td>SO1100</td>
<td>online</td>
<td>1 hour</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Supervisor's Safety Orientation</td>
<td>SO1003</td>
<td>classroom</td>
<td>3 hours</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>**</td>
</tr>
<tr>
<td>WHMIS 2015 For Employees</td>
<td>SO1002</td>
<td>online</td>
<td>1 hour</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>WHMIS 2015 For Students</td>
<td>LEARN</td>
<td>online</td>
<td>1 hour</td>
<td>x</td>
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<tr>
<td>Workplace Violence Awareness</td>
<td>SO1081</td>
<td>online</td>
<td>1 hour</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>X-Ray Safety</td>
<td>SO1011</td>
<td>online</td>
<td>2 hours</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* only mandatory for the Mechanical Group of MME Tech Staff  
** only mandatory for MME faculty with experimental research labs

## Notes

1. This list contains only the most common safety courses taken by MME employees.
2. x identifies mandatory courses for all people in each group.
3. An individual worker's additional required courses must be determined by the supervisor and the worker.
4. To sign up for Safety Office SO courses go to [https://uwaterloo.ca/safety-office/training](https://uwaterloo.ca/safety-office/training)
5. To sign up for the AODA course go to [https://uwaterloo.ca/human-resources/accessibility](https://uwaterloo.ca/human-resources/accessibility)
6. Take MME Lab Safety MME003 at [https://info.uwaterloo.ca/infohs/hse/online_training/MME/MME.html](https://info.uwaterloo.ca/infohs/hse/online_training/MME/MME.html)
7. Sign up for all other MME courses with the [MME Lab Director](https://info.uwaterloo.ca/infohs/hse/online_training/MME/MME.html)