



Department of Laboratory Medicine & Pathology

GRADUATE PROGRAM HANDBOOK
MSc Specialization in Transfusion Science STS

The Department of Laboratory Medicine & Pathology (LMP) Graduate Studies program is proud to offer a course and practicum-based MSc. with specialization in Transfusion Science.

I hope the Handbook will serve as a valuable resource for you in the planning and management of graduate training in the program, but please do not hesitate to contact the LMP Graduate Studies office directly at any time should you have concerns or questions.

Sincerely,

Jelena Holovati, PhD
Associate Professor | Director, Graduate Studies

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Abbreviations

CV	Curriculum vitae
ELP	English Language Proficiency
GPS	Faculty of Graduate & Postdoctoral Studies
FoMD	Faculty of Medicine and Dentistry
GPA	Grade Point Average
IDP	Individual Development Plan
LMP	Laboratory Medicine and Pathology
PD	Professional Development

1 GRADUATE STUDIES – TRANSFUSION SCIENCE PROGRAM (MSc)

1.1 Vision, Mission, and Values

Vision

To be a leader in the development of exceptional researchers and clinical scientists for meeting the health challenges of tomorrow

Mission

To deliver outstanding graduate education experiences and professional training

Values

Academic excellence: developing intellectual capacities for scholarly achievement

Research excellence: instilling independence, creativity and passion for discovery

Student-centered culture: delivering innovative education that engages active student learning, as well as offering supportive strategies to manage program requirements

Training environment: offering a stimulating multidisciplinary environment guided by dedicated faculty and staff in state-of-the-art facilities with leading-edge technologies

Communication excellence: encouraging effective dissemination of knowledge through teaching, scientific presentations and publications

Collaboration: promoting a cohesive and interactive multidisciplinary environment

Professional development: fostering networking opportunities, career development, citizenship, community service and mentoring

1.2 Overview

The course and practicum-based program leads to a Master of Science with the specialization in Transfusion Science in the Department of Laboratory Medicine and Pathology.

This full time program consists of two terms (8 months) of didactic courses, followed by a second year of 8 months including clinical practicum, electives, and a capping project.

Part time studies are also available with approval of the Graduate Studies Director.

The clinical component of the program will be competency-based with students expected to complete all competencies in advanced transfusion science laboratory training, such as theory and practice of immunohematology, blood donation, supply and distribution, blood product inventory management in support of specific hematological disorders, and quality management and regulatory systems in a blood bank context.

2 APPLICATION AND ADMISSION

A maximum of 2 students will be accepted into the program each year.

2.1 Requirements

2.1.1 Academic Requirements

Applicants require:

1. at least a baccalaureate degree or its academic equivalent.
2. a Workplace Mentor able to assist with program requirements.
3. successful completion of a course focused on the histories, experiences, and/or perspectives of Indigenous peoples in Canada.
4. an admission grade point average (GPA) of at least 3.0 on the University of Alberta 4-point scale, or the equivalent qualification from another institution - this is calculated on the most recent course work (equivalent to 60 units of course weight (UCW) or the last two years of full-time study).

2.1.2 Language Requirement

LMP requires proficiency in English prior to acceptance in the program. These requirements exceed those of GPS.

- Applicants must submit proof of English language proficiency (ELP) if they do not hold a degree from countries or international universities listed on the Faculty of Graduate & Postdoctoral Studies page of [Recognized English Language Countries and Institutions](#). Five ELP examinations are recognized: TOEFL, IELTS (Academic), PTE (Academic), CAEL, and Duolingo.
- Minimum scores required are:
 - internet-based TOEFL score of 95 with at least 21 per section; or
 - IELTS (Academic) score of 7.0 with at least 6 on each band; or
 - PTE (Academic) score of 65 with a minimum band score of 60; or
 - CAEL score of 70 with at least 70 on each subtest; or
 - Duolingo score of at least 125 with at least 105 on each subscore.

2.2 Application and Supporting Documents

Applications are submitted online via the University of Alberta's Graduate Studies Management Solution (GSMS), accessible at GPS's [Apply for Admission](#) web page.

2.2.1 Application and Documents Deadline

The admit term for the Transfusion Science program is Fall (September). Applications and all supporting documentation must be received by **June 1**.

2.2.2 Required Documents

Except for reference letters, all supporting documents are uploaded directly in pdf format only as part of the online application process.

1. Official transcripts or mark sheets and degree certificates from all university or post-secondary institutions previously attended whether or not they are perceived as relevant to the Transfusion Science program. Refer to [Application Requirements for Academic Documents](#) for detailed information. Failure to list and provide complete transcripts from all institutions attended on the

application may be considered an intentional omission and will lead to the cancellation of an application for admission or withdrawal of an offer of admission.

2. Proof of certification from CSMLS.
3. Proof of English language proficiency (if necessary).
4. Proof of successful completion of a course focused on the histories, experiences, and/or perspectives of Indigenous peoples in Canada, or course plan to complete the course by the beginning of the second year of study.
5. Curriculum vitae or résumé (do not use the University of Alberta's CV Form).
6. Letter of intent addressing the following:
 - Why have you chosen this program?
 - Why are you a good fit for this program?
 - What are your professional goals and ambitions?
 - Who will be your mentor and what is their role in transfusion medicine
 - Detail work experience in transfusion medicine, and identify short and long term professional goals and ambitions.
7. **Two letters** of recommendation; these must be received by the application deadline.
 - a. References may be academic or work related. The online application system requests 2 work references and 1 academic reference. This is a guideline only; we will accept any combination of two work and academic references.
 - b. Applicants are to ask their referees to address the following in the General Appraisal section of the referee form or as a separate document:
 - I. Provide an appraisal of the following specific qualities of the applicant:
 - A. Critical thinking/problem solving
 - B. Work ethic/industriousness
 - C. Multitasking/managing competing priorities
 - D. Judgment
 - E. Attention to detail
 - F. Communication skills
 - II. Address the applicant's ability to carry on advanced study and research, teaching ability, potential for successful study in the transfusion science field, and weaknesses, if any. Please provide specific examples to support your comments.
 - III. State number of years of experience of the candidate in a transfusion medicine role; specify involvement and responsibilities in transfusion medicine.
8. [Mentorship Agreement Form](#).

2.3 Admission Decision

2.3.1 Evaluation of Applications

Only complete application packages received by the deadline will be considered. Applications will be reviewed to ensure the applicant has the necessary prerequisite courses, meets the minimum academic requirement and the English language requirement. All eligible applications will be assessed by the program's admissions committee. Candidates who are shortlisted will be invited to an interview (in person or via videoconference). Prior to the interview, shortlisted candidates are asked to complete a [work experience self-assessment](#).

2.3.2 Offers of Admission

Laboratory Medicine and Pathology will make recommendations for admission for successful applicants to the Faculty of Graduate & Postdoctoral Studies (GPS). GPS makes a final review of the application, and *only GPS may extend the official offer of admission*.

Unsuccessful applicants will be notified via the application system or by the LMP Graduate Program office directly.

2.4 Additional Requirements

Admitted students may be responsible for these and/or additional requirements and any fees associated with them.

Police Information Checks: Applicants should be aware that a clear Police Information Check, which must include a Vulnerable Sector Check, is required at the time of admission. Students who fail to provide a clear Police Information Check may be required to withdraw from their program. See the [University of Alberta Calendar](#) for more information on the general requirements concerning Police Information Checks and the fees associated with them.

Immunizations: Students are required to obtain specified immunizations. Details will be provided on admission to the program.

(The above requirements are associated with clinical placement while in year 2 of the program.)

Course focused on the histories, experiences, and/or perspective of Indigenous peoples in Canada: This is a program prerequisite. For students who have not met the requirement at the time of admission, a condition of their admission would be to complete the course by the start of the second year of registration. This requirement may be fulfilled by completing:

- the certificate version of the University of Alberta Indigenous Canada MOOC within the 5 years preceding the first term of registration; or
- if the above course was completed more than 5 years preceding the first term of registration or is not offered, another course approved by the Department of Laboratory Medicine and Pathology graduate program.

Transfusion science professional society annual memberships:

- **The Canadian Society for Transfusion Medicine (CSTM)** is a multidisciplinary society which promotes and supports best practice in transfusion medicine in Canada through education, communication and partnerships. Annual student membership to the CSTM provides access to required educational resources, such as CSTM standard (2023 student membership cost was \$60)
- **The International Society of Blood Transfusion (ISBT)** is a scientific society where transfusion medicine professionals from over 100 countries come together to share knowledge to improve the safety of blood transfusion worldwide by promoting science, research and best practice in their specific areas of expertise across the transfusion chain. Annual student membership is required to access required ISBT learning resources (2023 cost for Canadians under 35 years old was 65 Euro and increases to \$110 euro for age 35 – 65)

Program required textbooks:

- **AABB Technical manual (digital or print copy).** AABB Press [Current edition] - 21st. (2023) ed. Claudia Cohn.
- **The blood group antigen fact book (digital or print copy)** Reid, Lomas Francis and Olsson 3rd Ed.

3 GUIDELINES AND RESPONSIBILITIES

3.1 Graduate Students - Guidelines and Responsibilities

Graduate students are ultimately responsible for their own programs and expected to become familiar with all regulations and deadlines relating to their program. GPS's [Graduate Program Manual 1.1](#) outlines graduate student responsibilities.

Students must be familiar with, and adhere to, the terms of the University of Alberta's [Code of Student Behaviour](#).

The student is responsible for successfully completing all course work and the capping exercise. Where the capping exercise involves a project, the student is responsible for producing a typed report of the project or some other finished product to be retained by the department ([U of A Calendar](#)).

3.1.1 Good Standing Policy

Students must be in "good standing" (see the [Good Standing Policy](#)) in order to receive certain Laboratory Medicine and Pathology graduate program benefits.

3.2 Program Director/Academic Advisor – Guidelines and Responsibilities

The Program Director serves as the Academic Advisor for graduate students in this program.

3.2.1 Academic Advisor Responsibilities

The academic advisor is essential to the successful pursuit by the student of the course-based Master's degree ([GPS Grad Program Manual Section 1.3](#)). The academic advisor will:

- provide appropriate guidance to the student in course selection, course changes, and progress within the program;
- meet with a full-time student no less than two times in an academic year;
- explain the rationale and review with the student any administrative and/or curricular changes that have occurred since their last scheduled meeting and any impact that such changes will have (or potentially might have) on the student's progress;
- where appropriate, consider a graduate student a junior colleague;
- maintain open communication with the student concerning any problem and, in the event of a conflict in the advisor-student relationship, discuss the issues with the student and the LMP Graduate Studies Director in a timely fashion.

3.2.2 Program Director Responsibilities

Among other responsibilities, the program director must:

- be responsible for the organization, administration, instruction, evaluation, continuous quality improvement, curriculum planning and development, directing other program faculty/staff, and general effectiveness of the program;
- have regular and consistent contact with students, faculty, and program personnel

[\(NAACLS Standards for Accredited and Approved Programs\)](#)

3.3 Education Coordinator – Roles and Responsibilities

"The education coordinator/clinical coordinator ... must provide supervision and coordination of the instructional faculty in the academic and clinical phases of the education program."

[\(NAACLS Standards for Accredited and Approved Programs\)](#)

3.4 Medical Director – Roles and Responsibilities

“The medical director must provide continuous medical direction for clinical instruction. The medical director must actively elicit the understanding and support of practicing physicians, and must participate in the clinical instruction of pathology within the program.”

[\(NAACLS Standards for Accredited and Approved Programs\)](#)

3.5 Department – Guidelines and Responsibilities

It is the responsibility of the department to:

- verify that all courses and the capping exercise have been successfully completed before recommending a student for graduation; and
- submit to GPS a Report of Completion of Course-based Master's Degree form.

This information must be received and verified by GPS before the student's name is placed on the convocation list.

Failure to meet the deadlines in the Academic Schedule will result in a delay in awarding the degree.

[\(U of A Calendar\)](#)

3.6 Graduate Studies Director

The LMP Director, Graduate Studies has primary oversight over all the LMP thesis-based Master's and PhD programs and course-based MSc programs, fostering a learning environment that promotes delivery of outstanding graduate education experiences and professional training. Key qualifications include a PhD (tenured or a tenure-track faculty) with a strong understanding of LMP, FoMD and Faculty of Graduate & Postdoctoral Studies (GPS) Program policies and procedures; experience in MSc and PhD student supervision, academic administration, strategic and curriculum planning; ability to work collaboratively and build partnerships within a larger and complex organization.

The Associate Director consults with the Director on program matters and acts as the graduate coordinator when the Director cannot.

Graduate Studies Director Responsibilities:

- Responsible for the administration, organization, evaluation, continuous quality improvement, curriculum planning, and general effectiveness of the LMP graduate program
- Acts as the official graduate program representative of the Department to GPS and FoMD, ensuring that the regulations and requirements of the University are administered and met in a fair and equitable manner
- Maintains effective relationships and work collaboratively with other university departments, research institutes, centres, faculties, colleges, and stakeholders to support graduate research and training development
- Communicates relevant information from GPS and FoMD to graduate students and faculty members in the Department
- Communicates relevant information to GPS and FoMD regarding graduate students in the Department
- Monitors student supervision and ensures that the supervisors meet regulations and requirements of GPS, FoMD, and the LMP department
- Responsible for admission of students to the department. Confirms the applicants meet the admission criteria before recommendations for admission are forwarded to GPS

- Ensures that a graduate student supervisor and a supervisory committee are set up within one year of the student starting the graduate program
- Recommends graduate student supervisors to FoMD for appointment in accordance with LMP, FoMD, and GPS policy
- Recommends members of the doctoral supervisory committee appointment to GPS in accordance with LMP, FoMD, and GPS policy
- Approves members of the master's supervisory committee appointment
- Acting as an advisor concerning the appointment external examiners
- Oversees submission and distribution of the PhD Proposal package, reviewers' comments, and student responses to the LMP Graduate Studies Committee (GSC) for approval
- Assists supervisors in addressing concerns regarding graduate student progress
- Monitors the progress of all graduate students in the Department
- Acting as an advisor concerning any changes to a graduate student's status or a program
- Chairs the graduate student candidacy and final oral examinations or appropriately delegates this responsibility
- Initiates and coordinates LMP graduate student orientations activities
- Acts as the course coordinator for LABMP 540 and LABMP 620/621 or appropriately delegates this responsibility
- Approves grades for graduate level LABMP courses or appropriately delegates this responsibility
- Chairs meetings of the LMP GSC Committee, acts as a member/representative of the LMP graduate program at the LMP Awards and Education Committees and other LMP, FoMD, and GPS committees and working groups, as requested

Conflict of interest guidelines are outlined in the [University of Alberta Calendar](#).

3.7 Graduate Studies Committee - Roles and Responsibilities

The role of the Graduate Studies Committee is to:

- promote and enhance graduate studies;
- set policy as defined in the LMP *graduate program handbooks*;
- review and make decisions as necessary regarding admissions and student awards;
- assist in monitoring graduate student progress;
- review PhD proposal packages (proposal, student progress, research environment, and committee expertise) and makes recommendations regarding a student's general readiness to proceed to the candidacy examination; and
- disseminate key information to students and supervisors.

The graduate program in Laboratory Medicine and Pathology is administered by the Graduate Studies Committee which normally consists of the Department Chair, the Director of Graduate Studies; the Associate Director of Graduate Studies, the Director of the Transfusion Science program, at least 4 additional faculty members (where at least 50% must be actively supervising graduate students), 1-2 graduate student representatives, and the Graduate Program Advisor who is a non-voting member. All faculty members of the Graduate Studies Committee are appointed by the Department Chair for a defined term of service.

At least 3 faculty members plus the Graduate Studies Coordinator are required for quorum.

3.8 Graduate Student Financial Assistance/Awards

Students are fully responsible for paying all required tuition and fees by the deadline dates set out in the Calendar.

Financial assistance in the form of scholarships or awards may be available to qualified students. See [LMP Awards and Funding](#) and [GPS Awards and Funding](#) for awards information pertinent to LMP students.

Students who are not in good standing may not be eligible for these benefits (see the LMP [Good Standing Policy](#)).

3.9 Student Concerns

3.9.1 Coursework Complaints

Concerns regarding coursework or grades should be addressed first with the course instructor and, if that proves unsatisfactory, then with the chair of the department where the course is taught, and finally with the dean of the faculty in which the course is taught or that dean's designate (usually the associate dean).

For detailed guidelines of the informal and formal grade appeals process see the Faculty of Medicine and Dentistry's Policy and Procedure on [Academic Appeals](#). Specific timelines apply.

Grades cannot be appealed beyond the Faculty level.

The [Office of the Student Ombuds](#) may be consulted for advice at any time.

3.9.2 Practicum Intervention Policy

The [Calendar](#) states that "the University has an obligation to protect the public interest, public safety, and public health by ensuring that students in practicums conform to accepted standards of professional, competent and safe practice in their work with patients, clients, and co-workers." Accordingly students in the Transfusion Science program are governed by the University of Alberta's [Practicum Intervention Policy](#) under which a Dean may intervene in the practicum of a student. Students have the right of appeal.

3.9.3 Appeals and Grievances

Students should consult the [University of Alberta Calendar](#) and the University's [Academic Appeals Policy](#) for details on appeals and grievances.

3.9.4 Student/Advisor Conflicts

At times, conflicts may arise between the student and advisor or course instructor/coordinator.

- The first step is to try to resolve the conflict or misunderstanding informally. The advisor (or course instructor/coordinator) and student should discuss the problem together.
- If resolution is unsuccessful, the Graduate Studies Director should be notified as early as possible. It is the responsibility of the Graduate Studies Director to arrange for consultation and mediation.
- Assistance/advice of the supervisory committee or other appropriate resources may be requested.
- Finally, assistance of GPS may be requested
- The [Office of the Student Ombuds](#) may be consulted for advice at any time.
- The Faculty of Medicine & Dentistry's [Office of Advocacy & Wellbeing](#) may also be contacted regarding issues pertaining to the health and well-being of learners, including graduate students and also advocates on their behalf. It is a safe and confidential place to seek out resources and support for any situation that might affect a student's ability to perform at his or her best.

4 MASTER'S PROGRAM – Transfusion Science

4.1 Time Limits for Program Completion (MSc)

The STS program is two years full time, or part-time with a maximum of 4 years to complete. Students in the part-time program must be registered continuously for 4 years, or for the length of their program to be complete.

4.2 Academic Standing and Grades

- LMP graduate students must maintain a cumulative program GPA of 3.0
- All core courses are pass/fail, and all must be passed to continue in the program
- The passing grade for graded graduate courses is C+ (2.3)
- If the cumulative grade point average falls between 2.3 and 3.0, or if one or more of the core courses is failed, termination of program or continuation in the program for a specified probationary period may be recommended.
- Notwithstanding the above, a graduate student whose academic standing falls below a grade point average of 3.0 may be required to withdraw at any time.

4.3 Professional Standards

Transfusion Science students must adhere to the Faculty of Medicine and Dentistry's [Professional Standards for Students](#), "a code of values, expectations and conduct [reflecting] the ideals that are integral to professionalism."

4.4 Program Requirements

4.4.1 Required Coursework

LABMP 501 (3): Advanced Immunohematology LABMP 502 (3): Immunohematology Techniques LABMP 503 (3): Supply & Distribution 1
LABMP 504 (3): Supply & Distribution 2 LABMP 505 (3): Advanced Transfusion Support LABMP 506 (3): Clinical Laboratory Operations & Quality Management Systems
LABMP 600 (3): Clinical Practicum I Elective (3) LABMP 900A (3): Research Project
LABMP 601 (3): Clinical Practicum II Elective (3) LABMP 900B (3): Research Project

4.4.2 Capping Project

LABMP 900 Research Project. The course is an independent capping project co-supervised by an appointed faculty member and the student's appointed mentor. The student will choose the capping project with the assistance of their workplace mentor. The student will be expected to write a proposal, keep an accurate laboratory notebook / project documents, and produce a final paper that can be

presented at department rounds. Publication of the final paper in a peer-reviewed journal is encouraged.

As per GPS policy, the report of the project must be retained by the department.

4.4.3 Practicum

The clinical practicum includes two courses LABMP600 and LABMP 601 which involves onsite observation, practice, or technique. The specific location and content of the practicum sessions will be determined jointly by the candidate, the mentor and the program director.

4.4.3.1 Essential Functions

Successful completion of the MSc with specialization in Transfusion Science Program at the University of Alberta requires achievement of the following core competencies during the clinical practicum courses:

Observation

A student must possess the ability to observe accurately at varying distances. A student must be able to observe demonstrations and participate in examinations, and processing of specimens. The performance of such tasks requires the student to be able to accurately perceive light versus dark, and to differentiate between different colors. A student must also be able to use a variety of tools, equipment, and chemicals to perform these tasks with consistency and precision. Observation requires the functional use of the sense of vision, hearing and touch.

Communication

A student must be able to communicate effectively and in a respectful and professional manner with physicians, faculty, laboratory staff, fellow students, and other members of the healthcare team through speaking, listening, reading, and writing in English. A student must be able to recognize, interpret, and appropriately use other auditory cues, including tone of voice and volume of speech, in addition to nonverbal forms of communication, including facial expressions, body language, and hand gestures. A student must be able to interpret and implement instructions in a complete and timely manner while working alone or with others. A student must be able to make accurate and appropriate entries in medical records, documents, and reports. Effective communication further requires the integration of a number of sensory modalities, including vision, sound, and touch.

Sensory and Motor Coordination and Function

A student must have sufficient sensory and motor function to perform the movements required to conduct all aspects of a transfusion service laboratory. These activities may require the student to sit or stand for long periods of time; lift and carry heavy objects; perform pushing, pulling, reaching, and bending motions; and grasp and manipulate tissues, tools, and other laboratory equipment. The student must also be able to perform all laboratory protocols, work with standard laboratory materials, and properly put on and remove personal protective equipment. These actions and activities all require the coordination of muscular, skeletal, and sensory functions, including touch and vision, to produce both gross and precise hand and body movements. Additionally, the student must possess tactile precision in order to perform these activities accurately and safely.

Intellectual, Conceptual, Integrative and Quantitative Abilities

A student must possess sufficient critical thinking and problem-solving skills to perform the duties of a Transfusion Science specialist, including the ability to accurately measure, calculate, reason, analyze, integrate, learn, comprehend, and synthesize information. A student must be able to comprehend, retain, and recall large volumes of complex information, and apply this knowledge to the assessment of transfusion medicine problems. A student must be able to interpret antibody identification, genetic

testing reports, and communicate this information in an accurate, effective, and timely manner. A student must be able to rely on their intellectual abilities, knowledge and prior experience to exercise good judgment.

Behavioural and Social Attributes

A student must possess the emotional maturity and mental fitness necessary to perform the duties of a Transfusion Science specialist. The student must be aware of the often sensitive and confidential nature of these duties, while also recognizing and understanding the importance of the roles and responsibilities of Transfusion Science. A student must assume responsibility for their work. A student is expected to seek out feedback for ongoing improvement, acknowledge suggestions and criticism when provided, reflect on this feedback and integrate it into future work, and take corrective or remedial measures if necessary. A student must be able to adapt to changing environments and cope with physically and mentally taxing workloads. A student must be compassionate and respectful towards others, and act with integrity, professionalism, and dignity.

4.4.3.2 Clinical Sites

Clinical sites will be chosen depending on the student's learning needs, and will be approved by the LMP program director. Sites may include both hospital laboratories and blood supplier facilities. It is the student's responsibility to arrange clinical placements in collaboration with the LMP program director.

4.4.3.3 Clinical Assignment

The clinical practicum is designed with flexibility and redundancy. To successfully complete the practicum students must complete all of their required competencies in a manner that complements competencies achieved through the didactic coursework or workplace activities. As the practicum occurs across multiple possible sites, when one of the clinical sites is not available there is almost always availability for training space at another site. In the rare event a clinical placement was not available for specific needed competencies, the students are trained such that with their solid foundation of skills they can complete virtual competencies using visual aids and discussion.

4.4.4 Ethics requirement

An ethics requirement is mandatory for all newly-admitted University of Alberta graduate students.

For Transfusion Science Master's students the Ethics and Academic Citizenship Requirement will consist of taking one zero-credit, self-paced, online course: [INT D 710: Ethics and Academic Citizenship](#). Registration is via Bear Tracks and should be completed within the first 8 months of the program.

4.4.5 Professional Development Requirement

It is mandatory for all graduate students to complete a professional development requirement, which includes the *Individual Development Plan (IDP)* and a minimum of 8 hours of professional development activities.

There is a recognized need for graduate students and their supervisors/advisors to be more aware of professional development, and the diversity of skills to be developed during graduate programs that go far beyond the ability to complete academic and research requirements. During completion of the IDP, students are expected to identify 3 possible career paths, and map appropriate professional development activities to support development of skills to enhance employment opportunities after graduation. In addition to career paths in business, industry, government, nonprofit sectors, and academia, etc., the "3 possible career paths" for Transfusion Science students could reflect Transfusion careers but in different streams/settings: e.g., academic hospital, community hospital, hospital admin

role, clinical transfusion safety, industry representation and a university or academic teaching role, as well as quality assurance role, etc. Accordingly, students are expected to:

1. Begin developing the IDP by the *start of the second term* of the first year. GPS's [Professional Development Requirement](#) website provides guidance.
2. Identify a career mentor *before commencement of the program*.

The career mentor may or may not be the academic advisor. *Plan to meet with the career advisor periodically – at least annually – to discuss the IDP and appropriate professional development activities.*

3. Submit LMP's [Professional Development Requirement \(template\)](#), which includes the IDP and a plan for a *minimum of 8 hours* of professional development activities to the LMP Graduate Program office *within 12 months of program commencement*.

See GPS's [Eight Hours of Professional Development Activities](#) for guidance.

4. Provide evidence of completion of the professional development requirement to the LMP Graduate Program office *by the end of year 2*.

The student must meet with the career mentor to review the evidence of completion of the professional development requirement. If met, the career mentor will sign the [Individual Development Plan & Professional Development Completion](#) form. The student will then submit this documentation to the Graduate Studies Director for review and signature. The form is then retained in the student's file as evidence for the *Completion of Thesis & Program Requirements* form.

4.4.6 Presentation/Seminar Attendance Requirement

1. Master's students are required to make one oral presentation to the department at LMP Rounds. Student LMP Rounds presentations are scheduled for half an hour, generally a 20-minute presentation followed by a short question period. Students in the Transfusion science program must present their capping project.
2. In order to obtain a broad perspective on a wide range of topics in their field, students in the Transfusion Science program are expected to attend seminars or rounds approved by the director. It is expected that students will attend the "[Learn Transfusion](#)" seminars and appropriate continuing education opportunities approved by the director.
 - a. Attendance for a minimum of 10 hours is required during each of the 8 months of the Fall and Winter terms of Year 1 and year 2.

Proof of attendance is required. Students will track their attendance using the [Transfusion Science Program Seminar Record of Attendance](#) form and submit the signed form to the LMP Grad Program office at the end of each academic term (Fall, Winter and Spring/Summer). Failure to submit the form will not be accepted as a reason for failing to meet the attendance requirement of the program.

4.4.7 Instructional Methods Course

Completion of a non-credit instructional methods course is required. This requirement can be met by any instructional methods / teaching program including, but not limited to:

1. completion of Level One of the University of Alberta's [Graduate Teaching and Learning program](#).
2. [Instructional Methods in Health Professions Education](#) (University of Michigan) offered via Coursera.

Courses not listed here may be acceptable but must be approved by the Program Director and Graduate Studies Director.

5 Meetings with Academic Advisor

It is the responsibility of the academic advisor to meet with a full-time student no less than two times in an academic year. ([FGRS Graduate Program Manual 1.3](#))

The graduate student should be made aware at each meeting whether they are making satisfactory or unsatisfactory progress.

The advisor must explain the rationale and review with the student any administrative and/or curricular changes that have occurred since their last scheduled meeting and any impact that such changes will have (or potentially might have) on the student's progress.

An email record of the meeting, summarizing the discussion, will be sent from the advisor to the student and copied to the graduate program advisor for inclusion in the student file.

6 PROGRAM COMPLETION

6.1 Program Completion Procedures

[Convocation information and deadlines](#) are posted on the GPS website.

The following are to be completed **before** the graduate student convocation deadlines:

- The LMP Graduate Program verifies successful completion of all program requirements and submits the [Report of Completion of Course-based Master's Degree](#) to GPS.
- The student must apply to graduate in [Bear Tracks](#).
- All applications for graduation are subject to review and approval by the Faculty of Graduate & Postdoctoral Studies. Applying to graduate on Bear Tracks **does not** guarantee convocation
- The student must pay all outstanding fees. Parchments and other official documentation will not be released to students with outstanding accounts.

Students will be invited to participate in an exit survey. Their input and feedback will help to improve the overall learning experience of future students in the LMP graduate program.

Students are encouraged to attend the [Convocation ceremony](#) held in their honour. The student's degree is conferred at this ceremony. The parchment (the official documentation of the student's academic credential containing the student's name, degree/specialization and academic honors if applicable) is given at this time. Students unable to attend Convocation may pick up their parchment in person during specified dates following the ceremony; if it is not picked up, it will be mailed to the current address on the student record.