CENTRE FOR EARTH
Observation Science

Student Handbook

Updated August 2019
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INTRODUCTION TO CEOS

WELCOME TO CEOS

Welcome to the Centre for Earth Observation Science (CEOS) at the University of Manitoba!

CEOS (umanitoba.ca/ceos) is a research centre within the Clayton H. Riddell Faculty of Environment, Earth, and Resources at the University of Manitoba, and has grown into an international research centre.

**VISION STATEMENT:**

*To be global leaders in research, education, training and public outreach on the science and technology related to Earth System Science.*

The mission of the Centre is to:

(i) facilitate and conduct research on aspects of the Earth system by using multidisciplinary approaches, creating partnerships with other academic institutions, industries, communities and government agencies;

(ii) create an environment that fosters the professional and personal development of early career scientists and staff by providing high-quality opportunities for research, education, training and outreach; and

(iii) communicate key research findings to the scientific community, partners and the general public using efficient and effective methods that reach the broadest audience.

The research conducted at the Centre is multidisciplinary and collaborative, seeking to understand interrelationships between elements of Earth systems and how these systems will likely respond to climate change. Although researchers have worked in many regions, the Arctic marine system has always been a unifying focus of activity. Areas of research activity evolve within the Centre but are currently focused on themes such as:

- Arctic Anthropology
- Atmospheric Studies/Meteorology
- Biogeochemistry
- Contaminants
- Earth Observation Science
- Ice-Associated Biology
- Inland Lakes and Waters
- Marine Mammals
- Modelling
- Oceanography
- Sea Ice Geophysics
- Traditional and Local Knowledge

Note: If you have any questions/concerns regarding the information presented in this handbook, or anything related to CEOS, please don’t hesitate to discuss those with the Executive Director.
In 2012, CEOS, along with the Greenland Institute of Natural Resources (GINR, Nuuk, Greenland) and the Arctic Research Centre (ARC, Aarhus, Denmark) established the Arctic Science Partnership (ASP), integrating academic and research initiatives. Over the past few years, ASP has grown to include other institutions and government agencies including Université Laval, Alfred-Wegner Institut, Lund University, University of Southern Denmark, University of Tromsø and Fisheries and Oceans Canada. This partnership is an extensive international research collaboration, enabling the world’s leading Arctic scientists to collaborate on projects, coordinated field campaigns, and to take advantage of infrastructure such as research vessels and field stations. As a member of ASP, there is also the opportunity to collaborate on publications, joint observations and data sharing, and to take part in developing new environmental Arctic technologies. All members of CEOS are considered members of ASP and we welcome you to sign up for their newsletter at asp-net.org.

We also encourage you to take advantage of the ISAAFFIK Arctic Gateway, which was founded by the ASP partners. Isaaffik.org is the site where you will get an overview of what’s going on in the Arctic scientific community, as it brings together universities, scientific organizations, and the Arctic Command (the Danish Coast Guard) who share their plans and offer logistical support and collaboration opportunities. Isaaffik provides interactive maps, timelines, education plans, safety courses and much more.

CEOS STAFF

CEOS can be found on the 4th and 5th floors of the Wallace Building, with the Administration office located at 535 Wallace. CEOS is a research centre composed of a variety of people fulfilling different roles. As a large research centre, CEOS incorporates traditional faculty/student roles along with more specialized personnel.

The faculty are teaching and research leaders, and are responsible for organizing research initiatives, securing grant funding, and teaching courses. These individuals are associated with different departments within the CHR Faculty of Environment, Earth, and Resources (Geological Sciences and Environment and Geography), as well as other faculties at the university. Each faculty member supervises graduate students/post docs and work with research associates to conduct original research and produce peer reviewed academic papers. Faculty members act as Principal Investigators (PIs) for projects and research studies, applying for grants and administering funds.

Technical Staff assists with research, typically in support roles. Technicians and Research Associates (RAs) are often equipment specialists and are knowledgeable about the purchasing, maintenance, utilization of equipment, modelling, etc. RAs conduct research alongside other members and assist students and researchers with specialized challenges.

The Administration team works in the background to keep the Centre running smoothly. All policies and processes for grants, purchasing, travel, payroll and human resources issues fall under the purview of administration.

For a list of faculty, staff and students, please refer to the CEOS website (umanitoba.ca/ceos).
INFORMATION FOR NEW STUDENTS:

ACCESS CARDS & KEYS

**Student Card** – Once you obtain your new student number, all new students will need to visit the ID Centre at the 400 level of University Centre for an ID card. To magnetize cards for access to CEOS labs and the 4th and 5th floors of Wallace after hours, you must see Tetyana Pavlyuk and fill out a Card Access form, which will be emailed to Physical Plant. You will need to go to Physical Plant (89 Freedman Crescent) to have your card swiped and entered in the system to gain access.

**Office keys** – Office key(s) are issued by Tetyana in the Administration Office (535 Wallace). Students are required to sign out the key(s) and pay a $25 deposit. Your deposit will be returned when you return the key(s) to the office at the end of your time at CEOS.

CLAIMING YOUR UM NET ID AND CARD

**UMNetID**: (username required for access to email, jump, internet, etc.). Staff must claim their UM Net ID online before their UM login ID is activated (student number required). Please claim your ID at umanitoba.ca/computing/ist/accounts/claimid.html. It is important that you read the Responsible Computer Usage Agreement while going through the Computer Account process.

OFFICE SPACE

Office space is assigned through the Space Committee, and students will be assigned to a desk in one of the four grad rooms in the Wallace Building. Grad desks are located in 463, 467, 579 and 587 Wallace. For security reasons, please make sure that the door is locked upon leaving the room, even if you are leaving for just a moment. CEOS cannot be responsible for the loss of personal items, including computers.

BOARDROOM USE

CEOS has two boardrooms between the two floors, 590 and 477 Wallace. Boardrooms are available for use by scheduling through the Administration Office. Please note that use of the boardrooms is for meetings and conference calls only, and are not to be used for personal reasons.

The Klaus Hochheim Theatre can also be used for specific events, such as guest lectures, or meetings. Please see the Administrative staff for assistance.
KITCHEN

There are two kitchens in CEOS, one on the 4th floor (room 459) and on the 5th floor (room 599). The kitchens are for general use. Please ensure that food is not kept in the refrigerators for an extended period (i.e. more than a few days) and that you clean up after any spills. General supplies such as dish soap and towels are provided by CEOS. To replace these items, please see John Iacozza (Executive Director). Also the towels and dish clothes should be washed periodically. It is encouraged that people in CEOS take these items home to be washed. It is the responsibility of all to keep the common areas clean.

PHOTOCOPIER/PRINTING

There is a combined photocopier/scanner/printer machine in rooms 598 and 463A of the Wallace Building. To use these machines, you must use a personal ID code to access the functions. Personal ID codes are confidential and are not to be shared. To obtain your personal ID code, please see Tetyana in 535 Wallace. For help in connecting/finding available printers on your computer, please contact the Faculty’s IT person, Jason Northage (Jason.northage@umanitoba.ca). Specialty printing (large format, bound, high quantity etc.) can be done through the University of Manitoba Digital Copy Centre. It is highly encouraged that all new students see Tetyana for a brief tutorial on the use of the photocopiers prior to use. There is a colour copier in the main administrative office. If you require anything printed in colour please send the document to Tetyana for printing.

In addition to printing, the machines in rooms 598 and 463A have the capabilities for scanning and faxing. Prior to scanning, your personal e-mail address must be entered into the system. Please see Tetyana to set up your scanning account. The fax number for our copier is 204-272-1532. There is no charge for incoming or outgoing faxes. For international (except US) faxes, dial 4 + 011 + country code + number. For national faxes and those to the US, dial 4 + 1 + number.

CEOS TRAVEL INFORMATION

All airfare travel arrangements must be booked through Carlson WagonLit (CWT) at 1-866-855-9850. Airfare should not be booked personally through an external website, as costs may not be reimbursed through the University. You will need to provide Carlson WagonLit with a FOP (a budget number provided by your Supervisor) and an RN# that you can retrieve at umanitoba.ca/expense_rn/ Students requiring travel assistance should see the Administrative staff.

Every student requiring reimbursement for travel must use the Guest/Student Travel & Business Claim Form to process their claim. You can find a fillable pdf version of this form at umanitoba.ca/admin/financial_services/media/Guest_Student_Travel_and_Business_Expense_Claim_form.pdf Please keep all receipts related to your claim as original receipts will need to be provided to Travel Services. Per Diem rates are based on the UM’s current policy which can be found at http://umanitoba.ca/admin/governance/media/Travel_and_Business_Expense_Claims_Procedure_-_2017_12_13.pdf
VEHICLE POLICY

CEOS has a number of vehicles including two cars (Toyota Corolla and RAV4) and two trucks that can be used for business purposes. Vehicles are available to CEOS graduate students with a valid driver’s license. Each vehicle request needs to be approved by David Barber (for trucks) or John Iacozza (for cars). Once authorization is granted (with email confirmation), vehicles need to be signed out at the Administration Office.

Parking of the vehicles is restricted to the assigned area for CEOS near St. Andrew’s College. CEOS vehicles must not be parked anywhere else on campus except at the user’s personal expense. All parking or traffic violations are the responsibility of the user and will not be paid by CEOS.

Please be respectful to all users and guests by keeping the vehicles full of gas and tidy. All users must enter required information in the log book that accompanies the keys to the vehicles. Accidents and breakdowns/mechanical issues must be reported immediately to the Executive Director, and/or Administrative staff. A list of CEOS phone numbers can be found in the log books.

NOTE: Fuel and mileage must not be claimed as a travel expense when using CEOS vehicles and fuel cards.

PAYROLL REQUIREMENTS

All new students must submit documentation to the Administration staff before they can be paid by CEOS. We will need the information below from all new students:

- Contact information (e-mail, phone, address etc.)
- Personal Information Form
  [umanitoba.ca/admin/human_resources/service_centre/media/PIF.pdf](umanitoba.ca/admin/human_resources/service_centre/media/PIF.pdf)
- Copy/Scan of SIN card
- Direct deposit & TD1 forms submitted directly to payroll by student
- International staff must also provide a copy of their work/study permit.

GRADUATE PROGRAM HELP

For Graduate Program help and information, please see the Faculty’s Graduate Student Coordinator, Celia Mellinger in the Dean’s office. Celia can be reached at (204) 474-6183, or by email at Riddell.Graduate@umanitoba.ca

For financial support, including Northern Studies Training Program (NSTP), University of Manitoba Graduate Fellowship (UMGF) or other funding, please see your supervisor for guidelines. Information can also be found at: [umanitoba.ca/faculties/graduate_studies/funding/](umanitoba.ca/faculties/graduate_studies/funding/).
HOLIDAYS AND VACATION

Manitoba's Statutory Holidays

The University of Manitoba is closed for the province’s statutory holidays, as well as, between Christmas and New Year’s Eve. However the university is open during fall and spring breaks. Please visit the following website for current holiday closures.

umanitoba.ca/admin/human_resources/service_centre/resources/holiday-closures.html

Dates of university closure:

- New Year’s Day (January 1)
- Louis Riel Day (3rd Monday in February)
- Good Friday
- Victoria Day (Monday preceding May 25)
- Canada Day (July 1)
- Labour Day (1st Monday in September)
- Thanksgiving Day (2nd Monday in October)
- Remembrance Day (November 11)
- Christmas Day (December 25)

TRAVELLING TO THE UM

The University of Manitoba is located in the south end of Winnipeg and is well connected to city transit (bus) and is relatively easy to get to via car or bicycle. Helpful info on getting to the UM can be found below:

Winnipeg Transit: winnipegtransit.com/en
Cycling Routes: winnipeg.ca/publicworks/MajorProjects/ActiveTransportation/
Parking Services: umanitoba.ca/parking/
Taxi Services: unicitytaxi.mb.ca/ duffystaxi.ca

SECURITY CONTACTS

Security Services on campus 204-474-9312
Campus emergency number 555
John Iacozza, Executive Director 204-474-8483 (office) or 204-771-1570 (cell)
Emmelia Stainton 204-272-1537
COMMUNICATIONS:

MAIL

Our mail is sorted by the Dean’s office and then picked up by the CEOS Administrative staff, where it is redistributed to mailboxes in the lab hallway on the 4th floor. Students can find their mail alphabetized by last name in the student mail slots on the left side. All personal cheques/important mail will be held by Administrative staff and the recipient will be notified by e-mail to pick it up.

Close to fiscal year-end, an e-mail will be sent to remind everyone to pick up their remaining regular mail. If mail is not picked up by April 1, it will be shredded for confidentiality reasons.

If you are expecting mail to be delivered to the UM, please use the following address:

Your name
____ (your room number) Wallace Building
125 Dysart Road
Clayton H. Riddell Faculty of Environment, Earth, and Resource
University of Manitoba
Winnipeg, Manitoba R3T 2N2

EMAIL

Your email signature is as important as any other part of your work here at CEOS. Having an email signature is like handing a person a business card every time you send an email. Not having consistent, branded signatures on emails can have a negative impact on our Centre’s reputation as it can come across as unprofessional and unkempt. To keep CEOS email signatures consistent, please follow the email signature template below when setting up your email account.

Your name
PhD Student or MSc Student
Centre for Earth Observation Science (CEOS)
Arctic Science Partnership (ASP)
____ (room number) Wallace Building
125 Dysart Road
University of Manitoba
Winnipeg, Manitoba R3T 2N2
OUTREACH

There are a number of outreach events throughout the year that CEOS engages in, and we encourage staff and students to be a part of. A few of the events that we are involved in are Arctic Science Day, Let’s Talk Science and Science Rendezvous. Special arrangements can also be made to deliver lectures at participating Elementary and High Schools.

Arctic Science Day is a collaborative effort between FortWhyte Alive and CEOS. The day focuses on bringing Arctic scientists from the University of Manitoba together with high school students in an outdoor learning environment on the grounds of FortWhyte Alive. Scientists demonstrate and involve students in sampling techniques while communicating the importance of conducting research in the Arctic.

Let’s Talk Science Day gives us the opportunity to share our knowledge to inspire and engage school aged kids, helping them to discover the relevance of science in their own lives. A number of stations are set up throughout CEOS where we engage young minds in hands-on/mind-on activities.

Science Rendezvous is a science carnival geared towards the whole family and provides a free day of fun and discovery for all ages. Hosted by the University of Manitoba, Science Rendezvous offers activities, interactive exhibits, hands-on displays, and free shows. CEOS, along with other departments from across campus are eager to share their passion for discovering the unknown and seeing the world in a brand new way.

More information on the above and other events throughout the year will be emailed to CEOS well in advance before the date. We are always looking for volunteers!

WEBSITE

The CEOS website should be viewed as a portal in which those outside of campus get an opportunity to connect with us, and view what we do. Our website (umanitoba.ca/ceos/) promotes us 24/7 and when people visit our site, they see it as a reflection of our organization. The website highlights our research and the layout looks harmonious and consistent. The website should also contain information that will not go out of date quickly.

The website is organized with three main sections: (i) personal information including name, position and department, education, supervisor; (ii) research interest; and (iii) contact information. The research interest section should be more than a single statement and focus specifically on your area of research at CEOS. You can include projects that you are working on/have worked on in this section.

In an effort to strive for consistency, we have attached a website template in the Appendix to help us standardize CEOS profiles. Please complete the form, and send it along with an appropriate picture of yourself to Tetyana, for posting on the website.
CEOS has multiple research labs that house a variety of research equipment. Field equipment and other research instruments are also stored in CEOS’s equipment storage room in the basement of Wallace Building or within the storage space at Sea-ice Environmental Research Facility (SERF) on campus. Please see Emmelia Stainton for basement storage needs and access. Equipment should not be removed without the proper consent from the owner of the equipment.

All CEOS labs are shared use with few exceptions. Laboratory spaces are restricted to staff and students preparing for field programs, maintaining and testing equipment, and conducting laboratory-based research. If your project requires the use of laboratory space, please identify these needs early on in your project or field preparation and communicate these needs to your supervisor and Emmelia to ensure they can be met.

All lab users must complete a lab safety checklist document (see Appendix) and walk-through with the lab manager, and have all necessary safety training and education required for the use of instruments and chemicals. For project-owned lab equipment please see the responsible lab manager or technician for storage and use.

**CEOS LABS:**

- SERF – 30 Service Road 2 SW, Fort Garry Campus

4th Floor:
- Stable Isotope Lab – 410 Wallace
- Ar-Ar Lab – 419 Wallace
- SIMS Lab – 431 Wallace
- Meteorological Lab – 488 Wallace
- Sediment Lab – 486 Wallace
- Cold Lab – 490 Wallace
- Calibration Lab – 492 Wallace
- Workshop – 494 Wallace

5th Floor:
- UCTEL – 529 Wallace
- Microscope Lab – 537 Wallace
- Metals Extraction – 537A Wallace
- Geochemistry Lab – 539 Wallace
- Prep Lab – 544 Wallace
- Organics Lab – 548 Wallace
- PETRL Lab – 552 Wallace
- Freezers – 560 Wallace
- Filtration Lab – 562 Wallace
- Water Chemistry Lab – 566 Wallace
- Electromagnetics Lab – 570 Wallace

The workshop in room 494A is available to all CEOS staff and students to use for work-related projects. Tools are to be used in room 494A only, **do not remove** tools from this space. Tools required for a specific field program are to be purchased and maintained by the project PI.

**Workshop Use Protocol:**

1. All staff and students are required to read all safe work procedures and receive a safety tutorial from your supervisor/lab manager prior to using any power tools.
2. Safety glasses, dust masks (if cutting anything with odour or dust), and closed-toed shoes are required while operating all power tools.
3. It is the user's responsibility to clean up the workshop space after each use.
FIELD SAFETY TRAINING

It is the responsibility of the PI/supervisor to ensure their staff and students have all necessary safety training for their specific field program. This may include: Firearms Safety training and application for Firearms Possession and Acquisition License, First-Aid, fall arrest training, snowmobile operation and safety training, cold water safety and rescue training, and Small Craft Operator license. Many of these safety training courses are organized by Emmelia on regular basis. Please allow several months’ notice if staff/students require this training as courses are time consuming to organize and often require a minimum number of participants. Some of the courses are not offered through CEOS and it is the students/supervisors responsibility to organize attendance and certification. If you have any questions, please see Emmelia for more information.

WHMIS TRAINING

Workplace Hazardous Material Information System (WHMIS) is a global hazard communication system recognized by the World Health Organization (WHO) providing employers and their employee’s information about hazardous products they work with or are in close proximity to.

WHMIS legislation is a joint effort between a variety of stakeholders, including industry, and provincial and federal governments. In Manitoba, the WHMIS requirements are set and enforced by the Workplace Safety and Health Regulations. It was created as a response to a workers “right to know” about both the safety and health hazards associated with the materials they might use at work, to reduce injuries and illnesses associated with handling hazardous materials in the workplace.

WHMIS is composed of 3 main elements to communicate the hazards of controlled products:

1. Labels – affixed to containers of hazardous materials and provides information regarding the hazards
2. Safety Data Sheets (SDS) – provide supplementary information to hazards outlined on the labels
3. Education – education on how to use the information provided, and training on how to safely handle hazardous products

Training Sessions

WHMIS training is required by anyone working in a laboratory within CEOS, as well as offsite in CEOS related field programs. The Clayton H. Riddell Faculty of Environment, Earth, and Resources offers 3 in-class training sessions throughout the year:

- September (Instructor: Misuk Yun),
- February (Instructor: Marcos Lemes),
- May (Instructor: Debbie Armstrong)

There is an online version on UMLearn: umanitoba.ca/admin/vp_admin/risk_management/ehso/chemical_safety/6336.html. For more information, on WHMIS please see Debbie.
Appendix:
TEMPLATE FOR STUDENTS WEBSITE PROFILE

Name:

Position:

Department:

Supervisor:

Education:

Research Interests:

Contact Information:

Room # Wallace Building
Centre for Earth Observation Science (CEOS)
Arctic Science Partnership (ASP)
125 Dysart Road
University of Manitoba
Winnipeg, MB
R3T 2N2

Email
**LABORATORY SAFETY CHECKLIST FOR NEW LAB PERSONNEL**

- PI/Lab Supervisor should discuss the following statements/questions with the new lab personnel before they start work in the laboratory.
- When completed and all signatures have been obtained, the checklist should be submitted to and kept by the WHMIS Coordinator, BEFORE lab keys can be issued.

Please Print

<table>
<thead>
<tr>
<th>Name:</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone #:</td>
<td>Department:</td>
</tr>
<tr>
<td>Principal Investigator/Official Supervisor:</td>
<td>Building and Room #</td>
</tr>
<tr>
<td>Biosafety Permit #</td>
<td>Radiation Safety Permit #</td>
</tr>
</tbody>
</table>

The questions on page three can be used as a template for discussion in conjunction with the questions below.

<table>
<thead>
<tr>
<th>YES</th>
<th>N/A</th>
<th>STATEMENT/QUESTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>PI/Supervisor has discussed the nature of the research/project being conducted in the laboratory.</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>PI/Supervisor has discussed hazardous components of the research including reference to the following as applicable.</td>
</tr>
<tr>
<td></td>
<td>a.</td>
<td>Chemical</td>
</tr>
<tr>
<td></td>
<td>b.</td>
<td>Biological</td>
</tr>
<tr>
<td></td>
<td>c.</td>
<td>Physical (including temperature, electrical, lifting/ergonomic, hi/low pressure, sharps)</td>
</tr>
<tr>
<td></td>
<td>d.</td>
<td>Radioactive Materials</td>
</tr>
<tr>
<td></td>
<td>e.</td>
<td>Radioactive Emitting Devices (REDS or X-ray Equipment)</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>PI/Supervisor has identified the location of Material Safety Data Sheets (MSDS) and chemical inventories to the employee/student and demonstrated methods of access.</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>Immunization requirements have been identified and offered if the employee will be working with/near vaccine-preventable human or animal pathogens or potentially infectious material. Contact EHSO Occupational Health Coordinator (474-6438) if you require assistance with this risk assessment.</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>PI/Supervisor has discussed the need for the employee/student to inform health care providers of the nature of the laboratory research during an accident or post-exposure medical visit.</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>PI/Supervisor has reviewed the site-specific laboratory safety requirements with the employee/student, including working alone, personal lab hygiene and responsibilities for safety, site specific waste procedures, and emergency response contacts.</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>Hazard assessment, use and limitations information concerning Personal Protective Equipment (PPE) required in laboratory has been reviewed and personnel have been provided with the appropriate personal equipment required (lab coat(s), safety glasses/goggles, gloves) and shown location of shared PPE (e.g. face shields, temp resistant gloves)</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>Does the employee/student need a respirator? ( ) YES ( ) NO If yes, arrange for exposure evaluation, training and fit testing through the Environmental Health and Safety Office at 474-6633.</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>Has the pertinent procedures for emergency response been identified to the employee/student for:</td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td>---</td>
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<td></td>
</tr>
<tr>
<td>a. Spills, Ventilation/fume hood failures, etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Fire (Fire procedures and Fire Marshall identified?)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Personal injury and/or medical emergency (First aid responders identified?)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Accident/Incident reporting procedure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Have all Safety and Emergency Equipment <strong>locations and procedures</strong> been identified to the employee/student?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Emergency Shower</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Emergency Eyewash</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Fire Alarm Pull Station</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d. Fire Extinguisher</td>
<td></td>
</tr>
<tr>
<td></td>
<td>e. First aid and Spill Kits</td>
<td></td>
</tr>
<tr>
<td></td>
<td>f. Emergency Contact Phone #s</td>
<td></td>
</tr>
<tr>
<td></td>
<td>g. Fume Hoods</td>
<td></td>
</tr>
<tr>
<td></td>
<td>h. Biological Safety Cabinets (BSC)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>i. Flammable Storage Cabinets</td>
<td></td>
</tr>
<tr>
<td></td>
<td>k. Others</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Have the site-specific waste procedures and locations of the Hazardous Waste Wall Charts (Lab waste, Biohazardous waste, Radioactive waste) been identified and explained to the employee/student:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Solvents?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Acids/bases?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Radioactive material?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d. Sharps/broken glass?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>e. Biohazardous material?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>f. Animal carcasses?</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Has the PI/Supervisor reviewed with the employee/student, the laboratory signage system and entrance requirements as indicated on the door? Contact EHSO 474-6633 for information on installation of door signage.</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>If radioactive materials are used in the lab, has the employee/student been made aware of the radiation safety awareness training? Contact EHSO at 474-6633 to register.</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>If a biological material user, has the employee/student signed up for generic BSC and Biosafety training. Call 474-6633.</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>All new lab personnel must view the &quot;Basic Lab Safety and WHMIS&quot; presentation and write and pass the test. WHMIS Coordinator signature below** indicates that this has been documented.</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>If radioactive material will be used by the new personnel, has the employee/student been added to the Internal Radioisotope Permit and registered for training? Call 789-3613</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>The new employee/student understands that the PI/official supervisor can/should be contacted at any time to discuss safety concerns.</td>
<td></td>
</tr>
</tbody>
</table>

**WHMIS Coordinator**  
__________________________________________

The signatures below indicate that the above material has been reviewed with this employee/student and the employee/student agrees to follow the prescribed lab and departmental safety procedures:

**Employee/Student**  
__________________________________________

**Principal Investigator/ Official Supervisor**  
__________________________________________

*Official Supervisor is a person whose supervisory responsibilities are defined in their job description*
Discussion questions for PI and new Lab Personnel

1. What are the hazards for 2-3 of the most hazardous/toxic chemicals or solutions that you use?

2. Are your lab’s working solutions, and your own labeled with completed, individual WHMIS labels?

3. What is your work alone policy? You need to have contact with someone who has access to the floor you are working on and a key to the space so they can come find you. When working in freezers, you need a 15 minute check-in schedule and if using the band saw you need a buddy present.

4. We are working in an open lab environment where people have access to several labs. Discuss the rules associated with using other labs:
   - You need permission to work in other labs from senior staff
   - A safety walk-through must be conducted before access is allowed
   - There is no removal of equipment without permission
   - Do not use consumables that do not belong to your group without permission. For example: gloves, kimwipes, tips/pipets, beakers, chemicals, etc.
   - If you are going to use other labs outside of regular hours please request permission.

5. When your experiments require use of a chemical or biological material that you haven’t used before, what steps do you take before using it?
   - Consult with the safety data sheets
   - Do some research on its reactivity
   - Speak with your PI or senior staff
   - Make sure you have the correct PPE (personal protective equipment)
   - Be clear on how to dispose of any waste

6. You are working late in the lab and have a major spill of one of the hazardous materials you are working with. What should you do?
   - Spill kit? Can you handle this cleanup, or do you need to call for help? Senior Staff or PI for assistance.
   - Call security services from wall unit outside the theatre, office phone dial 555, cell phone #555 if on MTS or Rogers, or dial 204-474-9341

7. Considering your project as a whole, what are the major points in your own work where a risk is encountered and how do you plan to contain these risks? Please revisit these procedures regularly with PIs.

Biological Risks

8. What biological risk agents or potential infectious material do you work with?

9. What are the symptoms of infection with this material?

10. How do you protect yourself and your co-workers while working with these materials?