



Bachelor of Health Sciences
in
Medical Laboratory Science (MLSc)

Program Handbook

2023.2024

IMPORTANT NOTE: This handbook is not a substitute for the calendar. The University Undergraduate Academic Calendar reflects the most recent policy information and will serve as the primary location for policy related decisions. It is the student's responsibility to ensure **ALL** degree and program requirements are met.

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1.0 INTRODUCTION

1.1 Vision Statement

The Medical Laboratory Science graduates excel as innovative practitioners committed to excellence and a collaborative and healthy work environment. These graduates play a pivotal role in the provision of quality health care and in scholarship for the advancement of self, the profession, and society.

1.2 Mission Statement

The Medical Laboratory Science program prepares highly skilled graduates who are committed to excellence, innovation and evidence based practice in a rapidly changing health care environment. Throughout the program, there is an emphasis on collaboration, accountability, leadership and research as the foundation of evidence.

1.3 Program Values

Quality
Accountability
Safe and Ethical Practice
Academic Rigour
Collaboration

1.4 Program Goals: Overarching and Years 1-4

- Prepare graduates to successfully challenge the CSMLS examination through attainment of the competencies stated in the provincial and national competency profiles.
- Prepare graduates that excel as entry-level technologists.
- Provide a leading edge educational experience that provides academic depth and breadth to support professional advancement and entry to graduate school.
- Provide opportunities for technology enhanced experiential learning in both the classroom and the laboratory.

Year One

- Develop knowledge of general safe laboratory practice, proceeding to the ability to consistently demonstrate safe laboratory practice.
- Develop foundational knowledge in basic sciences including chemistry, biology, anatomy and physiology, and in mathematics and academic writing.

Years Two and Three

- Demonstrate knowledge of the roles and responsibilities of a medical laboratory professional within the Canadian healthcare environment, including the patient's right to a reasonable, safe standard of care.
- Demonstrate knowledge of professional practice standards in the areas of ethical practice, communication, accountability, teamwork, managing conflict and reflective practice.

- Demonstrate a consistently high level of biosafety and safe practice, proceeding to a consistently high level of safe laboratory practice.
- Develop competence in the pre-analytical phase of laboratory processes; specimen procurement, sample processing and resource management
- Develop competence in the analytical phase of laboratory processes in the areas of Biochemistry, Hematology, Microbiology, Microanatomy, Histotechnology, and Transfusion Science, including quality control, interpretation and assessment.
- Develop competence in the use of molecular techniques and their application in diagnostics and research.
- Develop competence in the post analytical phase of laboratory processes including quality management, effective leadership skills and interprofessional practice.
- Demonstrate the ability to work and problem solve independently.
- Demonstrate the ability to apply appropriate data to the decision making process.
- Develop an attitude of inquiry in research.

Year Four

- Demonstrate competence as an entry level medical laboratory science professional as defined by national and provincial competency profiles and standards.
- Demonstrate an enhanced understanding of professional practice standards.
- Demonstrate an attitude of inquiry in research and preparedness to follow a graduate studies pathway.
- Demonstrate an understanding of the roles and responsibilities of a medical laboratory professional within the rapidly changing and complex health care environment including the impact of assuming an informal and/or formal leadership role.

1.5 CSMLS Competencies

CSMLS Competencies Expected of an Entry Level Medical Laboratory Technologist can be found at <https://www.csmls.org/Certification/Certification-Exam/Competency-Profiles.aspx>

These competencies are the foundation on which the BHSc in Medical Laboratory Science Program has been built.

1.6 Support & Accommodations

1.6.1 Faculty and Staff Directory

Refer to <https://ontariotechu.ca/directory/>

1.6.2 Accommodation

Disability-related support and accommodation support is available for students with mental health, physical, mobility, sensory, medical, cognitive, or learning challenges. Office hours are 8:30am-4:30pm, Mon-Fri. For more information on services provided, you can visit the Student Accessibility Services (SAS) website at <https://studentlife.ontariotechu.ca/services/accessibility/index.php>

Students may contact Student Accessibility Services by calling 905-721-3266, or email studentaccessibility@ontariotechu.ca

Ontario Tech University is committed to the prevention of sexual violence in all its forms. For *any* student who has experienced sexual violence, the University will make accommodations to cater to the diverse backgrounds, cultures, and identities of students when dealing with individual cases.

- If you have been subjected to or witnessed sexual violence: Reach out to a Support Worker, who are specially trained individuals authorized to receive confidential disclosures about incidents of sexual violence. Support Workers can offer help and resolutions options which can include safety plans, accommodations, mental health support, and more. To make an appointment with a Support Worker, call 905.721.3392 or email supportworker@ontariotechu.ca
- Learn more about Ontario Tech University sexual violence support and education at: <https://studentlife.ontariotechu.ca/sexualviolence/>

1.7 Academic Schedule 2023-2024

Refer to Ontario Tech University Academic Calendar <https://ontariotechu.ca/current-students/academics/academic-calendars/index.php>

2.0 PROGRAM PROFESSIONAL SUITABILITY

The following requirements are in place to ensure the provision of competent, safe and ethical practice while students are registered in MLSC designated courses.

2.1 Requirements for Safe Practice

In order to be eligible to participate in MLSC designated courses students will be required to meet specific requirements for safe practice within established timelines as stated in the Medical Laboratory Science Program Handbook and Biosafety/Safety Manual, the discipline specific laboratory standard operating procedure manuals and practicum handbooks. These requirements include the successful completion of all prerequisite course work, health and safety requirements, and a criminal reference check. Students who do not successfully meet the requirements for safe practice will not be approved to participate in MLSC designated courses and will be required to withdraw from their respective courses until the next time the course is offered and the requirements are met.

2.2 Clinical Review

A student on placement in a clinical setting, who has exhibited behaviour that is inconsistent with the norms and expectations of the profession, or that places the student, patients or others at risk, may be immediately suspended from the program and subject to a review and possible sanctions, in accordance with the Professional Unsuitability section of the Undergraduate Academic Calendar.

2.3 Ensuring Entry to Practice Suitability

One or more laboratory evaluation components of the MLSC courses may involve timed elements. In order for students to be able to meet the expectations of quality and safe patient

care in the clinical setting, the timed element of these evaluation components cannot be waived or extended. Students registered with Student Accessibility Services (SAS) must discuss time limitations with their advisor and subsequently with the course professor.

3.0 PROGRAM PROGRESSION REQUIREMENTS

3.1 Progression

Across the Program

1. A student must achieve a minimum grade of C in all professional medical laboratory courses (MLSC) in order to pass the course. Students who earn a grade lower than a C in any of the courses designated MLSC will be put on program probation, regardless of their overall GPA. A second grade of less than C in any repeated MLSC designated course will result in an academic standing of Program Dismissal.
2. Also, a total of three failures in any combination of required HLSC or MLSC courses will result in an academic standing of Program Dismissal. Additionally, students who have failed a third attempt of any required program course will be dismissed from the program as per the university's repeat policy.
3. In addition, a student who has two withdrawals from a single MLSC course and/or a total of three withdrawals from a combination of required HLSC or MLSC courses will be program dismissed.

Students who are dismissed from the program, but have maintained the academic standing to remain at the university, may apply for a change of program.

MLSC 1000 and 2000 Level Courses

In addition to the above requirements:

- The student must have an **overall minimum of 60%, plus**
- **A minimum of 60% in both theory and practical, plus**
- **A minimum of 50% on both the final theory and practical exams**

MLSC 3000 Level Courses

In addition to the above requirements:

- The student must have an **overall minimum of 60%, plus**
- **A minimum of 60% in both theory and practical, plus**
- **A minimum of 60% on both the final theory and final practical exams.**
- Failure in 3000 level MLSC designated courses will result in enrollment in a **self-directed, personalized learning plan** to facilitate success in the program. Compliance to learning plan conditions is tracked and documented. Noncompliance may impact student's professional conduct evaluation.

MLSC 4000 Level Courses

Each MLSC designated 4000-level discipline/professional practice practicum course is made up of a pair of 1.5 credit courses i.e. full year course. Failure in any required component (i.e. technical competencies, discipline exam, professional component) of a 4000-level practicum course constitutes a failed rotation. Students must obtain a **minimum of 65% on all discipline examinations.**

Discipline Exams

For 4000 level MLSC discipline courses, where a student does not achieve the required 65% on the first attempt at a discipline exam, **only one supplemental attempt is allowed** with agreement of Clinical Instructors. If the student is unsuccessful on the supplemental attempt, the discipline course will remain incomplete until the conclusion of practicum. Further supplementals will only be granted following consultation by the Dean, Program Director, Practicum Coordinator and Academic Advisor.

No further supplemental exams will be allowed after two failed discipline exams. The discipline course(s) will remain incomplete until the conclusion of practicum. Further supplementals will only be granted following consultation by the Dean, Program Director, Practicum Coordinator and Academic Advisor.

In addition, no further supplemental exams will be allowed after the following:

- 3 unsuccessful attempts at a discipline exam.
- A combined total of 10 discipline exams i.e. across all 5 disciplines.

The discipline course(s) will remain incomplete until the conclusion of practicum. Further supplementals will only be granted following successful appeal.

Project Course

MLSC 4400 and 4401 are two 3 credit courses. Required course components include:

- Literature review. Must obtain a **minimum of 60%.**
- Clinical project. Must obtain a **minimum of 60%.**

Overall

In addition to the above requirements:

- The **failure of three MLSC designated 4000-level practicum courses** may result in withdrawal standing and removal from the medical laboratory science program.

4. Missed Exams

Mid-Semester Laboratory Exam

There will be no opportunity provided to complete a missed mid-semester laboratory exam. **Following approval of appropriate documentation** explaining the absence, the weight of this missed exam will be allocated to the final laboratory exam. In the absence of documentation, zero will be the mark awarded for this assessment. On a case by case basis, where the missed material/skills are not formally evaluated elsewhere, a supplemental mid-semester laboratory exam may be given.

Mid-Semester Theory Exam – Course with Two Midterms

There will be no opportunity provided to complete a missed mid-semester theory exam **if** the course has two mid-semester theory exams. Following approval of appropriate documentation explaining the absence, the weight of the missed exam will be allocated to the final theory exam. In the absence of documentation, zero will be the mark awarded for this assessment.

Mid-Semester Theory Exam – Course with One Midterm

A deferred mid-semester theory exam may be offered following approval of appropriate documentation where only one mid-semester theory exam is scheduled. It is the student's responsibility to provide the appropriate documentation as soon as possible following the missed exam and to discuss, with the course instructor, the timing of a deferred mid-semester theory exam for courses that have only one mid-semester theory exam.

Final-Semester Laboratory Exam

A deferred final-semester laboratory exam may be offered following approval of appropriate documentation. It is the student's responsibility to provide the appropriate documentation as soon as possible following the missed exam and to discuss, with the course instructor, the timing of a deferred final-semester laboratory exam. In the absence of documentation, zero will be the mark awarded for this assessment.

Final-Semester Theory Exam

A deferred final-semester theory exam may be offered following approval of appropriate documentation. It is the student's responsibility to provide the appropriate documentation as soon as possible following the missed exam and to discuss, with the course instructor, the timing of a deferred final-semester theory exam. In the absence of documentation, zero will be the mark awarded for this assessment.

5. **Professional conduct evaluations** are used to assess the students' behaviour in the laboratory and other learning settings throughout the students' enrolment in the Medical Laboratory Science program. The MLSc Professional Conduct Evaluation assesses student safety and professionalism and is independent of the successful completion of MLSC courses with the exception of MLSC 3300 Simulated Practicum. As an **essential component of MLSC 3300**, students cannot proceed to practicum without successful completion of the professional conduct evaluation.

Each student is assessed individually using **feedback from all MLSc instructors** based on behaviour demonstrated in all MLSC courses in which students are enrolled in the relevant semester. A clear understanding of behaviour expectations for each of the competencies on the part of the student is critical. The professional conduct evaluation will be introduced at the beginning of each academic year in order to provide an opportunity for students to clarify the behaviour expectations identified in this document. When necessary, consultation with students will be conducted by the MLSc Practicum Coordinator and other MLSc faculty members as appropriate. Professional conduct evaluation also occurs throughout the practicum semesters.

3.2 Progression Review

The MLSc program instructors will regularly assess students' performance within a course. Decisions about a student's progress in the program are based on documented standards.

- On the first day of class, MLSC course outlines will be available for review. Outlines will detail the type, timing and weight of all evaluations included in the course. No changes to the course outcomes can be made. Changes to the evaluation type, timing and weight can only be made with appropriate consultation with the class and approval from the Program Director.

- Students will receive written evaluative feedback and/or at least one mark prior to the voluntary withdrawal deadline specified in the calendar.
 - Students at risk mid-semester will be identified by the instructor to the program director, who will send a reminder notice to the student to review their performance with the relevant instructor.
 - For students in the practicum component of the program, academic files will be reviewed by the practicum coordinator and program director as needed.
 - Students who have not been successful in meeting MLSc course/program requirements by end of semester, and wish to appeal their academic standing, will follow the established policies and procedures (see below).

3.3 Student Academic Appeals

3.3.1 Academic Standing

Refer to Ontario Tech University Academic Calendar <https://ontariotechu.ca/current-students/academics/records-and-scheduling/student-records/academic-standing.php>

3.3.2 Grade Changes

Refer to Ontario Tech University Academic Calendar <https://usgc.ontariotechu.ca/policy/policy-library/policies/academic/grading-system-and-academic-standing-policy-undergraduate.php>

3.3.3 Grade Reappraisal and Appeals

Refer to Ontario Tech University Academic Calendar <https://registrar.ontariotechu.ca/services/appeals.php>

3.3.4 Other Academic Policies

Refer to Ontario Tech University Academic Calendar <https://ontariotechu.ca/current-students/academics/academic-calendars/index.php>

4.0 ATTENDANCE, PROFESSIONAL AND ACADEMIC EXPECTATIONS

4.1 Attendance and Safety

The University believes that a student will make reasonable and informed decisions regarding his or her attendance at scheduled sessions. Attendance at lectures, tutorials, seminars, laboratories and clinical education sessions is essential to the successful completion of the MLSc program of study. Both theoretical curricula, which may be presented in lectures, tutorials and seminars, and laboratory sessions and practicum are essential to the development of clinical skills.

Because of the nature of the specimen preparation for Medical Laboratory Science laboratory sessions and the progressive nature of laboratory session topics, there will be no makeup laboratory sessions. As competence acquisition is essential to the practice of Medical

Laboratory Science, attendance at 90% or more of the laboratory sessions in each MLSC course is required or a failing grade will be recorded for the laboratory component. Students must notify the instructor of a planned absence prior to missing the laboratory session.

Please note that there will be an impact on theory and laboratory marks for lateness, absences and serious safety infractions. The specifics are outlined below and are detailed in each MLSC course outline.

Safety infractions in the laboratory are considered to be very serious. A mark of zero will be awarded if a serious safety infraction occurs although some latitude/discretion on the part of the laboratory instructors may be exercised based on the seriousness of the infraction and the stage of the learning process. If safety infractions occur repeatedly, an incident report will be completed and forwarded to the Program Director. A second documented safety infraction will result in an interview regarding suitability to continue in the program.

4.2 Dress Code for Both Safety and Professionalism, Use of Electronic Devices in the MLSC designated laboratories

- Safe footwear consisting of closed toes with medium height heels and having a non-slip sole is required.
- Long hair must be tied back. A simple rule is: If hair can be tied back, it must be tied back. Barrettes and combs must be professional in appearance. No hats are allowed.
- Use cosmetics and fragrances in moderation.
- Male students with beards should ensure that facial hair is kept clean and tidy.
- Comfortable, professional clothing is to be worn under the lab coat. Skirts, dresses or shorts must be of an appropriate length as to be considered suitable for a professional healthcare environment. Undergarments must not be visible.
- Limit jewelry to plain ring bands and necklaces, stud earrings, medic alert bracelets and a watch.
- Personal electronic devices (i.e. cell phones, personal laptops, etc.) are not permissible in the lab.
- Students who follow specific dress requirements for cultural or religious reasons are invited to speak directly with the course instructor to ensure that their needs are met within the dress code expectations.

4.3 Protection of Privacy

Personal information is collected under the authority of the University's Act and is protected, used, disclosed and retained in compliance with Ontario's Freedom of Information and Protection of Privacy Act. Information will be used for the purposes of administering registration and progression in the Medical Laboratory Science program.

Program information on registration and academic achievement may be disclosed to a clinical partner site where necessary for the purposes of administering clinical placements in the Medical Laboratory Science program.

Questions regarding the privacy of student personal information may be directed to the MLSc Program Director or to the University's Chief Privacy Officer at <https://usgc.ontariotechu.ca/compliance/access-and-privacy/index.php>

4.4 Communication

It is expected that students communicate with course instructors regarding any aspect of a course using Canvas for the duration of the course. Course instructors will also only communicate with students about course related issues using Canvas. The **ontariotechu.net email** is to be used for all other “general” i.e. non-course related matters. **The use of a personal email address is not acceptable and cannot be used as an excuse for not having issues addressed or for not receiving communication.**

4.4.1 Email

Email communication should be considered professional communication. It is expected that students will include appropriate greetings/signatures, compose full sentence messages which indicate the purpose of the communication, and demonstrate a respectful, professional tone at all times.

Students should not consider email sent to faculty members or clinical instructors to be confidential. If, in the potential interest of student, patient, or public safety, correspondence from a student is deemed to be potentially concerning in any way, faculty will be required to share this information with appropriate individuals.

4.4.2 Use of Personal Technology & Communication Devices

It is essential that students conduct themselves in a professional and appropriate manner at all times when using technology.

All students are guided by Ontario Tech University's Information Technology Use Policy which can be found at: <https://itsc.ontariotechu.ca/resources/policies.php>

In addition to this general policy, the following guidelines apply to the use of any technology in the BHSc MLSc program (including computers/laptops, tablets, smart watches, and cell phones, and other electronic devices):

- Professional behaviour and proper technology etiquette will be observed at all times when using cell phones, tablets, laptops, or other electronic devices in the classroom, or clinical setting.
- Technological devices may be used only when authorized by faculty for clinical or classroom activities, or as an approved accommodation to reduce the impact of a disability. Students seeking the latter will require an Accommodations Notice from the Student Accessibility Services.
- When faculty request that students close laptops or turn off other electronic devices to focus attention on a learning activity, it is expected that students will respond promptly to this direction.

- Personal phone conversations or texting is not allowed outside of the lab during designated laboratory hours. **A formal written warning that will remain in the student's file will be given for the first violation of using the electronic device for socializing during lab time. A lab component failure will be given for the second violation, whether this occurs in the same course or in another course.**

4.4.3 Program Communication with Students

Faculty members and staff in the MLSc program will communicate directly with students. It is up to the student to decide how much information they wish to share with their family and support network.

Email communication with students from the BHSc MLSc program will be done using the students' ontariotechu.net address only.

4.5 Professional Conduct Evaluation

The profession of Medical Laboratory Science operates under the Regulated Health Professions Act, 1991(http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_91r18_e.htm) and abides by the CSMLS Code of Professional Conduct (<http://www.csmls.org/About-CSMLS/Who-We-Serve/Code-of-Conduct.aspx>).

Professional conduct evaluations are used to assess the students' behaviour in the laboratory and other learning settings throughout the students' enrolment in the Medical Laboratory Science program. The MLSc Professional Conduct Evaluation Form assesses student safety and professionalism and is independent from the successful completion of MLSC course with the exception of MLSC3300 Simulated Practicum. **Each student is assessed individually using feedback from all appropriate MLSc instructors based on behaviour demonstrated in all MLSC courses in which students are enrolled in the relevant semester.** A clear understanding of behaviour expectations for each of the competencies on the part of the student is critical. The professional conduct evaluation will be introduced at the beginning of the semester in order to provide an opportunity for students to clarify the behaviour expectations identified in this document. When necessary, consultation with students will be conducted by the MLSc Program Director and other MLSc faculty as appropriate. For the MLSC3300 course the student must successfully meet the expectations in order to pass the course and to continue to proceed in the program. Professional conduct evaluation also occurs throughout the practicum semesters.

The expectation of professional conduct has been developed to support and enhance Ontario Tech University's Student Code of Conduct and to prepare students for the professional behaviour expectations of the Medical Laboratory Science practicum sites.

4.6 Policy on Missed Compulsory Evaluations

The term "compulsory evaluation" refers to any assignment, project, laboratory exercise, practicum evaluation, or examination where the mark allotted to that evaluation forms 5% or more of the final grade.

Absence from theory or laboratory evaluations, or late submission of course work (laboratory reports, projects, essays) that contribute less than 5% of the final course mark will result in a mark of zero for that evaluation.

Late submissions of course work worth 5% or more of the final course mark will be penalized 10% per day and will not be accepted after the third day, including weekends. It is the responsibility of the student to negotiate alternative arrangements prior to the due date.

4.6.1 Reallocation of Marks or Access to a Deferred Examination

Please note that in each of the scenarios identified below, there will be no reallocation of marks or access to a deferred exam without the submission of appropriate documentation explaining “unavoidable cause” within the identified timeframes. See below for the definition of appropriate documentation of unavoidable cause and timeframes. This information can also be found in section 3 of this handbook.

4.6.2 Documentation of Unavoidable Cause

Students who are late for, or who do not attend, a compulsory evaluation (laboratory or theory evaluation worth 5% or more of the final mark) due to unavoidable cause* must:

- Submit the appropriate documentation of unavoidable cause to the course instructor as soon as is reasonably possible and no later than two working days after the evaluation date, or upon first day of return if later than that.
- Make alternative arrangements with the course instructor to:
 - Take an exam at another time (theory only)
 - Be awarded a mark based on a special assignment – applies to activities such as projects, assignments, and laboratory exercises
 - Have the mark omitted from the calculation of the final grade for the course – applies to activities such as projects, assignments and laboratory exercises

NOTE: Please see section 3 on Program Progression Requirements for further information on missed examinations.

*Unavoidable cause generally includes:

- Serious illness or injury, supported by a medical certificate and a completed Ontario Tech University Medical Statement form (see Registrar’s website)
- Death of a member of the immediate family, supported by a death certificate.
- Major interruption to transportation (that is documentable)
- The determination of unavoidable cause is at the discretion of the faculty member in consultation with the Program Director and/or Dean.

4.7 Final Examination Policy

Refer to Ontario Tech University Academic Calendar <https://ontariotechu.ca/current-students/academics/academic-calendars/index.php>

4.8 Academic Conduct

Faculty members and students share an important responsibility to maintain the integrity of the teaching and learning relationship. This relationship is characterized by honesty, fairness, and mutual respect for the aims and principles of the pursuit of education. Academic misconduct impedes the activities of the university community and is punishable by appropriate disciplinary action.

The University and its members have the responsibility of providing an environment that does not facilitate the inadvertent commission of academic misconduct. Students and faculty should be made aware of the actions that constitute academic misconduct, the procedures for launching and resolving complaints, and the penalties for commission of acts of misconduct. **A lack of familiarity with the University's policy on academic conduct on the part of the student does not constitute a defense against its application.**

4.9 Academic Misconduct

Refer to the Ontario Tech University Academic Calendar

<https://ontariotechu.ca/current-students/academics/academic-calendars/index.php>

5.0 SAFETY AND HEALTH INFORMATION

Medical Laboratory Science involves procurement, manipulation, analysis, storage and disposal of human samples. There is considerable risk with exposure to human samples, which means all students must be both aware of and receive adequate training prior to being exposed to these risks. The MLSc Program provides students with training in safety and standard precautions. **It is the responsibility of all concerned to demonstrate safe practice at all times while in the laboratory setting. Failure to do so will result in documentation using incident reports and repeated infractions may result in removal from the program.**

5.1 Immunization

MLSc students are required to update their immunization status as a condition of admission and continuation in the program. Please see appendix 7.4 and **the MLSc section of the Faculty of Health Science website, Pre-practicum requirements** found in this link:

<https://healthsciences.ontariotechu.ca/undergraduate/programs/medical-laboratory-science/immunization-requirements.php> for further information, forms, submission deadlines and the location of the individual to whom this information must be submitted.

5.2 Canadian Police Information Center, Criminal Record Synopsis "CPIC Check"

All students in the MLSc program are required to have a CPIC check, **including Vulnerable Sector Screen**, completed prior to the start of their practicum placement. The background check must be completed as close to the placement start date as possible, and **not before June 1**. Students who have not provided appropriate documentation of a completed CPIC check will not be eligible for practicum placement.

All information pertaining to student CPIC check will be kept confidential under the MLSc Program Guidelines. In the event that a student's record is not clear, a decision will be made as to the suitability of the student being accepted for placement.

Completed documentation will be verified for completeness by the Practicum Coordinator and returned to the student for safekeeping. It is the students' responsibility to maintain custody of the certified documents and produce copies as required by the clinical practicum site.

Students should be aware of the following:

- * The cost of the police record check is at the student's expense.
- * Please advise the police department that this police record check is for practicum placement purposes.
- * Two pieces of identification, one of which must be photo ID, are required.

Exceptions to this are non-negotiable due to liability and safety regulations.

5.3 Biohazard Risks

MLSc students risk exposure to containment level 1 and 2 human biohazards during the course of working with human samples.

The routes of infection for these biohazards include injection, inhalation, absorption and ingestion.

Exposure to these biohazards is minimized by the use of barrier protection, appropriate personal protective equipment and adequate hand washing.

Safety training including the appropriate handling of biohazardous material, the use of barrier protection and appropriate personal protective equipment and an emphasis on hand washing starts on entry to the program and **ongoing consistent compliance is mandatory**. References for safe laboratory practice are the Ontario Tech University Biosafety Manual and the BHSc MLSc Biosafety/Safety Manual. A more comprehensive list of safety references can be found in Appendix 7.1.

5.3.1 Exposure to Blood and Body Fluids

It is the students' responsibility to notify the laboratory instructor immediately on exposure to blood and/or body fluids. The protocol for managing this exposure is detailed in Appendix 7.3.

5.4 Other Hazards/Risks

MLSc students are also exposed to dangerous chemicals (e.g., flammables, oxidizers, toxic, explosive), physical (e.g., cuts, burns, ergonomic problems) and psychosocial (e.g., angry patients, workplace stress) hazards. It is the University's responsibility to ensure that student and faculty are knowledgeable in the appropriate:

- Storage of chemicals,
- Use of personal protective equipment required,

- Use of other safety equipment (e.g., fume hood, safety shower),
- Use of SDS and spill kits and the location of such,
- Use of Incident Reports to document any near or actual accident or injury.

All of the above are included in the ongoing safety training and monitoring that occurs in the four years of the BHSc MLSc program.

5.4.1 Rights to Refuse

Students have the right to refuse blood collection on their person without stating cause.

6.0 CLINICAL PLACEMENTS

The fourth year of the MLSc program is devoted to gaining experience in the clinical setting. The clinical setting can include public hospitals and private laboratories. **It is important to note that students may be placed in clinical settings anywhere within the province of Ontario and some discipline rotations may be in a different location and some distance from the primary clinical site.** An opportunity to apply for special consideration will be provided. Clinical placements are assigned using a tiered approach that may include a questionnaire, and a random draw. **Final assignment of placement is the responsibility of the Practicum Coordinator in consultation with the MLSc faculty.** Final assignments may not be completed until spring/summer at the end of 3rd year.

MEDICAL LABORATORY SCIENCE PROGRAM HANDBOOK

7.0 APPENDICES

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7.1 SAFE PRACTICE RESOURCES

Medical Laboratory Science Biosafety/Safety Manual

An electronic copy may be found on the MLSc component of the Faculty of Health Sciences website: https://healthsciences.ontariotechu.ca/undergraduate/programs/medical-laboratory-science/mls_biosafety_manual/index.php

Hard copies are available in the laboratories.

Ontario Tech University Biosafety Manual

<https://shared.ontariotechu.ca/shared/departments/healthandsafety/documents/biosafety-manual-r5.pdf>

Ontario Tech University Biosafety Committee

<https://hr.ontariotechu.ca/health-and-safety/programs/biosafety-program/index.php>

8th edition of the Laboratory Safety CSMLS Guidelines Available in the laboratories.

7.2 NOTICE AND ACKNOWLEDGEMENT OF RISK

NOTICE AND ACKNOWLEDGEMENT

FOR ONTARIO TECH UNIVERSITY STUDENTS PARTICIPATING IN PHLEBOTOMY TRAINING AND THE HANDLING OF BIOHAZARDOUS MATERIAL (BLOOD) WITHIN THE MEDICAL LABORATORY SCIENCE PROGRAM, PLEASE READ THE FOLLOWING DOCUMENT CAREFULLY PRIOR TO PARTICIPATING IN PHLEBOTOMY TRAINING AND OTHER LABORATORY ACTIVITIES. FOR YOUR SAFETY AND THE SAFETY OF THOSE PARTICIPATING AS VOLUNTEERS, IF YOU ARE UNABLE TO AGREE TO ANY ONE OF THE STATEMENTS NOTED BELOW THEN PLEASE DO NOT PARTICIPATE IN PHLEBOTOMY TRAINING UNTIL SUCH TIME AS YOU ARE ABLE TO INDICATE YOUR AGREEMENT.

I, _____, ACKNOWLEDGE AND AGREE
THAT: (STUDENT NAME PRINTED)

1. I HAVE BEEN MADE AWARE THAT THERE ARE RISKS INHERENT IN PHLEBOTOMY TRAINING BOTH IN THE PROCUREMENT OF BLOOD FROM OTHERS AND IN THE INSERTION OF A NEEDLE TO DRAW BLOOD FROM ME. SPECIFICALLY, I AM AWARE THAT BLOOD IS A BIOHAZARDOUS MATERIAL, EXPOSURE TO WHICH OFFERS POTENTIAL DANGERS INCLUDING DANGERS ARISING FROM EXPOSURE TO CHEMICALS, BACTERIA AND VIRUSES,
2. ONTARIO TECH UNIVERSITY HAS PROVIDED ME WITH INFORMATION, EDUCATION AND TRAINING ADVISING ME ABOUT THE RISKS ASSOCIATED WITH AND ARISING FROM PHLEBOTOMY TRAINING AND THE HANDLING AND TESTING OF BIOHAZARDOUS MATERIAL AND ABOUT RECOMMENDED PRACTICE INTENDED TO MINIMIZE AND MITIGATE SUCH RISKS.
3. I AM SUFFICIENTLY FAMILIAR WITH APPROPRIATE PRACTICE AND UNDERSTAND THE IMPORTANCE OF FOLLOWING ALL RECOMMENDED PROCEDURES AND OF EXERCISING DILIGENCE, CARE AND ATTENTION WHEN PARTICIPATING IN ALL ASPECTS OF PHLEBOTOMY TRAINING AND LABORATORY TESTING OF BIOHAZARDOUS MATERIAL.

SIGNED THIS _____ DAY OF _____, _____.

PRINTED NAME: _____

SIGNATURE: _____

7.3 PROTOCOL FOR MANAGEMENT OF STUDENT EXPOSURE TO BLOOD/BODY FLUIDS DURING LABORATORY SESSIONS

1. Immediately on exposure, the student must report to the laboratory instructor.
2. Administer First Aid.
3. It is the laboratory instructor's first responsibility to attend to the student. **At an appropriate time**, the laboratory instructor **MUST** complete an Ontario Tech University Accident/Injury report. This is to be done electronically. This form can be found at <https://healthandsafety.ontariotechu.ca/forms/accident-injury-form.php>
4. On completion and submission of the electronic form, copies are automatically sent to the Health and Safety Officer, the Insurance and Risk Management team and the Program Director. **Please ensure that the electronic copy is received.**
5. It is the responsibility of the laboratory instructor to arrange for transportation and accompany the student to one of the following emergency departments:

Lakeridge Health Oshawa

1 Hospital Court

Oshawa, ON

Tel: 905-576-8711 x 3214/4560

Fax: 905-721-4749

Lakeridge Health Ajax

580 Harwood Avenue

Ajax, ON

Tel: 905-683-2320 x 1210

Fax: 905-428-8277

Transportation to the hospital should be via Blueline Taxi Services. Blueline can be contacted at 905-440-2000. State that this is an emergency and that the taxi is to proceed to the Main Entrance of Durham College, off Commencement Drive and wait. Blueline Taxi Services chits can be found in the laboratory first aid kits.

Because the maximum benefit of immunoprophylaxis is achieved the sooner it is initiated (preferably 1 or 2 hours post exposure), the emergency department should be notified of the imminent arrival of the student so that they can be assessed immediately. See phone numbers above.

6. If an alternate instructor is not immediately available to replace the laboratory instructor attending the student, the Faculty of Health Sciences reception desk, at extension 3166, is to be called to help arrange for another instructor or staff member to come to the laboratory to remain with the second instructor and students. If an alternate instructor or staff member cannot be found and it is not considered safe to continue the laboratory session with only one instructor, the students are to be excused from the laboratory.
7. As the student may be very anxious about the risk of contracting HIV, the following information can be shared with the student en-route to Health and Wellness:
 - The average risk for HIV infection from all types of reported percutaneous exposures to HIV infected blood or body fluid is 0.3%. The average risks after mucus membrane and skin exposure to HIV infected blood or body fluids are 0.1% and less than 0.1%,

respectively. Conversely, greater than 99% of exposed individuals will **not** become infected.

7.4 GENERAL INFORMATION

Immunization, CPIC/VS

NOTE: The up to date summary of this information, and all necessary documents are available on the MLSc component of the Faculty of Health Science website. <https://healthsciences.ontariotechu.ca/undergraduate/programs/medical-laboratory-science/pre-practicum-requirements.php>.

Confidential Information while in Practicum

Students in the Medical Laboratory Science program will have access and be exposed to confidential information about clients, clinical partners, fellow students and the program while participating in practicum. Students are expected to maintain the privacy and confidentiality of information at all times in accordance with legislation, University and clinical partner policies, and professional standards.

In particular, it is expected that students will:

- Access information only under the direction and supervision of their clinical instructor and/or only as required for practicum-related purposes.
- Only share or discuss client and clinical partner information when necessary, with authorized individuals, and in a location where the confidentiality of that information can be strictly maintained.
- Be familiar with and follow the University and clinical partners' policies, procedures and principles regarding privacy and confidentiality.
- Discuss any questions or concerns with the clinical instructor and/or the Practicum Coordinator.

Failure to observe obligations related to the confidentiality of information may result in sanctions under the University's Academic Conduct regulations, up to and including dismissal from the University. Students may also face consequences under the respective clinical partner's policies.

7.5 PROFESSIONAL CONDUCT EVALUATION FORM

Student Name: _____
Class of : _____

Date: _____
Evaluator _____

Ratings:

Green = Full ability to perform the competency

Yellow = Limited ability to perform the competency

Red = Clear inability to perform the competency

[√] PLEASE CHECK THE APPROPRIATE RESPONSE FOR EACH CRITERION.

COMPETENCY	CSMLS COMP	GREEN	YELLOW	RED	COMMENTS
Communicates Clearly and Effectively The ability of the student to effectively receive and convey information and facilitate the interpersonal and interdisciplinary/interprofessional relationships needed to support safe and effective patient care. Abilities reflective of this competency could include, but are not limited to: <ul style="list-style-type: none"> Practices effective communication with colleagues, patients/clients and other health care professionals: <ul style="list-style-type: none"> Active listening e.g. attend, encourage and paraphrase Verbal communication e.g. courtesy, confidence, respect Non-verbal communication Written communication e.g. legible, accurate, spelling, grammar Conflict management Identifying barriers to effective communication Using technology appropriately to facilitate communication Demonstrates adaptive skills when interacting with patients/clients Obtains informed consent prior to procedure and respects patient's right to refuse Selects appropriate means to convey a message using appropriate terminology Speaks and writes clearly and coherently Asks questions for clarification e.g. dangerous or unusual situations 	7.01 7.03 7.04 8.04 8.12 8.13				

COMPETENCY	CSMLS COMP	GREEN	YELLOW	RED	COMMENTS
<ul style="list-style-type: none"> Reads for content, structural analysis and word meanings Gives and receives focused feedback Positively promotes the MLT profession during communications and interactions with all clients Discusses current issues with colleagues to develop abilities in reflective processes e.g. clinical, technical, professional 					
<p>Takes Responsibility for One's Own Actions</p> <hr/> <p>The ability of the student to understand their role within a health care team and their importance to the quality of patient care and acknowledge, reflect on and take responsibility for their own actions</p> <p>Abilities reflective of this competency could include, but are not limited to:</p> <ul style="list-style-type: none"> Recognizes limitations of own competence and seeks action to resolve Recognizes potentially dangerous situations and understands the right to refuse unsafe work Takes responsibility and is accountable for professional actions e.g. punctuality, safe practice, respectful treatment of others (verbal and physical), clean and organized laboratory work space Acknowledges one's role in group activities Reviews the results of one's actions Identifies the successes and problems resulting from one's actions and make adaptations Accepts feedback on behaviour identified as inappropriate 	<p>8.03 8.05 8.06</p>				

COMPETENCY	CSMLS COMP	GREEN	YELLOW	RED	COMMENTS
Demonstrates Ethical Decision Making <p>The ability of the student to learn, practice and model professional behaviour in their work with patients and as part of the health care team using articulated standards of ethical practice as a guide.</p> <p>Abilities reflective of this competency could include, but are not limited to:</p> <ul style="list-style-type: none"> Adheres to expectations of Academic Integrity as outlined by Ontario Tech University Maintains confidentiality of healthcare information Recognizes how ethical issues in the health care environment affect the medical laboratory technologist and clients Adheres to professional and institutional Codes of Ethics Conducts all aspects of education and practice with honesty and integrity 	8.01 8.09				
Works Effectively in a Team <p>The ability of the student to effectively collaborate with others to maximize patient safety and the quality of care.</p> <p>Abilities reflective of this competency could include, but are not limited to:</p> <ul style="list-style-type: none"> Demonstrates interdisciplinary/interprofessional team skills: <ul style="list-style-type: none"> Communication Collaboration Role clarification Reflection Demonstrates effective teamwork skills Offers opinions, ideas, and suggestions as appropriate to help resolve workplace challenges; accepts feedback graciously Contributes to the development and knowledge of team members (professional roles) Accepts the input and contribution of others with respect Participates in decision making related to patient care Contributes own ideas, opinion and information while demonstrating respect for others Contributes to the development of shared team values and ethical principles Reaches mutual agreement 	7.01 7.02 7.03				

COMPETENCY	CSMLS COMP	GREEN	YELLOW	RED	COMMENTS
<ul style="list-style-type: none"> Synthesizes and analyses information from colleagues, instructors, and other health professionals to develop skill base Demonstrates dependability 					
Solves Problems Using a Variety of Strategies <hr/> The ability of the student to solve problems in practice and apply these techniques in multiple contexts. Abilities reflective of this competency could include, but are not limited to: <ul style="list-style-type: none"> Demonstrates effective problem solving/troubleshooting strategies and initiates appropriate follow up Recognizes when there is a problem to be solved (including conflict) Clarifies issues using non-judgmental language Selects the thinking skills and strategies which could be used to solve the problem (e.g. inductive and deductive thinking, brainstorming, clustering) Implements the preferred solution i.e. works toward mutual agreement through negotiation Seeks assistance for resolution as required 	6.06 7.01				
Utilizes Reflective Practice for Personal and Professional Development <hr/> The ability of the student to use self-reflection for the purpose of personal and professional growth. Abilities reflective of this competency could include, but are not limited to: <ul style="list-style-type: none"> Engages in reflective practice; stops and thinks about practice, consciously analyzes decision making and draws conclusions to improve future practices Practices evidence-based decision-making skills such as literature review, data analysis and research methodologies/studies Recognizes the need for and participates in continuing education and training Reflects and evaluates his/her own professional behaviour during stressful situations Clarifies the nature and extent of problems or required directions Explores various thinking skills and strategies that could be used e.g. inductive and deductive thinking, creative and intuitive thinking, inquiry and critical thinking, reflection Identifies limits as well as the potential of own thought processes i.e. seeks help when unclear about task Applies knowledge across disciplines e.g. quality control tasks completed, phone calls completed with accuracy 	6.03 6.08 8.03 8.07				

COMPETENCY	CSMLS COMP	GREEN	YELLOW	RED	COMMENTS
<ul style="list-style-type: none"> Evaluates results of thinking skills and strategies used in problem solving and decision making e.g. improved decision making, time management 					
Manages the Use of Time and Resources to Complete Tasks and Attain Goals <p>The ability of the student to manage time and resources effectively across multiple contexts for the purpose of optimizing patient care.</p> <p>Abilities reflective of this competency could include, but are not limited to:</p> <ul style="list-style-type: none"> Organizes work to accommodate priorities Maximizes efficient use of resources e.g. time, equipment, materials, money, information, support systems, personnel Contributes to implementation strategies that integrate timelines, resource management and communication related to projects or research/studies Sets reasonable and realistic goals Uses appropriate planning tools (checklists, schedules) to achieve goals e.g. daily activity completion, workload completion, etc. Monitors process and expectations, and makes necessary adjustments Begins to develop personal strategies and behaviours that integrate timelines and are mindful of resources 	6.04 6.05 6.07				
Models the Professional Role of the MLT <p>The ability of the student to exercise professional responsibilities, including their role within and inter/intraprofessional environment.</p> <p>Abilities reflective of this competency could include, but are not limited to:</p> <ul style="list-style-type: none"> Adheres to Standards of Practice Demonstrates knowledge of the health care system, professional laboratory organizations and their responsibilities Demonstrates knowledge of the determinants of health and their implications for the laboratory system Promotes the image and status of the profession of medical laboratory science as members of the health care team Complies with legislations that govern medical laboratory technology Respects the diversity, dignity, values, and beliefs of patients/clients and colleagues Demonstrates knowledge of interpersonal skills: <ul style="list-style-type: none"> Recognizes signs of individual and group stress Recognizes signs of patient stress Exhibits empathy when assisting patients and colleagues 	6.01 6.02 7.01 7.03 7.04 8.01 8.02 8.04 8.06 8.07 8.08 8.10 8.11				

COMPETENCY	CSMLS COMP	GREEN	YELLOW	RED	COMMENTS
<ul style="list-style-type: none"> Identifies own learning needs and actively seeks out required knowledge and training Conforms to professional and institutional standards e.g. dress code, punctuality, no cell phones, etc. Plans with other HCPs to provide patient care e.g. phone calls to answer questions, report to public health, infection control Adapts to change: <ul style="list-style-type: none"> Demonstrates knowledge of a dynamic environment; adapts and responds to change Recognizes that change initiated in one area may impact other areas of health care services Reacts to critical situations with competence Demonstrates understanding when changes in schedule occur 	8.12 8.13				

PROFESSIONAL CONDUCT EVALUATION SUMMARY SHEET

Student Name: _____

Date: _____

No. of Yellow or Red	Communicates clearly and effectively	Takes responsibility for one's own actions	Demonstrates ethical decision making	Works effectively in a team	Solves problems using a variety of strategies	Utilizes reflective practice for personal and professional growth	Manages the use of time and resources to complete tasks and attain goals	Models the professional role of the MLT	TOTAL YELLOW OR RED

Learning Plan(s) Required: ☐ Yes ☐ No ☐

Signatures:

Practicum Coordinator/Designate: _____

Date Issued: _____

Student: _____

Date: _____

I have read, and understand the evaluation.

Comments:

7.6 MLSc PROGRAM MAPS

Please refer to Ontario Tech University Health Science website for program maps.

<https://healthsciences.ontariotechu.ca/undergraduate/programs/medical-laboratory-science/program-maps.php>