

# **Faculty of Graduate Studies and Research**

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- Computing Science [Graduate] 1826
- Dentistry [Graduate] 1834
- Digital Humanities [Graduate] 1856
- Drama [Graduate] 1859
- Earth and Atmospheric Sciences [Graduate] 1863
- East Asian Studies [Graduate] 1867
- Economics [Graduate] **1869**
- Educational Policy Studies [Graduate] 1875
- Educational Psychology [Graduate] 1890
- Educational Studies [Graduate] 1893
- Electrical and Computer Engineering [Graduate] 1895
- Elementary Education [Graduate] 1900
- English and Film Studies [Graduate] 1903
- Faculté Saint-Jean [Graduate] 1907
- Health Sciences Education [Graduate] 1915
- History and Classics [Graduate] 1918
- Human Ecology [Graduate] 1925
- Internetworking [Graduate]
   1929
- Kinesiology, Sport, and Recreation [Graduate] 193'
- Laboratory Medicine and Pathology [Graduate] 1937
- Law [Graduate] 1940
- Library and Information Studies [Graduate]
   1944

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- Linguistics [Graduate] 1948
- Mathematical and Statistical Sciences [Graduate]
   1950
- Mechanical Engineering [Graduate] 1954
- Medical Genetics [Graduate] 1964
- Medical Microbiology and Immunology [Graduate] 1967
- Medical Sciences [Graduate] 1969
- Medicine [Graduate] 1971
- Mining and Petroleum Engineering [Graduate] 1976
- Modern Languages and Cultural Studies [Graduate]
   1976
- Music [Graduate] 1982
- Native Studies [Graduate] 1992
- Neuroscience [Graduate] 1996
- Nursing [Graduate] 2000
- Obstetrics and Gynecology [Graduate] 2008
- Occupational Therapy [Graduate] 2010
- Oncology [Graduate] 2013
- Ophthalmology and Visual Sciences [Graduate] 2016
- Paediatrics [Graduate] 2017
- Pharmacology [Graduate] 2019
- Pharmacy and Pharmaceutical Sciences [Graduate] 2021
- Philosophy [Graduate] 2023
- Physical Therapy [Graduate] **2025**
- Physics [Graduate] 2031
- Physiology [Graduate] 2033
- Political Science [Graduate] 2035
- Psychiatry [Graduate] 2039
- Psychology [Graduate] 2042
- Public Health [Graduate] 2047
- Radiology and Diagnostic Imaging [Graduate] 2068
- Rehabilitation Medicine [Graduate] 2070
- Religious Studies [Graduate] 2078
- Renewable Resources [Graduate] 2082
- Resource Economics and Environmental Sociology [Graduate]

  2086
- Secondary Education [Graduate] 2091
- Sociology [Graduate] 2098
- Surgery [Graduate] 2101
- Women's and Gender Studies [Graduate]
   2103

## The Faculty of Graduate Studies and Research

### **Policies and Regulations**

The University Calendar and the Graduate Program Manual of the Faculty of Graduate Studies and Research (the FGSR) set forth the policies and regulations of the University of Alberta on graduate education at the time of publication.

Graduate students should also refer to the regulations set forth in University Regulations.

University deadlines are set out in the Academic Schedule. Please note that graduate student deadlines may differ from undergraduate student deadlines.

#### Responsibilities Related to Graduate Programs

#### Student

Graduate students are ultimately responsible for their own programs, and are expected to be familiar with all regulations and deadlines relating to their programs.

The students' fundamental responsibilities include

- ensuring that their registration is accurate and does not lapse
- submitting appropriate forms to the department for signature and processing
- paying all fees required by the deadline dates set out in the Calendar
- maintaining open communication with their supervisor or advisor and graduate coordinator concerning any problem
- in the event of a conflict in the supervisor-student or advisor-student relationship, discuss with the supervisor or advisor and graduate coordinator in a timely fachion
- in a thesis-based program, providing the supervisor with an annual report for distribution to the supervisory committee
- being aware of the expectations of the supervisor and the department
- informing the supervisor or advisor regularly about progress
- making research results accessible (beyond their appearance in a thesis) to an appropriate audience.

Please read the Calendar carefully. If you are in doubt about the regulations pertaining to your graduate program, consult your department or the FGSR.

#### Supervisor

If a student has more than one supervisor, then the term "supervisor" refers to the entire group of supervisors. The supervisor is directly responsible for the supervision of the student's program. The supervisor

- assists the student in planning a program of studies
- assists in ensuring that the student is aware of all program requirements, degree regulations, and general regulations of the department and the FGSR
- provides counsel on all aspects of the student's program
- stays informed of the student's research activities and progress
- ensures that students conduct their research in a manner that is as effective, safe, and productive as is possible
- arranges for and attends all supervisory committee meetings and the student's examinations, ensuring that these are scheduled and held in accordance with FGSR regulations

## GRADUATE STUDIES AND RESEARCH

- when going on leave or an extended period of absence, ensures that the student is adequately supervised by the provision of an acting supervisor.
   In the case of doctoral students this should be a member of the supervisory committee
- reviews the thesis both in draft and in final form.

#### Academic Advisor

The academic advisor is essential to the successful pursuit by the student of the course-based master's degree. 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 and will meet with a part-time student no less than once 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 supervisor-student relationship, discusses the issues with the student and graduate coordinator in a timely fashion.

#### **Graduate Coordinator**

The term graduate coordinator refers to an associate chair, associate dean, director, or any other individual officially designated by the head of the unit as being responsible for the unit's graduate programs.

Graduate coordinators must be tenured or tenure-track faculty members.

Graduate coordinators have a duty to ensure that departmental and Faculty rules are administered in a fair and equitable manner. This often involves going beyond a mere application of the rules, and may entail using moral persuasion on colleagues and students.

However, since the various units within the University contain a variety of graduate programs and operate under a diversity of policies, regulations and customs, the exact role of the graduate coordinator will vary.

The responsibilities of the graduate coordinator may include:

- ensuring that the regulations and requirements of the FGSR and the University are met
- being the official representative of the department to its graduate students
- admitting applicants to graduate programs
- acting as an advisor concerning the appointment of supervisors, supervisory committees, and external examiners
- acting as an advisor concerning any changes to a student's status or program
- carrying out FGSR and University policies relating to graduate students
- acting as a liaison between the FGSR and the unit
- coordinating financial support for graduate students, including fellowships and assistantships
- monitoring the academic progress of graduate students
- providing advice to graduate students on the rules and procedures of the FGSR and the department
- keeping the FGSR informed of any changes in the student's program, including student status, course and program changes, scheduling of examination dates,
- initiating and coordinating graduate student recruitment activities.

Relationships between graduate coordinators and the staff and students in their program(s) should be academic. Any personal relationships that alter or affect this academic relationship may constitute a conflict of interest (e.g. familial or intimate relationship, business relationship).

## **GRADUATE STUDIES AND RESEARCH**

In addition, a conflict of interest may arise when graduate coordinators make decisions concerning students that they supervise. Any possible conflict of interest should be disclosed in accordance with the University of Alberta Conflict Policy -- Conflict of Interest and Commitment and Institutional Conflict.

#### Department

The term "department" refers to a department, a non-departmentalized Faculty, or to an extra-departmental graduate program such as a Centre.

The term "department" also refers to the graduate coordinator or any other individual officially designated as being responsible for the graduate program in the unit.

The department must ensure that supervisors are aware of and are meeting their supervisory or advisory obligations, and in turn, that students are performing satisfactorily.

The department maintains open communication with its students concerning any problem; and in the event of a conflict in the supervisor-student or advisor-student relationship, the graduate coordinator discusses the issues with the student and supervisor or advisor in a timely fashion (see Section 8 of the graduate program manual for further information).

#### **FGSR Council**

The FGSR Council is established by the Post-Secondary Learning Act, and operates under delegated authority from the General Faculties Council. The FGSR Council

- approves minimum University standards on all aspects of graduate education, including minimum admission standards, time limits for the completion of program milestones, and residency requirements
- approves graduate policy
- approves the creation of all new graduate credentials and new graduate programs, including graduate programs under the Shared Credential Policy
- deals with any other such matters as are brought to it from time to time by the Vice-Provost and Dean, FGSR.

## Members of the Faculty

#### Officers of the Faculty

Interim Vice-Provost and Dean

D Burshtyn, PhD

Refer to the Contact Us page on the FGSR website at https://www.ualberta.ca/graduate-studies/about/contact-us for a complete listing of the Dean, the Vice-Dean and the Associate Deans as well as Professional Development and Community Volunteer Programs

## **General Information**

### **Graduate Programs Offered**

Graduate work has been offered at the University of Alberta since its inception in 1908. The present organization of the Faculty of Graduate Studies and Research, headed by a Dean, was adopted in 1957.

The University of Alberta offers graduate programs leading to doctoral and master's degrees. The specific programs offered in each category are listed below. In addition, the University offers many graduate diploma and certificate programs designed to provide an opportunity for individuals to take a sequence of courses to increase their knowledge of a specialized area without needing to enrol in a degree program.

For more information on graduate programs offered, refer to the Program Search Results on the FGSR website.

### **Graduate Teaching and Learning Program**

The Graduate Teaching and Learning Program is offered through the Faculty of Graduate Studies and Research.

The primary objective of the program is to provide opportunities for master's and doctoral students to develop an ethical, philosophical, and practical basis for teaching in academic and non-academic careers. Successful completion of each of the components is recorded on the student's transcript. The program is voluntary and no additional fees are required.

Graduate students are expected to familiarize themselves with the requirements of the Graduate Teaching and Learning Program and are responsible for meeting the requirements and deadlines for each respective level.

Graduate students are not required to complete all four levels of the program; however, levels must be completed in sequence.

Program Levels:

Level 1: Graduate Teaching and Learning Foundations. A minimum of 20 hours of workshop participation and an exit survey and critical reflection.

Level 2: Graduate Teaching and Learning Practicum. Course equivalent to 17 hours of instruction in multifaceted classroom experience, including lesson design and delivery; feedback from student peers and course instructor; creation of teaching development plan; development of a statement of teaching philosophy; an exit survey and critical reflection. Prerequisite: Level 1

**Level 3:** Graduate Teaching and Learning Pedagogy. Course equivalent to 36 hours of instruction in the fundamentals of pedagogy, resulting in the design of a course, and a teaching dossier; revision of a teaching development plan; and, an exit survey and critical reflection. Prerequisite: Level 2

**Level 4:** Graduate Teaching and Learning Research. A minimum of 60 hours of project work related to the design of learning experiences and measurement of learning outcomes; literature review, participation in cohort meetings; peer and mentor feedback; dissemination of research project; revision of teaching development plan; an exit survey and critical reflection. Expected completion time up to one year. Prerequisite: Level 3.

The goals of the program are:

- Participants will build self-confidence and personal effectiveness in the classroom. Participants will develop pedagogical knowledge, competencies in course design and delivery, and classroom management and leadership skills. Participants will develop research skills in the scholarship of teaching and learning.
- Departments will improve their teaching practice with teaching assistants who are better equipped for their role in the classroom and laboratory, and faculty
  members who have a heightened awareness of teaching and learning issues
- The University will support its mandate to provide excellence in undergraduate and graduate education. The University will strengthen the quality and reputation of its graduates.

It is highly recommended that students pursue teaching opportunities outside the Graduate Teaching and Learning Program to further complement their teaching practice developed through the program. Students do not require access to teaching assistantships to complete the program. The entire program is designed to be completed over a two- to three-year period.

### Faculty of Graduate Studies and Research Community Volunteer Program

The Faculty of Graduate Studies and Research Community Volunteer Program provides opportunities for graduate students to participate in activities that promote learning and a dissemination of knowledge among elementary, junior, and senior high schools in the community, as well as to colleges, community groups, or industry. The Community Volunteer Program Office will initiate, promote, and facilitate off-campus outreach opportunities and contacts for graduate students. More information is available at www.ualberta.ca/graduate-studies/professional-development/communityvolunteerprogram.

#### Information for International Students

International students (i.e., neither Canadian citizens nor permanent residents) studying in Canada require a Study Permit from Citizenship and Immigration Canada. Study Permits must be obtained before coming to Canada-they cannot be issued here.

While it is not possible to obtain a Study Permit until an official letter of admission from the Faculty of Graduate Studies and Research has been issued, students are advised to begin the procedures necessary to secure admission to Canada and to complete the documentation required by Citizenship and Immigration Canada as soon as possible after submitting an application for graduate admission.

The University of Alberta International conducts orientation seminars and assists students after they arrive in Canada.

#### Fees

The University of Alberta's fees policies and procedures are stated in Fees Payment Guide of the Calendar. Information on fees for graduate students is found in Fall 2016/Winter 2017 Graduate Instructional and Non-Instructional Fees of the Calendar. Individuals seeking fees information should consult these sections or the Faculty of Graduate Studies and Research website.

## Regulations of the Faculty of Graduate Studies and Research

The general Faculty regulations outlined below apply to all graduate students. Faculty regulations specific to particular degree programs are found under the appropriate program heading in Graduate Programs.

### **Application for Admission**

All documents submitted to the Faculty of Graduate Studies and Research in support of an application for admission become the property of the Faculty of Graduate Studies and Research and will not subsequently be released or copied except to other University of Alberta offices, at the request of the student.

Reference letters are collected under the Freedom of Information and Protection of Privacy Act and the Post-Secondary Learning Act. They are required by the University to evaluate applicants for admission to a graduate program and for scholarship and other funding purposes. Reference letters are considered to be supplied in confidence and will be used only by individuals and committees who evaluate applicants.

Application deadlines are set by many departments and non-departmentalized Faculties, and should be consulted by the applicants.

In accordance with the University's Admissions Policy, all admission decisions are final and there is no formal appeal to any body or person within the Faculty or the University.

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#### Admission

Individuals seeking admission should review the University of Alberta Code of Applicant Behaviour. Amendments to the Code of Applicant Behaviour occur throughout the year. The official version of the Code of Applicant Behaviour, as amended from time to time is housed on the University Governance website at www.governance.ualberta.ca.

The minimum requirements for admission to the Faculty of Graduate Studies and Research are outlined below. Some departments and non-departmentalized Faculties impose additional admission requirements. Even though an applicant may appear to satisfy the minimum admission requirements, acceptance into a graduate program is not quaranteed.

#### **Academic Requirements**

In making its admission decisions, the University of Alberta strives to optimize the students' opportunity to succeed academically, while maintaining a high standard in its graduate programs.

Applicants for admission must have obtained a University of Alberta baccalaureate degree or its academic equivalent from this or another recognized academic institution.

Qualified applicants with a three-year undergraduate degree from a Bologna-compliant or another recognized research-intensive university will be considered for admission in the normal way.

Applicants will not be admissible to a doctoral degree program at the University of Alberta if they have previously obtained a similar or identical degree.

Please see Evaluation Procedures and Grading System of the University Calendar for the University of Alberta grading system.

The minimum Admission Grade Point Average (AGPA) required for admission to a graduate program at the University of Alberta is 3.0, equivalently, a letter grade B. Many graduate programs have higher minimum AGPA requirements, see Graduate Programs of the University Calendar.

For detailed information on the calculation of the AGPA, please consult the Graduate Program Manual, §5.11.

Please consult §5 of the Graduate Program Manual for information and regulations concerning international grading systems and their evaluation.

The decision to admit an applicant to a graduate program is made by that program.

#### Admission with Conditions

In certain circumstances, the Faculty of Graduate Studies and Research or the academic unit may impose conditions on an applicant's admission. Such circumstances include academic qualifications that are difficult to assess or below the minimum standards required by the program.

The conditions will be clearly stated in the admission letter followed by the statement that if the student fails to satisfy the stated conditions by the required deadlines, the student may not be allowed to continue in the program.

Examples of admission conditions include:

- 1. The requirement for the receipt of various documents.
- 2. The successful completion of a specific English Language Proficiency test.
- 3. The requirement to take a specific set of courses, and achieve certain grades, or grade point averages, within a specified time.

An applicant who has met some or all of their admission conditions prior to arrival at the University of Alberta may request confirmation of the fact from the FGSR.

## GRADUATE STUDIES AND RESEARCH

In the absence of exceptional circumstances, students admitted with conditions will not be permitted to register in project courses. In no circumstances will students admitted with conditions be permitted to register in directed reading courses.

If a student meets all of the conditions of admission, they may continue in the program; if not, the department will recommend, in writing, one of the following to the Dean, FGSR:

- That the deadline for meeting the unfulfilled condition(s) be extended, with no new conditions being imposed.
- That the student be granted another term with conditions. This recommendation must include (a) an indication of how the Failure in or Failure to Complete a
  Course in the first term of registration will be managed (see Failure in or Failure to Complete a Course or Research Work of the University Calendar) and (b)
  specification of a minimum number of graduate-level courses which are to be taken by the student and the minimum academic performance required.
- That the student not be permitted further registrations in the program. This written recommendation to the Faculty of Graduate Studies and Research must include a rationale for this decision.

Any student who does not meet the conditions of a second term of registration will not be permitted to continue in the program.

#### **Aboriginal Applicants**

The University of Alberta is committed to the recruitment, retention and graduation of Aboriginal students. The University also recognizes that Aboriginal applicants have traditionally been under represented in higher education and strives towards having the University's Aboriginal student population attain a level that is at least proportionate to the Aboriginal population of the province.

For the definition of an Aboriginal applicant, please see Definition of Aboriginal People for the Purpose of Admission of the University Calendar.

In accordance with the Faculty of Graduate Studies and Research admission policy, Aboriginal applicants may be considered for admission on the basis of their life experience. The Faculty of Graduate Studies and Research advocates the admission of Aboriginal applicants by individual departments.

#### **English Language Requirement**

Since English is the primary language of instruction and communication at the University of Alberta (except for Faculté Saint-Jean), proficiency in English is a prerequisite for graduate admission.

All applicants must demonstrate English language proficiency prior to admission either by:

- 1. Possession of a degree or its academic equivalent from an academic institution recognized by the University of Alberta, in which the language of instruction is English.
  - or
- A satisfactory score on an approved English language examination as described below.

Notwithstanding the above, graduate programs reserve the right to require a further demonstration of English language proficiency.

The Faculty of Graduate Studies and Research recognizes five English language examinations:

- 1. the Test of English as a Foreign Language (TOEFL)
- 2. the Michigan English Language Assessment Battery (MELAB)
- 3. the International English Language Testing System (Academic IELTS)
- the Canadian Academic English Language (CAEL) Assessment
- the Pearson Test of English Academic (PTE Academic).

The minimum acceptable scores are:

## GRADUATE STUDIES AND RESEARCH

- TOEFL: total score of 88 with a score of at least 20 on each of the individual skill areas (internet-based) or equivalent
- MELAB: 85
- Academic IELTS: 6.5, with at least 5.5 on each test band.
- CAEL: overall 60 with at least 60 on each subtest.
- PTE Academic: 59.

The University will receive PTE Academic results electronically directly from Pearson at the request of the applicant. Applicants with results from other examinations should arrange for their English language test results to be sent directly to the graduate program.

Individual graduate programs may require higher scores. Consult the appropriate departmental information in Graduate Programs.

#### University of Alberta Staff as Graduate Students

University of Alberta staff may be considered for admission to graduate programs provided the academic unit has reviewed the case and established that conflict of interest between the candidate's role as staff member and as graduate student will be absent or minimal.

### Registration

Students are responsible for the completeness and accuracy of their registration. They are also responsible for adjustments in registration.

#### Maintenance of Registration

Course-based Programs: Students in course-based degree programs must register in and successfully complete a minimum of ★3 of coursework or in M REG 800 - Maintaining Registration for at least one term in each September to August period to keep their program active. Other registration patterns for students in exceptional circumstances will be considered by the Faculty of Graduate Studies and Research.

Thesis-based Programs (Admitted prior to Fall 2011): Students who are admitted to any thesis-based program (excluding cost-recovery programs) and who initially register as full-time students in these programs must register full-time for the remainder of their program. This policy is in effect for students who began September 2003 and thereafter. In order to keep their program active, thesis-based master's and doctoral students admitted prior to Fall 2011 must register each year in the Fall and Winter Terms either full-time (equivalent of ★9 of coursework and/or thesis) or part-time if eligible (minimum of ★3 of coursework and/or Thesis, or in M REG 800 - Maintaining Registration). Students who have registered in Fall and Winter Terms and are working only on thesis research during May through August do **not** need to register for the Spring and Summer Terms. See Registration Procedure for registration procedures. Other registration patterns for students in exceptional circumstances will be considered by the Faculty of Graduate Studies and Research. For registration at the end of the program, see Registration.

Students who fail to keep the program active as described above will be considered to have withdrawn from their program. If they wish to resume work on their program, they must apply for readmission and have their program reassessed in terms of the regulations in force at the time of reapplication. There is no guarantee of readmission. If a student is recommended for readmission, a Readmission Fee will be assessed in addition to the fees assessed in the usual manner.

**Thesis-based Programs (Admitted Fall 2011 and thereafter):** Students who are admitted to any thesis-based program (excluding cost-recovery programs) and who initially register as full-time students in these programs must register full-time for the remainder of their program.

In order to keep their program active, thesis-based master's and doctoral program students admitted in Fall 2011 and thereafter must register each year in each consecutive term (Fall, Winter, Spring and Summer). In Fall/Winter Terms (September through April), these students must register either full-time (equivalent of  $\bigstar$ 9 of course work and/or thesis) or part-time if eligible (minimum of  $\bigstar$ 3 of course work and/or Thesis, or in M REG 800 - Maintaining Registration). In Spring/Summer Terms (May through August), these students must register in each term full-time (in THES 906  $\bigstar$ 6). See Registration Procedure for registration procedures. Other registration patterns for

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students in exceptional circumstances will be considered by the Faculty of Graduate Studies and Research. At the end of the program, the registration can be as described in Registration at End of Program.

Students who fail to keep the program active as described above will be considered to have withdrawn from their program. If they wish to resume work on their program, they must apply for readmission and have their program reassessed in terms of the regulations in force at the time of reapplication. There is no guarantee of readmission. If a student is recommended for readmission, a Readmission Fee will be assessed in addition to the fees assessed in the usual manner.

Students who require a leave of absence from their program should refer to the Approved Leave of Absence policy see www.ualberta.ca/graduate-studies/about/graduate-program-manual/section-7-administration-of-graduate-programs/7-11-approved-leave-of-absence.

#### Minimum Units of Course Weight Registration Requirements

#### Thesis-Based Master's Programs:

- Admitted before Fall 2011: Over the duration of their program, students in thesis-based master's programs admitted before Fall 2011 must successfully complete a minimum of ★24, which may consist of a combination of courses and thesis research. Only approved transfer credits from the University of Alberta may count towards the ★24 minimum requirement. Notwithstanding the above, students are required to fulfil the department's thesis-based program requirements as approved by Faculty of Graduate Studies and Research Council and as stated in the department's graduate program requirements listed in Graduate Programs of the University Calendar.
- Admitted Fall 2011 and thereafter: Over the duration of their program, students in thesis-based master's programs admitted Fall 2011 and thereafter must pay the equivalent of at least one full year of program fees; see section Fall 2017/Winter 2018 Graduate Instructional and Non-Instructional Fees for information on program fees. Notwithstanding the above, students are required to fulfil the department's thesis-based program requirements as approved by Faculty of Graduate Studies and Research Council and as stated in the department's graduate program requirements listed in Graduate Programs of the University Calendar.
- Course-Based Master's Program: Over the duration of their program, students in course-based master's programs must successfully complete a minimum of ★24. Only approved transfer credits from the University of Alberta may count towards the ★24 minimum requirement. Notwithstanding the above, students are required to fulfil the department's program requirements (often more than the minimum ★24) as approved by Faculty of Graduate Studies and Research Council and as stated in the department's graduate program requirements listed in Graduate Programs of the University Calendar.

#### Doctoral Programs:

- a. Admitted before Fall 2011: Over the duration of their program, students in a doctoral program admitted before Fall 2011 must successfully complete a minimum of ★36, which may consist of a combination of coursework (where required) and thesis research. Only approved transfer credits from the University of Alberta may count towards the ★36 minimum requirement. Notwithstanding the above, students are required to fulfil the department's doctoral program requirements as approved by the Faculty of Graduate Studies and Research Council and as stated in the department's graduate program requirements listed in Graduate Programs of the University Calendar.
- b. Admitted Fall 2011 and thereafter: Over the duration of their program, students in a doctoral program admitted Fall 2011 and thereafter must pay the equivalent of at least three full years of program fees; see section Fall 2017/Winter 2018 Graduate Instructional and Non-Instructional Fees for information on program fees. Notwithstanding the above, students are required to fulfil the department's doctoral program requirements as approved by the Faculty of Graduate Studies and Research Council and as stated in the department's graduate program requirements listed in Graduate Programs of the University Calendar.

#### Registration in Thesis at the End of Programs

Thesis-Based Programs (Admitted prior to Fall 2011): If the Department submits a student's Thesis Approval/Program Completion form to the Faculty of Graduate Studies and Research after the Fall Term Convocation deadline, the student must register for Fall Term, but does not need to register in Winter Term. If the Department submits a student's Thesis Approval/Program Completion form to the Faculty of Graduate Studies and Research after the last working day in January, the student must register both for the Fall and Winter Terms. If the Department submits a student's Thesis Approval/Program Completion form to the Faculty of Graduate Studies and

## GRADUATE STUDIES AND RESEARCH

Research during the May through August period, the student must be registered both for the Fall and Winter Terms immediately preceding. This enables the Faculty of Graduate Studies and Research to award credit for the thesis. Thesis-based programs are not recorded as complete until the thesis and accompanying documentation have been submitted to the Faculty of Graduate Studies and Research. Departments that require a thesis-equivalent may have special submission procedures. See Graduate Programs. See Convocation for information about convocation.

Thesis-Based Programs (Admitted Fall 2011 and thereafter): If the Department submits a student's Thesis Approval/Program Completion form to the Faculty of Graduate Studies and Research after the Fall Term Convocation deadline, the student must register for Fall Term, but does not need to register in Winter Term. If the Department submits a student's Thesis Approval/Program Completion form to the Faculty of Graduate Studies and Research after the last working day in January, the student must register both for the Fall and Winter Terms. If the Department submits a student's Thesis Approval/Program Completion form to the Faculty of Graduate Studies and Research after the May add/delete deadline and by the end of June, (Refer to Academic Schedule, Dates, and Deadlines) the student must register for Spring Term, but does not need to register in Summer Term. If the Department submits a student's Thesis Approval/Program Completion form to the Faculty of Graduate Studies and Research after the July add/delete deadline and by the end of August, (Refer to Academic Schedule, Dates, and Deadlines) the student must register both for the Spring and Summer Terms. This enables the Faculty of Graduate Studies and Research to award credit for the thesis. Thesis-based programs are not recorded as complete until the thesis and accompanying documentation have been submitted to the Faculty of Graduate Studies and Research. Departments that require a thesis-equivalent may have special submission procedures. See Graduate Programs. For information about convocation see Convocation.

#### **Registration Status**

A student's registration status is determined automatically by the total units of course weight (including a project or a thesis where appropriate) in which the student is registered for credit in a given term. Audited courses are not included in the calculation of registration status.

#### Thesis-based programs (Admitted prior to Fall 2011)

Thesis-based master's and doctoral students admitted prior to Fall 2011 must register each year in the Fall and Winter Terms. See Maintenance of Registration.

Full-Time Registration in Fall/Winter: Students are registered in ★9 or more for credit in a term and are working full time on their academic program in that term.

**Part-Time Registration in Fall/Winter:** Students are registered in less than  $\bigstar 9$  for credit in a term.

Full-Time Registration in Spring/Summer: Students are registered in ★6 or more per term.

Part-Time Registration in Spring/Summer: Students are registered in less than ★6 per term.

#### Thesis-based programs (Admitted Fall 2011 and thereafter)

Thesis-based master's and doctoral program students admitted in Fall 2011 and thereafter **must** register each year in each consecutive term (Fall, Winter, Spring and Summer). See Maintenance of Registration.

Full-Time Registration in Fall/Winter: Students are registered in \*9 or more for credit in a term and are working full time on their academic program in that term.

Part-Time Registration in Fall/Winter: Students are registered in less than ★9 for credit in a term

Full-Time Registration in Spring/Summer: Students are registered in ★6 or more per term; fees are assessed based on full-time status (See Registration Procedure).

Part-Time Registration in Spring/Summer: Students are registered in ★6 per term; fees are assessed based on part-time status (See Registration Procedure).

#### Course-based programs

Students in course-based degree programs must register in and successfully complete a minimum of  $\bigstar 3$  of coursework or in M REG 800 - Maintaining Registration for at least one term in each September to August period. See Maintenance of Registration.

Full-Time Registration in Fall/Winter: Students are registered in 🛨 9 or more for credit in a term and are working full time on their academic program in that term.

**Part-Time Registration in Fall/Winter:** Students are registered in less than  $\pm 9$  for credit in a term.

Full-Time Registration in Spring/Summer: Students are registered in ★6 or more per term.

**Part-Time Registration in Spring/Summer:** Students are registered in less than ★6 per term.

## GRADUATE STUDIES AND RESEARCH

M REG 800 Maintaining Registration: Students who are not registered in any courses in a given term, and are not working on thesis or project research, but still wish to maintain their status as graduate students register in M REG 800. This results in a part-time registration status. Fees are assessed.

#### **Registration Procedure**

**Note:** Effective September 2011, students who are admitted to thesis-based programs will follow a program-based registration and tuition model. Refer to the Faculty of Graduate Studies and Research website www.gradstudies.ualberta.ca for more information.

Newly-admitted and continuing graduate students in degree programs register using the Bear Tracks web registration system at www.registrarsoffice.ualberta.ca. For Special and Visiting graduate student registrations refer to the Graduate Program Manual 5.12 Categories of Graduate Students [Admissions] and 6.6 Special and Visiting Students [further registration] https://www.ualberta.ca/graduate-studies/about/graduate-program-manual.

In order to register at the University of Alberta, graduate students must:

#### Step 1. Consult and Receive Counselling

All graduate students in degree programs in the Faculty of Graduate Studies and Research must consult with their department and discuss their program with their supervisor prior to registering.

**Thesis Registration** is restricted to students in thesis-based graduate degree programs. Qualifying, Special, and Visiting graduate students may not register in Thesis. The specific thesis registration selected by the student will depend upon the amount of time during the term(s) that the student will devote to work on their program.

Thesis sections are scheduled according to units of course weight equivalency. Students should consult with their department to determine which of the Thesis sections is appropriate. The selection will depend on the amount of time that the student will devote to work on the program. By registering in the appropriate Thesis designation (along with any other courses), the registration status of the student is calculated automatically. Refer to the Course Listings of the University Calendar under Thesis for the appropriate Thesis section for the student to register in.

These Thesis sections are to be used in combination with course registrations in order to achieve the correct units of course weight for registration status (i.e., FT or PT). For example, if a student registers in a  $\pm 2$  course, then the addition of THES 907 would bring the registration status to full-time (i.e.,  $\pm 9$ ).

Thesis-Based Programs (Admitted prior to Fall 2011): To register full-time in a thesis-based program in Fall/Winter Terms, students must register in a combination of course work and/or thesis research comprising a minimum of  $\bigstar 9$  each term. Students registered in less than  $\bigstar 9$  in Fall/Winter Terms are considered part-time students. There is a special full-time thesis designation (THES 919) which is assessed at a reduced fee. Registration in this section of Thesis will provide the student with full-time student status but at a substantially lower Instructional Fee than the existing  $\bigstar 9$  thesis registration (THES 909). Students should consult with their department to determine if they are eliqible to register in the reduced-fee thesis and refer to the Graduate Program Manual section 6.12.

Thesis-Based Programs (Admitted Fall 2011 and thereafter): To remain full-time in a thesis-based program, in the Fall and Winter Terms, students must register in a combination of course work and/or thesis research comprising a minimum of  $\star 9$  in each term. In Spring and Summer Terms, students must register in thesis research of a minimum of  $\star 6$  in each term. Course work can be taken in Spring/Summer Terms in addition to the  $\star 6$  of thesis registration. Additional fees are assessed for course registration during these terms. Departments need to notify FGSR when they admit thesis-based students on a part-time basis. In Fall term and Winter term part-time students are registered in less than  $\star 9$  per term. In Spring Term and Summer Term students are registered in  $\star 6$  of thesis registration but are assessed part-time fees.

Research Project Registration for students in the course-based master's route normally involves registering in the appropriate 900-level course. Registration in this is restricted to students in a course-based graduate degree program. Consult the department course listings in the University Calendar for the appropriate section. Qualifying graduate students may not register in graduate-level project courses.

## GRADUATE STUDIES AND RESEARCH

#### Step 2. Register

Once newly-admitted and continuing graduate students in degree programs have determined their program requirements in consultation with their departments, they register using the Bear Tracks web registration system. Students are responsible for the completeness and accuracy of their registration.

Bear Tracks cannot be used for the following:

Audited Courses: All graduate students (excluding special graduate students) who are registered full-time or part-time may seek permission to audit a course.
 Since permission to audit cannot officially be granted until the number of students registered for credit is known, students will not be allowed to register for audit until after classes close for registration for credit (after the sixth day of class in Fall/Winter).

To add a course for audit students must

- a. Complete a Course Audit form available from the department;
- b. Have it signed by
  - 1. The instructor of the course and
  - The graduate coordinator or department chair; and
- c. Submit the form to Faculty of Graduate Studies and Research for approval and processing.

Students who wish to change their status in a course from credit to audit must first consult with their supervisor or program advisor. If permission is granted, a *Course Audit* form must be signed and submitted to the Faculty of Graduate Studies and Research office. Deadlines for submitting such a change are found in the Academic Schedule, Dates, and Deadlines.

Audited courses will not be considered as meeting prerequisite, admission, or course requirements for any University of Alberta degree or diploma program. For further information on auditor status refer to Auditors of the University Calendar.

- 1. Courses Extra to Degree: To designate a course as Extra, students must
  - a. Complete an Extra to Degree form available from the department;
  - b. Have it signed by the graduate coordinator or department chair; and
  - c. Submit the form to the Faculty of Graduate Studies and Research for approval and processing.
- Courses taken toward doctoral program requirements: Students who are still candidates for a master's degree cannot use the Bear Tracks web registration
  system to register in courses toward their doctoral program requirements. Such doctoral level courses may be taken for one Fall/Winter only by master's
  degree candidates. Students must
  - a. Complete an Extra to Degree form available from the department;
  - b. Have it signed by the graduate coordinator or department chair; and
  - c. Submit the form to the Faculty of Graduate Studies and Research for approval and processing.
- 3. Registration in more than one degree program: The Bear Tracks web registration system can only be used to register in one degree program. Students who have been approved to register in more than one program (e.g. PGME students also completing a graduate program) must contact the Faculty of Graduate Studies and Research office for approval to register in the graduate degree program. Registration in more than one program requires the knowledge and consent of the department(s) and the Faculty of Graduate Studies and Research.
- 4. Registration as an off-campus student:
  - a. See the Glossary of the University Calendar for a definition of an off-campus student.
  - b. To register in an off-campus section of a course not available through Bear Tracks, contact the teaching department offering the course.
  - c. Graduate students who live more than 80 kilometers from Edmonton can be registered as off-campus students for thesis research and project courses by contacting the Faculty of Graduate Studies and Research at grad.services@ualberta.ca
  - d. All students registered in M REG 800 Maintaining Registration are off-campus students. To register, contact the Faculty of Graduate Studies and Research at grad.services@ualberta.ca

#### Step 3. Confirm Registration

All students who register, including Special and Visiting graduate students; students registered in courses for credit and/or audit; and students registered in thesis, research projects, or M REG 800 only are considered to have confirmed their registration when they register.

Graduate students are not required to pay a tuition deposit.

#### Reregistration in Courses

See Reregistration In Courses.

#### Changes to Registration

If students wish to make changes to their registration in any of the following cases, they must first consult the department in which they are registered. Students make changes to their registration for all unrestricted courses through the Bear Tracks web registration system during the period that it is available for a particular term. They can drop courses, add courses, or cancel their entire registration.

Bear Tracks is available for registration until the deadline dates listed in the Academic Schedule, Dates, and Deadlines in this Calendar. For detailed Bear Tracks registration procedures, see the Registrar's web site www.registrarsoffice.ualberta.ca After the close of Bear Tracks in a particular term, any changes to a graduate student's registration require the approval of the student's department and the Faculty of Graduate Studies and Research. A Course Audit or Withdrawal form must be used for the following registration changes: withdrawal from courses; withdrawal from program; changes from credit to audit; or changes of course section.

Such changes of registration, once approved by the student's department, must be received by the Faculty of Graduate Studies and Research no later than the deadline dates found in the Academic Schedule, Dates, and Deadlines. No credit will be given for any course unless it is included in the student's registration.

Students who drop a course and add Thesis to maintain their full-time status, will be assessed fees for the Thesis registration in addition to any fees assessed for the dropped course.

Faculty of Graduate Studies and Research deadline dates may differ from undergraduate deadline dates (consult the Academic Schedule, Dates, and Deadlines).

There may be academic record and fee implications for withdrawing from courses. Refer to Academic Schedule, Dates, and Deadlines, Fees Payment Guide, and Registration Deadlines Implication for Records.

#### Cancellation of Registration

Students in the Faculty of Graduate Studies and Research who wish to withdraw from courses should follow the procedure described in Adding or Withdrawing from Courses after the Registration Deadline. Students who wish to withdraw from a term, or from their program should complete a Withdrawal form. This form must then be signed/authorized by their department and submitted to the Faculty of Graduate Studies and Research for approval. Students who do not properly withdraw are not eligible for any refund of fees, nor for exemption from fees that have been assessed.

Refer to Refunds and Withdrawals for fee refund information.

If after withdrawing from a graduate program students wish to apply again for admission, their application will be considered in the current competition for places with all other applicants. See also Refunds and Withdrawals and Registration Deadlines Implication for Records.

#### Classification of Graduate Students

The classification of students is generally determined upon admission to a program on the basis of the student's previous academic background. Graduate students at the University of Alberta are classified as one of the following:

- 5. Qualifying graduate students are those whose academic background entitles them to serious consideration for admission to graduate studies but who are considered to be inadequately prepared to enter a graduate program in the subject area they have chosen. Generally, students who hold a three-year bachelor's degree from the University of Alberta (or an equivalent qualification from some other recognized institution) and students who have graduated from a four-year degree program, but who are entering a new field, may be admitted as qualifying graduate students.
  - Qualifying graduate students are registered in the Faculty of Graduate Studies and Research and as such are subject to the regulations of the Faculty of Graduate Studies and Research; however, qualifying students are not considered to be candidates for a degree.
  - Students who are not eligible for admission to the Faculty of Graduate Studies and Research as qualifying students should consult the appropriate undergraduate Faculty regarding admission to that Faculty to clear course deficiencies. They may apply for admission to the Faculty of Graduate Studies and Research at a later date.
  - Normally, a qualifying period will not exceed five full course equivalents (\$\strict\*30\$). Courses taken during a qualifying period will be specified by the department concerned. Completion of the work in a qualifying period does not automatically entitle the student to proceed toward a degree program. However, upon satisfactory completion of a qualifying period the department may recommend to the Faculty of Graduate Studies and Research that the student be reclassified as a master's or doctoral degree student. Students should note that neither the courses taken nor the fees paid during a qualifying period will be credited toward a subsequent degree program.
- 6. Degree students are those who are registered in an approved program leading to a master's or doctoral degree granted by the University of Alberta.
- 7. Graduate diploma students and graduate certificate students are those who are registered in an approved program leading to a graduate diploma or certificate granted by the University of Alberta. Such students must meet the general admission requirements of the Faculty of Graduate Studies and Research (Admission), unless different admission criteria are approved by FGSR Council. These can normally be completed in one academic year of full-time study. The graduate diploma is designed for persons who have had previous work experience.
- 8. Special graduate students are those who take graduate level courses for credit without proceeding toward an advanced degree at the University of Alberta. Such students must meet the general admission requirements of the Faculty of Graduate Studies and Research.
  - Special graduate students are not candidates for a degree at this University and will not receive any residence or fee credit toward a subsequent degree program for the work completed as a special graduate student. In addition, the number of courses allowable for transfer credit is limited (see Transfer Credit, Course Exemption/Substitution, and Credit by Special Assessment).
  - Admission as a special graduate student does not imply eligibility for admission to a degree program in any department.
  - Individuals who wish to study under this classification must apply and be admitted each year in which they take courses.
  - Special graduate students require a written recommendation from the department concerned to register in a course. They are not permitted to take courses for audit.
  - Only graduate level courses may be taken by special graduate students. Individuals wishing to take courses at undergraduate levels should contact the appropriate Faculty regarding registration as a special student in that Faculty.
- 9. Visiting graduate students are those who are registered in a graduate degree program at another university or college, who have obtained written permission in advance from the home and host institutions to take one or more courses for transfer of credit toward that graduate degree program. Visiting students are not permitted to register in thesis or departmental project courses.
- 10. Postgraduate medical education (PGME) students have the option of paying fees to the Graduate Students' Association (see Fall 2017/Winter 2018 Graduate Instructional and Non-Instructional Fees).

## GRADUATE STUDIES AND RESEARCH

## Transfer Credit, Course Exemption/Substitution, and Credit by Special Assessment

**Transfer Credit** refers to the formal transfer of credit for a course(s) which has been earned outside the program. Transfer credit for certain courses may be granted by the Faculty of Graduate Studies and Research, provided the courses have not been counted toward a previous degree or program and were not used to satisfy admission requirements of the Faculty of Graduate Studies and Research. Transfer credit can be granted for both graded courses and for courses with grades of Credit (CR).

**Course Exemption** refers to the reduction in required credit weights of a student's program by removal of specific courses normally required. In special circumstances the Faculty of Graduate Studies and Research may approve exemption of certain courses if the student has completed appropriate equivalent coursework here or elsewhere, but the program will not be reduced by more than the value set out below.

**Course Substitution.** It is more normal for departments which exempt specific required courses from a student's program to substitute more appropriate courses equivalent in weight to the courses exempted. This is called Course Substitution and is a departmental prerogative.

**Limits.** The description of each program in Graduate Programs contains a listing of the required and optional courses.

**Thesis-based programs:** The total credit weight required for any thesis-based program will not be reduced by any combination of Transfer Credit and Course Exemption from the requirement set out in Graduate Programs by more than  $\bigstar$ 6 (except as noted below).

**Course-based programs:** The number of courses nearest to, but not exceeding, 1/3 of the total units of course weight of a student's program can be met through transfer credit and/or course exemption if recommended by the department and approved by the Faculty of Graduate Studies and Research on a case-by-case basis.

Only approved transfer credits from the University of Alberta may count towards the  $\pm 24$  minimum requirement.

In exceptional circumstances and with the explicit prior approval of the Faculty of Graduate Studies and Research, up to 1/2 of the total units of course weight for the program may be met through transfer credit and/or course exemption.

For students participating in formal exchange programs which have been ratified by the University of Alberta, consideration will be given for transfer of credit earned during the exchange and approved in principle by the department in advance, even if the credit value transferred exceeds the limit stated above.

#### Criteria for Transfer Credit and Course Exemption

The criteria that must be met before transfer credit will be considered are:

- 1. the department agrees that the course in question is applicable to the degree program;
- the student achieves a grade acceptable to the department and the FGSR;
- 3. the course has not been used as a part of the basis for admission to the program; and
- 4. the course has not been taken as part of any previously awarded degree, diploma, certificate, etc.

For the laddering of graduate certificates and diplomas into a course-based Master's degree see Laddering. Courses taken as a qualifying graduate student are therefore not acceptable for transfer credit since the qualifying period is, by definition, a basis for admission. The FGSR reserves the right to deny transfer credit for courses taken far enough in the past that the material could be considered out of date. The maximum number of years will depend on individual circumstances; however, in a number of cases credit has been considered for courses taken up to but not exceeding six years prior to the date of application for transfer credit.

**Exceptions:** For students who have commenced an equivalent graduate program at a recognized university and are relocating to the University of Alberta, consideration will be given to departmental recommendations for transfer credit which exceeds the limit stated above. Other exemptions specific to individual programs are discussed in the Program descriptions in Graduate Programs.

Students should note that they cannot apply directly for transfer credit or course exemption; the department must petition the Faculty of Graduate Studies and Research on the student's behalf. Transfer credit and course exemption are granted at the discretion of the Faculty of Graduate Studies and Research.

## GRADUATE STUDIES AND RESEARCH

The Faculty of Graduate Studies and Research does not accept credit by special assessment.

### Residence Requirement

**Master's Programs:** Residence requirements for master's programs are established and monitored by the department. Most course-based master's programs have no residence requirements. Consult the department listing for program details.

**Doctoral Programs:** Residence supports two important objectives in these programs:

- A doctoral program provides students with significant contact with the University of Alberta, through time spent on campus and through interactions with the
  faculty and graduate students at the University.
- A doctoral program educates the student as an independent researcher and scholar in an academic discipline, through activities such as course work,
  participating in seminars, involvement in teaching, interactions with faculty members and other graduate students, and research under the direction of a
  faculty member.

The default residence requirement for the PhD and DMus programs is two academic years (where an academic year is defined as the eight-month period from September through April), and 12 continuous months for the EdD.

Specific residence requirements to support these objectives will be established by the department. Changes or exceptions to departmental residence requirement are to be submitted to the Dean of the department's Faculty for approval.

When a department changes a student's status in the middle of a program, the time spent as a master's candidate may count toward the residence requirement. Time spent as a qualifying graduate student does not count toward the residence requirement.

The University of Calgary and the University of Alberta have an agreement allowing, under certain conditions, PhD students at one institution to take up to one year of their two-year residence requirement at the other institution. Contact the Faculty of Graduate Studies and Research for further information.

Graduate diploma and graduate certificates: There is no Faculty of Graduate Studies and Research residence requirement for graduate diplomas or certificates

### Language Requirement

It is a program requirement in some departments that students show proof of proficiency in one or more languages other than English. Programs with a second language requirement may accept ASL (deaf language). (For information on specific language requirements see the detailed program information under the appropriate departmental entry in Graduate Programs.)

#### Academic Standing

#### **Explanation of Grading System**

The University of Alberta uses a letter grading system for most courses. For students registered in the Faculty of Graduate Studies and Research the normal passing grade is C+ (see Minimum Faculty Requirements below). In addition, some courses are offered on a credit/no credit (CR/NC) basis.

The grade distribution according to the four-point system is as follows:

#### Course Grades Obtained by Graduate Students

Descriptor	Alpha Grade	Grade Point Value	
Excellent	A+	4.0	
	A	4.0	
	A-	3.7	
Good	B+	3.3	
	В	3.0	Minimum admission GPA
Satisfactory	B-	2.7	Min. Academic Standing GPA
	C+	2.3	Minimum Course Pass Mark
Failure	С	2.0	
	C-	1.7	
	D+	1.3	
	D	1.0	
	F	0.0	

The grade equivalencies for graduate students according to the letter grade as well as detailed information about grade remarks can be found in Evaluations Procedures and Grading System under '4. Assigning Grades' and '5. Final Grades and Remarks'.

For the purpose of promotion and graduation, FGSR defines the cumulative grade point average (CGPA) as the average of all graded courses, including failed grades, taken for credit towards a degree program. Grades for

courses designated as extra to degree are not included in this calculation. All courses that are not necessary to or an integral part of a graduate program must be designated and approved by FGSR as extra to the degree at the time of registration.

#### Failure in or Failure to Complete a Course or Research Work

Satisfactory performance in the coursework component of a graduate program entails completion of all courses taken as part of the student's program requirements (i.e., courses designated as extra to the student's program requirements are excluded). Normally, the minimum acceptable passing grade in individual courses is C+ (see Minimum Faculty Requirements below); however, some departments may require higher grades.

Graduate students are not permitted to take reexaminations. Regardless of their category, students who do not obtain an acceptable grade, or fail to complete a course that is required as part of their graduate program, must have the approval of the department and the Faculty of Graduate Studies and Research to retake the course and must obtain a passing grade. Alternatively, students may take an alternate course recommended by the department and approved by the Faculty of Graduate Studies and Research, but they must also obtain a passing grade.

In calculating a student's CGPA, the original failing grade will be included. The failing grade and the grade achieved for the repeated or substitute course will appear on the student's transcript. A Grade of IN5 is counted as a numeric grade of 0.0 in the computation of the CGPA.

A student whose course and/or research work is unsatisfactory may at any time be required to withdraw.

## GRADUATE STUDIES AND RESEARCH

#### **Deferred Final Exams**

In certain circumstances, graduate students may apply for a deferred exam for courses in which they were absent from or will be absent from the scheduled final exam. See Absence from Final Exams.

Requests for Deferred Examinations are subject to approval by the Dean, FGSR. The Deferred Final Examination request form is available in the FGSR Forms Cabinet.

The policy on Deferred Examinations does not apply to candidacy or final oral exams for thesis-based programs. See Conduct of Examinations for further information.

### Grades of Incomplete (IN)

In exceptional cases only, the instructor may assign a grade of Incomplete (IN) to a course. If a grade of Incomplete is assigned, the instructor must indicate on the Grade Report form the date by which the course requirements will be met. If a grade of Incomplete is assigned on the Grade Report form but no date for completion is indicated, the Incomplete will be changed to a grade of Incomplete Fail (IN5) by the FGSR.

#### Time Limits on Incomplete Grades

Maximum time limits on Incomplete (IN) grades:

- 1. April 30 for Fall term courses (September-December);
- 2. August 31 for Winter term (January-April) or two-term courses of Fall/Winter;
- 3. October 31 for Spring term courses;
- December 31 for Summer term courses or two-term courses of Spring/Summer.

The FGSR may consider written department requests for extensions beyond these time limits only under exceptional circumstances.

If an Incomplete has not been cleared by the date shown on the Grade Report form, it will be changed to Incomplete Fail (IN5) by the FGSR.

#### **Repeating Courses**

- Students may not repeat any successfully completed university course or course for which transfer credit has been awarded, except with the written approval of the Dean, FGSR.
- Only one re-registration for credit or audit will be permitted in any failed university course, except with the written approval of the Dean, FGSR.
- Only one re-registration for credit or audit will be permitted in any university course in which a student has received a final grade of W, except with the written approval of the Dean, FGSR.
- If a student contravenes regulations listed above, the Dean, FGSR may withhold credit or indicate the course as extra to the degree on the registration that contravenes the regulation.
- Students may repeat a first-term course in the second term, if it is offered, as long as the student complies with regulations listed above.
- Students may re-register in the 900-level capstone courses and in thesis (THES) as often as is required.

Students are responsible for monitoring the number of times they have repeated a course. Withdrawals (W) from courses will be considered together with failing grades when a faculty is restricting the number of multiple registrations in a course.

### **Grade Grievances and Appeals**

Grade grievances and appeals for course grades are within the jurisdiction of the Faculty that teaches the course and cannot be subsequently appealed to FGSR.

## GRADUATE STUDIES AND RESEARCH

#### **Minimum Faculty Requirements**

Regardless of the student's category, the pass mark in any course taken while registered in the Faculty of Graduate Studies and Research is a grade of C+.

All students in degree programs (including time spent as a qualifying graduate student) or diploma or certificate programs must maintain a minimum cumulative grade point average of 2.7 throughout the course of the program. (In cases where the cumulative grade point average falls between 2.3 and 2.7, departments may recommend the student be required to withdraw, or continuation in the program for a specified probationary period; in any case, convocation shall not take place with a cumulative grade point average of less than 2.7.) Notwithstanding the above, a student whose cumulative grade point average falls below 2.7 may be required to withdraw.

The above are minimum grades and grade point averages acceptable to the Faculty of Graduate Studies and Research. Individual departments may require higher grades than these. See Graduate Programs.

#### **Academic Probation**

Academic probation is used to address deficiencies in program or performance standards relevant to a student's particular program of studies such as CGPA, or progress in research. The conditions attached to a period of academic probation are designed to meet the specific needs of a student's academic situation.

When a student's term or cumulative grade point average falls between 2.3 and 2.7 or the minimum required by the program (See Graduate Programs), departments may recommend to the Faculty of Graduate Studies and Research continuation in a graduate program on academic probation for a specified period.

#### **Change of Category**

Departments may recommend a change of category to FGSR for doctoral students to master's programs due to poor academic performance.

When this occurs following the doctoral candidacy examination, please refer to Decision of the Candidacy Committee for details.

#### Required to Withdraw

Departments may recommend to FGSR that students be required to withdraw on academic grounds. Reasons for the recommendation include:

- Failure to maintain adequate academic standing; failure to meet requirements set out in a conditional admission; candidacy or final oral examination failure; or
  expiry of program time limit. Requests to require to withdraw for these reasons must be documented in the academic record or student's file: for example,
  grades, exam reports, etc;
- Failure to make satisfactory academic progress in other aspects of the program, such as adequate progress in research. Requests to require to withdraw for
  these reasons should be supported by evidence that the process of feedback, assessments and warnings has been followed;
- Failure to complete the practicum component of a graduate program, if that practicum component is an integral part of the program;
- Failure of the department to secure alternate supervision for a thesis-based student following dissolution of a supervisory relationship (see Resolving Conflicts in Supervisor-Student Relationships) as it is an academic requirement that thesis-based students have a supervisor (see Appointment of the Supervisor(s)).

The following considerations apply:

- Cannot require to withdraw except for just cause;
- Students shall be given adequate warning, feedback and timelines related to what is the nature of the inadequate progress, what special performance would be required to rectify the inadequacy, and what is the timeline for demonstration of the required improved performance;
- Student should be given an opportunity to respond in writing to any warning given;

## GRADUATE STUDIES AND RESEARCH

Meetings with appropriate advisors (members of supervisory committee; Chair's designate, etc.) may assist the process of providing adequate warning and advice

The decision to require a student to withdraw rests with the Associate Deans, FGSR. Students may appeal to the FGSR Academic Appeals Committee. For details, see Appeals and Grievances.

### Academic Integrity and Ethics Training Requirement

The University of Alberta expects graduate students, as members of the University community, to uphold the highest degree of ethical practice in the conduct of their education, research, and professional activities. Students are responsible for understanding and following the various policies and practices mandated by the University (including, but not limited to, the Code of Student Behaviour, the Discrimination and Harassment Policy, the Research and Scholarship Integrity Policy, the Animal Ethics Policy, the Standards for the Protection of Human Research Participants, and the Conflict of Commitment and Conflict of Interest Policy), FGSR-specific guidelines and expectations, departmental guidelines and expectations, Tri-Council or other funding bodies ethical requirements, and any ethical codes mandated by the students' professional governing body. Ethics training is a critical part of the education of all graduate students and in addition to their required ethics training students are expected to seek opportunities to broaden their knowledge of ethics and good practice early in their programs. Like all members of the University community, graduate students should be aware that they will be held accountable for their actions under these various codes even if they have not yet completed their required ethics training or are acting on the advice of others.

Graduate degree requirements include a mandatory component that provides training in the areas of academic integrity and ethics.

The normal requirements of this training component will include participation in activities such as workshops, presentations, discussion groups and course work related to each of the following areas:

- Intellectual Property Guidelines for Graduate Students and Supervisors www.uofa.ualberta.ca/graduate-studies/about/graduate-program-manual/section-10-intellectual-property
- The University of Alberta Research and Scholarship Integrity Policy https://policiesonline.ualberta.ca/PoliciesProcedures/Pages/Research.aspx
- The relevant Tri-Council and Canadian Council on Animal Care requirements for ethics approval for research-including emphasis on the limitations of the requirements, i.e., for which areas of research is ethics approval necessary.

To fulfil these requirements, each student is normally expected to complete the equivalent of at least eight hours of structured academic activity for this training component. Students should consult the department for guidance about specific requirements for ethics training and refer to the FGSR website at https://www.ualberta.ca/graduate-studies/current-students/academic-requirements/ethics.

## Professional Development Requirement

The University of Alberta considers professional development to be an important component of any graduate student's program of studies. Professional development is the active acquisition of skills, knowledge, and mindset to fully realize one's strengths and potential in all environments. It sets up individuals for success in achieving their goals while giving them the ability to meet, exceed and adapt to personal, career, and societal responsibilities within the context of a changing world.

All graduate students at the University of Alberta are required to submit an individualized professional development plan to the department for their program of studies within 12 months of the program's commencement for master's students and within 18 months of the program's commencement for doctoral students. The department may extend the time to complete the IDP to up to 24 months for part-time master's students and 36 months for part-time doctoral students. The plan is a career and skills assessment document that allows graduate students to consider their future careers and goals in an organized way and to map their participation in professional development activities in conjunction with their academic activities.

Templates for an Individual Development Plan are available from the Faculty of Graduate Studies and Research. Graduate students are also required to spend at least eight hours on completing the activities proposed in their plan by time of program completion for master's students and by year three for doctoral students. Graduate students should consult directly with their department (or Faculty where nondepartmentalized) as to specific professional development requirements.

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All graduate students must submit evidence of the completion of this requirement to their department.

The Professional Development Requirement does not apply to students in graduate programs offered by the Faculty of Education and the Faculty of Law. A graduate student in a non-exempt program may seek exemption from the Professional Development Requirement with the approval of their supervisor (if thesis-based), the graduate coordinator, and the Dean of the Faculty of Graduate Studies and Research.

For more information go the FGSR website at https://www.ualberta.ca/graduate-studies/professional-development/professional-development-requirement.

#### Convocation

There are two convocations each year, normally held in June and November. Students must apply for graduation on Bear Tracks (https://www.beartracks.ualberta.ca) in accordance with the deadlines published in the Academic Schedule.

In order to convocate, students in thesis programs must complete all coursework and submit their thesis to the Faculty of Graduate Studies and Research by the deadline dates specified in the Academic Schedule. Departments that require a thesis-equivalent may have special submission procedures. See Graduate Programs. For further details on thesis submission refer to the Thesis Requirements and Preparation page in the Current Student section of the FGSR website.

Students in course-based programs must complete all program requirements prior to the deadlines set out in the Academic Schedule. It is the responsibility of the department to forward a completed *Report of Completion for Course-based Master's Degree* form to the Faculty of Graduate Studies and Research by the deadline dates specified in the Academic Schedule, to ensure that the student's name will be included in the convocation list.

## Time Limit for Completion of Graduate Programs

The time limit (or the maximum period of time permitted to complete the requirements for a degree) is calculated from the start of the term in which the student first registers in that specific program or, if transferring from another program, the start of the first term of the first program.

Any time spent registered in Maintaining Registration (M REG 800) is counted in the time limit for completion. Any time spent as a qualifying graduate student is not counted in the time limit for completion. The time limit for completion of the degree will be extended by the duration of any Faculty of Graduate Studies and Research (FGSR)-approved leave of absence.

**Thesis-based Master's:** Candidates must complete their program within four years of the term in which they first register as candidates in the master's program. In the case of students transferring from a course-based or other program, the beginning of the program is the term of initial registration in the first program.

**Course-based Master's:** Course-based master's students have six years to complete their program unless the department has opted for a shorter time limit for its course-based master's program. In the case of students transferring from a thesis-based or other program, the beginning of the program is the term of initial registration in the first program. Consult the department listing in Graduate Programs.

**Doctoral degree:** Candidates must complete their program within six years of the term in which they first register in a doctoral program. In the case of master's students who are reclassified as doctoral students, all degree requirements must be completed within six years of the time they first register as master's candidates.

**Graduate diploma and graduate certificate:** Candidates must complete all the requirements within four years of the time they first register in the graduate diploma or certificate program.

#### **Extensions**

#### **Program Extensions**

In exceptional circumstances a student who has failed to complete all the requirements for the degree within the appropriate period specified in Time Limit for Completion of Graduate Programs may be considered for a program extension.

The Department has the delegated authority to approve the first program extension. Authority for the approval of a second and subsequent program extensions rests with the Dean, FGSR.

All requests for program extensions will only be considered if there are well-documented reasons specific to a particular type of research that precludes completion within the time limit, or if there are sufficient and substantial unforeseen circumstances beyond the control of the student and/or supervisor which prevent completion of the program within the time limits.

Program extensions may be considered for up to one year at a time.

#### **Doctoral Program Three-year Progress Requirement Extensions**

In exceptional circumstances a student who has failed to meet the doctoral program three-year progress requirement, as specified in Doctoral Program Three-Year Progress Requirements, may be considered for an extension.

The Department has the delegated authority to approve the first extension to the doctoral program three-year progress requirement.

Under exceptional circumstances an additional extension may be granted. Authority for the approval of a second and subsequent doctoral program three-year progress requirement extensions rests with the Dean, FGSR.

All requests for an extension to the doctoral program three-year progress requirement will only be considered if there are sufficient, and substantial unforeseen circumstances beyond the control of the student and/or supervisor which prevent completion of the program within the time limits.

The doctoral program three-year progress requirement extension may be considered for up to one year at a time.

## **Intellectual Property**

Intellectual Property Guidelines for graduate students and supervisors Guidelines for Ownership of Research Materials and Guidelines for Authorship are available in Section 10 of the Graduate Program Manual.

#### Appeals and Grievances

Student grievances of an academic nature sometimes arise. Students in the Faculty of Graduate Studies and Research are advised first to approach the instructor or supervisor concerned; in most cases, the issue can be resolved at this level. If the matter is not resolved, students are advised to see the department chair. Departments are encouraged to have internal appeal procedures. Where these exist, they should be followed before moving the matter to the Faculty level. The Dean or Associate Dean may be approached by students for advice in these matters.

The Academic Appeals Committee of the Faculty of Graduate Studies and Research hears and determines appeals from appellants of decisions of the Faculty of Graduate Studies and Research which affect academic standing.

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The Committee shall have no jurisdiction to hear an appeal with respect to:

- 1. The academic judgements inherent in marks or grades awarded in individual courses;
- 2. The examination decisions of Faculty of Graduate Studies and Research;
- 3. Decisions to refuse admission or readmission to the Faculty;
- 4. Decisions relating to the granting of credit for courses taken or to be taken outside the University of Alberta.

For further information regarding appeals procedures at the Faculty level, students should consult the appeal regulations available from the Faculty of Graduate Studies and Research. All formal appeals of a decision of the Faculty of Graduate Studies and Research must be initiated within 15 working days of the student's receipt of the Faculty of Graduate Studies and Research decision.

Grade grievances initiated by graduate students are not within the jurisdiction of the Faculty of Graduate Studies and Research, but rather within the jurisdiction of the Faculty from which the graduate student had taken the course in question.

Additional information on appeals and grievances found in Appeals and Grievances of the University Calendar.

### Course-based Master's Programs

Course Requirements: In course-based programs, all coursework must be at the graduate level.

Residence: Residence requirements are established and monitored by the department.

Language Requirement: It is a requirement in some departments offering master's degrees that students show proof of proficiency in a language other than English. (For specific information on language requirements see the detailed program information under the appropriate departmental entry in the Graduate Programs section of the Calendar.)

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.

It is the responsibility of the department to:

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

This information must be received and verified by the FGSR 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.

## Laddering of Freestanding Graduate Certificates and Diplomas into a Course - based Master's Degree

Laddering of freestanding graduate level certificates and diplomas into a master's degree means that a student who holds specific certificates or diplomas may be able to use the courses from the certificate to receive advanced standing in a course-based master's degree.

The program will specify the certificates and/or diplomas that may ladder into a master's degree. Completion of a certificate and/or diplomas does not guarantee admission to a master's program. Certificates and/or diplomas may be used for both the basis of admission and laddered into the course-based master's degree.

Once admitted to the master's program, the graduate courses taken in the certificates and/or diplomas may be recognized as advanced standing toward the master's degree. To be incorporated into a master's degree the student must indicate the request at the time of application to the master's program. Except where otherwise specified by a program, courses must be taken within the five years prior to admission to the master's program. Certificates and/or diplomas from other institutions may also be eligible

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for laddering providing they do not exceed  $\bigstar$  9 in credits or, for course-based masters programs with more than  $\bigstar$  24 required credits, 1/3 of the total credit weight of the program in combination with any individual transfer-credits from other institutions. In exceptional circumstances and with the explicit prior approval of the Faculty of Graduate Studies and Research, up to  $\frac{1}{2}$  of the total units of course weight for the program may be met through laddering of certificates from other institutions in combination with transfer-credits from other institutions.

Where presenting graded-courses, the student must have obtained individual grades in these courses that are sufficient for credit in the master's program and meet other quality assurance considerations of the master's program outlined in the program-specific section of the calendar at the time of admission.

To receive the master's degree, the student must complete the University's Ethics and Professional Development requirements as well as any remaining master's program requirements including the master's capping exercise. Other master's requirements may be waived if there is an explicit exemption in the department's section in the calendar for the master's program.

The student will pay tuition and associated fees for the time registered in the master's program.

### Thesis-Based Master's Programs

Course Requirements: Considerable variation is permitted in the balance between research and course requirements for the master's degree. Thesis-based master's students may only take undergraduate courses for credit to satisfy their graduate program requirements when all of the following conditions are satisfied. The courses must be:

- necessary;
- not in the student's field of specialization and/or major area of study; and
- approved by the department offering the graduate program.

Residence: Residence requirements are established and monitored by the department.

**Language Requirement:** It is a requirement in some departments offering master's degrees that students show proof of proficiency in a language other than English. (For specific information on language requirements see the detailed program information under the appropriate departmental entry in Graduate Programs.)

### **Doctoral Degrees**

The essential requirement for a doctoral degree is the planning and carrying out of research of high quality leading to an advance in knowledge in the student's field of study.

#### **Program Requirements**

A doctoral degree is awarded upon successful completion of a doctoral degree program. All departments are responsible for developing and publishing a clear statement of all program requirements to be completed by the student in addition to the thesis. These requirements will vary from department to department, but will likely include a number of required and optional course requirements, the academic integrity and ethics requirement, a candidacy examination requirement, and in some disciplines, written comprehensive examinations.

#### **Doctoral Program Three-year Progress Requirement**

All program requirements, other than the thesis, must be completed within three years of the commencement of a student's program. Students who change from a master's program to a doctoral program, without the need to complete the master's program as part of an acceleration or fast-track, have four years to complete the doctoral program program progress requirements from the term of initial registration in the master's program. For part-time doctoral students who change to a full-time doctoral program, or

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who remain as part-time doctoral students throughout the program, the department will determine the appropriate time period. The three-year rule does not apply to doctoral programs offered by the Departments of Educational Psychology, English and Film Studies, and Philosophy; nor to the doctoral program in Medical Sciences (Orthodontics) offered by the Department of Dentistry: students in these programs must consult the published department-specific regulations. For doctoral students in individualized interdisciplinary programs, the time limit for the completion of all program requirements, other than the thesis, must be specified in the individualized program proposal. For all doctoral programs, the time limit for completion remains six years.

#### The Degree of PhD

**Admission:** Students may be admitted to a doctoral program if they hold a bachelor's or a master's degree, or equivalent, from an approved academic institution. Admission is contingent upon approval of the department and the availability of: suitable supervision; suitable courses of study; and adequate library, laboratory and other facilities.

**Course Requirements:** Doctoral degree students may only take undergraduate courses for credit to satisfy their graduate program requirements when all of the following conditions are satisfied. The courses must be:

- necessary;
- not in the student's field of specialization and/or major area of study; and
- approved by the department offering the graduate program.

Residence Requirements: See Residence Requirement of the University Calendar.

Language Requirement: A department may require a student to demonstrate a knowledge of one or more languages in addition to English. Where this is the case, the student must satisfy the language requirement before being allowed to take the candidacy examination. See also Language Requirement of the University Calendar.

#### Combined Program for the Degrees of MD and PhD

The MD/PhD combined program is intended for exceptional students who are seriously committed to a career in medical research. Highly qualified students wishing to pursue a career of teaching and research in either basic medical science or in clinical medicine may enrol in a program of approximately six years' duration leading to the acquisition of both an MD and a PhD degree from the University of Alberta. To be eligible for the combined program, students must already have been admitted to the MD program. Students are admitted to the combined program on the recommendation of the MD/PhD Committee.

Students entering the MD program from a preprofessional medical or a bachelor's program, and who are interested in applying to the MD/PhD program, should do so in their first year of medical school. For these students, admission into the program begins after completion of the second year of the MD program. Alternately, students who are transferring from a University of Alberta graduate program to the MD program are eligible to enrol immediately in the combined program. The most common route is for students to complete the first two years of the MD program, apply for and be admitted into the PhD program, and when the PhD is completed, return to the final two years of the MD program. Students pursuing the combined program will be assessed fees for both the MD and the PhD programs.

#### The Degree of DMus

The regulations pertaining to doctoral degrees also apply to the Doctor of Music degree; exceptions and special conditions are noted in Music of the University Calendar.

#### The Degree of EdD

The degree of Doctor of Education attests proficiency in a program of graduate study in which the emphasis is upon preparation for competent professional performance. The general regulations for the EdD degree concerning admission, residence requirements, the candidacy examination and final oral examination (based largely on the thesis) are the same as those for doctoral degrees, with the following exceptions:

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- Several years of successful teaching and an MEd degree or its equivalent are prerequisites for admission into the EdD program;
- The program emphasizes breadth in educational theory, practice and research rather than intensive specialization in a particular area;
- The student's program may make provision for supervised field experience;
- The minimum period of continuous residence is 12 months of full-time study at the University of Alberta, unless otherwise noted in the departmental listing in Graduate Programs.

### Shared Credential Master's and Doctoral Degrees

The University of Alberta Shared Credential Policy governs the creation of agreements with national and international partners which lead to the awarding of what are sometimes known as joint or dual degrees.

Students must be admitted into a regular master's or doctoral program first before being admitted to a shared credential degree.

Please consult your department for information regarding possible shared credential agreements in which your department may be participating.

### **Individual Interdisciplinary Studies**

An individual, interdisciplinary graduate program may be appropriate where a proposed area of study for an individual student cannot be effectively accommodated within a single department.

There should be strong reasons for establishing an individual program rather than operating within the context of a current program.

There is no obligation for departments to offer an interdisciplinary program to a student. However, departments may consider creating a program for an individual student if they are prepared to provide an appropriate program and if they have adequate supervision, facilities, and other resources necessary to offer such a program.

Both the home and conjoint department will be designated on the degree. Departments may also propose an individual specialization at the outset of the program.

The template for Individual Interdisciplinary Studies proposals is found at Individual Interdisciplinary Program available in uofa.ualberta.ca/graduate-studies/about/resources-for-faculty-and-staff/forms-cabinet.

## **Diplomas and Certificates**

It is the responsibility of the department to:

- 1. verify that all the requirements of the diploma or certificate have been successfully completed before recommending a student for graduation;
- 2. submit to the FGSR a Report of Completion of Graduate Diploma/Graduate Certificate form.

This information must be received and verified by the FGSR 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 diploma or certificate.

University of Alberta offers both Embedded and Freestanding Certificates. Graduate students cannot receive an embedded undergraduate certificate as part of their program of studies, with an undergraduate certificate being one that contains courses primarily at the 300- and 400-level.

Information regarding graduate diploma and certificates is provided under the appropriate departmental listing in the Graduate Programs section of the Calendar.

Certificates and/or diplomas may be eligible for laddering into course-based master's programs.

## Supervision and Examinations

The minimum requirements for all graduate programs are set by the Council of the Faculty of Graduate Studies and Research of the University of Alberta. In this Calendar the minimum requirements acceptable are outlined under the respective headings. Students should note that the individual graduate program may impose additional requirements.

- Supervision and Supervisory Committees
  - Appointment of the Supervisor
  - Eligibility for Appointment as Supervisor
  - Resolving Conflicts in Supervisor-Student Relationships
  - Supervisory Committees
- The Role of and Structure of Examining Committees
  - Categories of Examiners and Eligibility
  - Conflict of Interest Guidelines for Supervisory and Examination Committees
  - Size and Composition of Examining Committees

- Conduct of Examinations
  - Common Examination Protocols
  - Conduct of Thesis and Candidacy Examinations
  - Thesis Based Master's Program Examination
  - Doctoral Candidacy Examination
  - Decision of the Candidacy Committee
  - Final Doctoral Examination
  - Decision of the Doctoral Final Examining Committee
- Thesis Requirements

## **Supervision and Supervisory Committees**

### Departmental Regulations and Responsibilities

Departments are responsible for preparing a set of regulations and guidelines for supervisors and students. Guidelines should deal with the selection and functioning of supervisors and should outline the joint responsibilities of faculty members and graduate students. Options for students to pursue who believe they are receiving unsatisfactory supervision should also be specified.

## Appointment of the Supervisor(s)

Every student in a thesis-based program is required to have a supervisor. The department that admits a student to a thesis-based graduate program is responsible for providing supervision within a subject area in which it has competent supervisors, and in which the student has expressed an interest.

Normally there is only one supervisor. Departments may consider the appointment of more than one supervisor for a student.

Implicit in the admission process is the following: on the applicant's part, that there has been an indication of at least a general area of interest and, preferably, provision of some form of proposal, particularly if the program is at the doctoral level; on the department's part, that the application has been reviewed, the area of interest examined, academic expectations and potential performance considered, and that the department accepts its obligation to provide appropriate supervision for the applicant in the specified subject area.

It is expected that every effort will be made to arrive at a mutually agreeable arrangement for supervision between the student and the department. Students are normally involved in the process for selecting their supervisor(s) although this process varies from program to program.

The authority for the appointment of supervisors rests with the Dean of the department's Faculty. Such appointment decisions are final and non-appealable.

Article 7.02.1 of the Faculty Agreement lists the "supervision of graduate students" as a form of "participation in teaching programs". It is expected that a department will monitor and review the performance of supervisors.

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### Supervisors on Leave

It is the responsibility of supervisors to make adequate provision for supervision of their graduate students during their leave. Therefore, if a supervisor is to be absent from the University for a period exceeding two months, it is the supervisor's responsibility to nominate an adequate interim substitute or indicate the means by which supervision will be maintained. It is the supervisor's responsibility to inform the student and the department in writing at the time the leave is approved.

Supervisors planning to take a sabbatical should follow the requirements found in Appendix E of the Faculty Agreement with respect to adequate advance arrangements for graduate students while a supervisor is on sabbatical.

### Eligibility for Appointment as Supervisor

Each of the following criteria must be met by at least one of the supervisor(s):

- be a tenured, tenure-track, or retired faculty member, or a Faculty Service Officer, of the University of Alberta (current or retired categories A1.1, A1.3, or current category C1.1, as defined in the University's Recruitment Policy (Appendix A) Definition and Categories of Academic Staff and Colleagues);
- be active in the general subject area of the student's research;.
- demonstrate continuing scholarly or creative activity of an original nature;
- either hold a degree equivalent to or higher than that for which the student is a candidate, or have a demonstrated record of successfully supervising students for the degree.

If one of conditions (2)-(4) is not satisfied by any of the proposed supervisors, then a departmental justification (with the proposed supervisors' CV) is put forward to the Dean of the department's Faculty for approval.

For supervisors from outside the University of Alberta, working with a supervisor at the University of Alberta, the means by which meaningful interaction can be maintained should be specified in writing to the student and the department.

### Time Line for the Appointment of Supervisors

Ideally, the supervisor for a thesis-based student, both master's and doctoral, should be appointed as soon as the student arrives to begin their program of studies. If this is not possible, an interim academic advisor should be appointed by the department. Supervisor(s) must be appointed within the first 12 months of the student's program following the procedures approved by the Dean of the department's Faculty and submitted to FGSR.

#### **Introductory Meetings**

Every department must develop a list of topics that will be covered during the introductory meetings between a supervisor and a graduate student. These meetings should be held during the term in which a supervisor is first appointed. Topics likely to be listed include program requirements, academic integrity requirements, the role of the supervisor, the composition of the supervisory committee, the preferred means of communication, the availability of funding, and scholarly practices and outputs.

### Resolving Conflicts in Supervisor-Student Relationships

The relationship between students and supervisors is normally close and long-lasting. At times, conflicts may arise between a student and the supervisor. In such cases, the first step should be to try to resolve the misunderstanding or conflict informally. This is more likely to be successful if attended to as early as possible. The supervisor and student should discuss the problem together. The supervisor should document the discussions and keep a record of any agreements made. This document should be shared with the student. In the event of a conflict that cannot be resolved, the graduate coordinator should be consulted as early as possible by the parties involved.

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It is the responsibility of the graduate coordinator to arrange for consultation and mediation. The graduate coordinator or the parties involved may request advice and/or mediation assistance from their Faculty, the FGSR, and/or other appropriate services such as the Student Ombudservice. The student and supervisors shall not be required to participate in informal resolution.

If informal resolution is unsuccessful or inappropriate and the graduate coordinator determines that the supervisor-student relationship is beyond repair, the department will attempt in good faith to work with the student to find alternative supervision within the department and will keep the FGSR apprised of these efforts.

Where the supervisor has been providing funding to the student, the funding should continue for a period of at least 30 days from the date on which the graduate coordinator determines that the supervisor-student relationship is beyond repair.

If the best arrangements of the department and the FGSR fail to meet the expectations of the student, the student may choose to withdraw without prejudice. If the student refuses to accept the supervision provided, or if no supervision can be secured, then the student is not fulfilling the academic requirement of having a supervisor and may, on academic grounds, be required to withdraw.

### **Supervisory Committees**

#### Thesis-based master's students

It is not a University requirement for master's students to have a supervisory committee; however, some graduate programs require them. If required by the program, the supervisory committee members are ex-officio members of the master's final examining committee. Attention should be paid to the qualifications of the committee members as examiners to ensure the composition and size of the examination committee will be appropriate.

#### **Doctoral students**

Every doctoral student's program shall be under the direction of a supervisory committee approved by the department.

A doctoral supervisory committee must have at least three members, and must include all the supervisors.

The department should ensure that the members of a supervisory committee are sufficiently competent and experienced to serve at the required level. In forming a supervisory committee, the department should consider the rank and experience of the prospective members, their publications and other demonstrations of competence in the subject area or field of specialization, and the prospective members' experience in graduate supervision.

Attention should be paid to the qualifications of the committee members as examiners to ensure the composition of the examination committee will be appropriate as they are ex-officio members of doctoral examining committees.

The supervisory committee is chaired by one of the supervisors.

Compliance with the University of Alberta's Conflict Policy - Conflict of Interest and Commitment, and Institutional Conflict is mandatory.

The supervisor is responsible for ensuring committee meetings are held and making arrangements. The committee shall have a formal regular meeting with the student at least once a year. The department should maintain a record of meetings that have occurred and when students who are not on an approved leave fail to respond to requests to schedule a committee meeting.

For doctoral students, the department shall appoint the supervisory committee well in advance of the candidacy examination.

## The Role and Structure of Examining Committees

Formal examining committees are required for thesis-based master's final examination, doctoral candidacy examinations, and doctoral final examinations. Members of these examining committees perform two functions: 1) they bring knowledge and expertise to the assessment of the thesis, and 2) they ensure that the University's expectations are met regarding the conduct of the examination, adherence to all relevant policies, and the suitability of the thesis for the degree.

#### The Chair

Every examining committee must have a chair who is not the supervisor and is a faculty member with experience supervising graduate students. The chair should have sufficient experience of graduate examinations to be able to allow the examination to be conducted in a fair manner. The chair is responsible for moderating the discussion and directing questions. It is the chair's responsibility to ensure that departmental and FGSR regulations relating to the final examination are followed. If the chair is not an examiner, then the chair does not vote.

The committee chair is not an examiner for doctoral examinations. See Size and Composition of Examining Committees for the requirements for each examination.

The chair should not have real or apparent conflict of interest with the student or any of the examiners.

#### **Examiners**

Examiners are full voting members of the examining committee. All examiners must be either active in the general subject area of the student's research or bring relevant expertise to the assessment of the thesis.

## Categories of Examiners and Eligibility

There are four types of examiners: ex-officio examiner, arm's length examiner, University of Alberta examiner and External examiner.

#### **Ex-officio Examiners**

The supervisor(s) and, for doctoral students, the other members of the student's supervisory committee are ex-officio members of the examining committee.

By definition, no individual can be both an ex-officio and an arm's length examiner on the same examining committee.

#### **Arm's Length Examiners**

An arm's length examiner is knowledgeable in the field and comes fresh to the examination. They must not be (or have been) a member of the supervisory committee, or have been connected with the thesis research in a significant way. The examiner should not have been associated with the student, outside of usual contact in courses or other non-thesis activities within the University, nor be related to the student or supervisor(s).

The arm's length examiners should not be a former supervisor or student of the supervisor(s).

Except in special circumstances (fully justified in writing to the Dean of the department's Faculty), an arm's length examiner should not be an active collaborator of the supervisor(s) (see Conflict of Interest Guidelines below).

Arm's length examiners who have served on a student's candidacy examination committee do not lose their arm's length status as a result, and are eligible to serve as arm's length examiners on the student's doctoral final examination if the other conditions of being arm's length remain unchanged.

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#### **External Examiner**

An external examiner from outside the University of Alberta is required for doctoral thesis examinations. In addition to being an arm's length examiner this examiner must fulfill additional criteria as described under Final Doctoral Examination below.

#### **University of Alberta Examiners**

The University of Alberta examiner is a tenured, tenure-track, or retired University of Alberta faculty member, or Faculty Service Officer, (current or retired categories A1.1, A1.3, or current category C1.1, as defined in the University of Alberta's Recruitment Policy (Appendix A) Definition and Categories of Academic Staff and Colleagues).

### Conflict of Interest Guidelines for Supervisory and Examination Committees

The key relationships are: the supervisor to the student; the supervisor to the other committee members; and the student to the committee members. There must be no conflict of interest in these relationships, as defined by the University of Alberta policy. Any personal or professional relationships that alter or affect this academic relationship may constitute a conflict of interest.

It is a best practice to request examiners and the chair declare any potential conflicts of interest prior to approval of the examination committee. Where potential conflicts of interest emerge, the matter may be referred to an Associate Dean at FGSR for advice on how to best manage unavoidable conflicts of interest.

### Size and Composition of Examining Committees

For all examination committees, at least half of the examiners must have a degree equivalent to or higher than the degree being examined.

For all examination committees, at least half of the examiners must fulfill the criteria as a University of Alberta examiner as tenured, tenure-track, or retired University of Alberta faculty members, or Faculty Service Officers (see above under Categories of Examiners and Eligibility).

#### Master's Thesis Examination Committee

- 1. The minimum size of a master's final examining committee is three examiners. The maximum size is five examiners.
- 2. The ex officio members of the committee are the supervisor(s) and the supervisory committee members if there is a committee.
- 3. There must be one arm's length examiner.
- At least half of the examiners must hold a master's degree or higher (see above).
- 5. At least half of the examiners must fulfill the criteria of University of Alberta examiner (see above)
- 6. The chair is not the supervisor. The chair is a faculty member in the student's home department or with experience chairing master's examinations. The FGSR recommends that committee chairs not be examiners except in extenuating circumstances where any conflict of interest in this role be managed transparently for the student

The authority for the appointment of final examining committees rests with the Dean of the department's Faculty [unless delegated to the department].

#### **Doctoral Candidacy Examination Committee**

- The minimum size of a doctoral candidacy committee is five examiners. The maximum size is seven examiners.
- The ex officio members of the committee are the supervisor(s) and the supervisory committee members.
- There must be two arm's length examiners.
- At least half or more of the examiners must hold a doctoral degree or higher (see above).
- At least half of the examiners must fulfill the criteria of University of Alberta examiner (see above)
- The chair is not an examiner. The chair is a faculty member in the student's home department or with experience chairing doctoral examinations

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The authority for the appointment of doctoral candidacy examining committees rests with the department.

#### **Doctoral Thesis Examination Committee**

- The minimum size of a doctoral final examining committee is five examiners. The maximum size is seven examiners.
- The ex officio members of the committee are the supervisor(s) and the supervisory committee members.
- There must be two arm's length examiners, one of whom must be a reader or examiner external to the University
- At least half of the examiners must hold a doctoral degree or higher (see above).
- At least half of the examiners must fulfill the criteria of University of Alberta examiner (see above)
- The chair is not an examiner. The chair is a faculty member in the student's home department or with experience chairing doctoral examinations.

The authority for the appointment of final examining committees rests with the Dean of the department's Faculty [unless delegated to the department].

#### **Conduct of Examinations**

#### **Common Examination Protocols**

Attendance at Examinations: In the absence of unforeseen circumstances, it is essential that all examiners attend the entire examination. Attendance means participation in the examination either in person or via Teleconferencing (see below). The only exception allowed is the External Reader for a doctoral final examination, who participates by providing a detailed report and a list of questions.

If the department has warning that any member of the examining committee cannot attend the examination, the department should contact the Dean of the FGSR for advice. The situation will be dealt with on a case-by-case basis, but it may be necessary that the examination be postponed, or the examiner replaced.

The Dean, FGSR, the Dean of the department's Faculty, or a Pro Dean (the representative of the Dean, FGSR) may participate fully in the examination. Persons other than the examiners may attend only with the approval of the Dean, FGSR, the Dean of the department's Faculty, or the chair of the committee.

**Responsibilities of a Pro Dean at Examinations:** A Pro Dean is a full voting member when attending an examination. The Pro Dean's presence is in addition to the regular membership. Attendance of the Pro Dean may be at the request of a committee member, student, chair, graduate coordinator, the Dean of the department's Faculty, or the Dean, FGSR.

The Pro Dean's role is to ensure the proper conduct of the examination and will intercede actively to correct procedural problems. The Pro Dean has the power to adjourn an examination. If problems are encountered, the Pro Dean is asked to submit a brief report to the Dean, FGSR.

**Teleconferencing Guidelines for Examinations:** The term 'teleconferencing' is used here generically to include all forms of distance conference facilitation including telephone, video and synchronous electronic communication.

Departments may wish to use teleconferencing for one or more of the examiners (including the External). No more than two participants may attend by teleconference. Teleconferencing may be used for master's or doctoral examinations. Examiners participating in examinations by this means are considered to be in attendance.

Students must attend their candidacy examinations in person. In exceptional circumstances, for the final examinations, students may participate by teleconferencing. It is recommended that if the student is the remote participant, no remote committee members be used.

Use of teleconferencing must be submitted for approval to the Dean of the department's Faculty at the time the examination committee is approved, following the Faculty's established procedures.

# GRADUATE STUDIES AND RESEARCH

**Timelines and Approval of the Examining Committee:** It is the responsibility of the department to nominate the members of the examining committee following the procedures established by the Dean of the department's Faculty using the Forms available on the FGSR website The notice of final approval must be received by the FGSR at least two weeks in advance of the examination to be coded into the system.

**Scheduling of Examinations:** It is the responsibility of the supervisor(s) to ensure that:

- proper arrangements are made for the student's examination,
- the exam is scheduled and held in accordance with FGSR and departmental regulations,
- committee members are informed of meetings and details of examinations
- the student does not make these arrangements, and
- the student provides a copy of the thesis (master's and doctoral final examination) to the individual delegated by the program to distribute the thesis to the examiners (e.g., chair of the examination, program administrator, supervisor). The supervisor is responsible for ensuring that all examiners receive the thesis in a timely way. All examiners for a doctoral final examination must receive a copy of the thesis at least four weeks before the examination.

In the absence of the supervisor, the department's graduate coordinator or designate shall be responsible for these arrangements.

**Changing an Examining Committee Member:** Changes to the membership of the Examining Committee must follow the procedures established by the Dean of the department's Faculty.

Language of Examinations: The language used to conduct examinations shall be English, except where already approved by the FGSR Council. However, the examining committee may petition the Dean of the FGSR, and on receiving written approval, may conduct the examination in a language other than English.

**Time Limit for Submission of Theses to FGSR:** Following completion of the final examination at which the thesis is passed or passed subject to revisions, the student shall make any necessary revisions and submit the approved thesis to the FGSR within six months of the date of the final examination. Departments that require a thesis-equivalent may have special submission procedures. See Graduate Programs. Departments may impose earlier deadlines for submitting revisions.

If the thesis is not submitted to the FGSR within the six-month time limit, the student will be considered to have withdrawn from the program. After this time, the student must apply and be readmitted to the FGSR and register again before the thesis can be accepted. If the final examination is adjourned, the six-month time limit will take effect from the date of completion of the examination where the thesis was passed with or without revisions.

In order to convocate, all thesis-based students must submit their thesis to the FGSR and have it approved before they can be cleared for convocation. Departments that require a thesis-equivalent may have special submission procedures. See Graduate Programs.

#### **Conduct of Thesis and Candidacy Examinations**

The following apply to all examinations. Matters specific to each type of examination are detailed in the sections that follow. Programs may have additional regulations in their program guidelines.

- 1. The student may be required to give a presentation prior to the examination. The presentation may be public or only for the examining committee (and others approved to attend the examination—see Attendance at Doctoral Examinations, above).
- 2. If a public seminar is held before the examination, typically the examiners do not ask questions until the examination itself begins.
- 3. At the start of the examination the chair should review the procedures as detailed by the program's guidelines for the examination including the order of examiners, number of rounds of questions, the length of time allotted to each examiner and whether interjections by other examiners are permitted.

  Departmental examination procedures should have flexibility to adjust accordingly when there are large supervisory committees so as not to extend the questioning portion of the examination beyond a reasonable duration (2 hours for master's and 3 hours for doctoral examinations).
- 4. The student may be asked to leave the room while the order of examiners is determined, and the student's academic record is reviewed by the supervisor for the committee. Typically the order of examiners is the External if applicable, the arm's length examiners, the supervisory committee members, and then the supervisor. The Examiners may seek clarification at this time regarding exam procedures.

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- 5. If academic misconduct is suspected, an Associate Dean, FGSR should be consulted prior to the exam.
- 6. For thesis examinations the questioning should focus on establishing the quality of the thesis (or thesis substitute) and the student's breadth and depth of understanding at a level appropriate to the degree qualification. Expectations for a Candidacy examination are detailed in the program's guidelines.
- 7. When the questions have concluded, the chair should ask the student if they have any final comments they would like to add.

#### Deliberation:

- The student is required to leave the room and will be asked to take their personal belongings including electronic devices with them.
- The deliberations are confidential proceedings. The committee will agree on the report to be provided to the student with the outcome of the examination.
- The examiners are asked to give their opinions on the quality of the thesis and the defense, or performance in the candidacy examination, in the same order as questioning occurred. All examiners must provide their opinion before a final decision is made.
- The options of the outcomes from the vote are detailed for each type of examination.
- If the outcome of the first vote does not result in a decision (eg. two of five examiners vote to fail), the chair will allow for further discussion and attempt to reach a decision. Only in cases where a decision cannot be reached in a reasonable time will the student be informed and matter referred to the Dean FGSR, who will determine the appropriate course of action.
- The Chair of the Examination Committee may sign the thesis examination form on behalf of an examiner who is participating from a remote location.

#### Thesis Based Master's Program Examination

Each department offering a thesis-based Master's degree is required to establish detailed examination procedures for final examinations. These procedures must be made available publicly.

**Decision of the Master's Final Examining Committee:** The decision of the examining committee will be based both on the content of the thesis and on the student's ability to defend it. The final examination may result in one of the following outcomes:

- Adjourned
- Pass
- Pass subject to revisions
- Fail

There is no provision for a final examination to be "passed subject to major revisions".

If the Examining Committee fails to reach a decision, the department will refer the matter to the Dean, FGSR, who will determine an appropriate course of action.

**Adjourned:** An adjourned examination is one that has been abandoned officially. A majority of examiners must agree to an outcome of Adjourned. The final examination should be adjourned in the following situations:

- The revisions to the thesis are sufficiently substantial that it will require further research or experimentation or major reworking of sections, or if the
  committee is so dissatisfied with the general presentation of the thesis that it will require a reconvening of the examining committee. In such circumstances
  the committee cannot pass the student, and must adjourn the examination.
- The committee is dissatisfied with the student's oral presentation and defence of the thesis, even if the thesis itself is acceptable with or without minor revisions.
- Compelling, extraordinary circumstances such as a sudden medical emergency taking place during the examination.
- Discovery of possible offences under the Code of Student Behaviour after the examination has started.

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If the examination is adjourned, the committee should:

- Specify in writing to the student, with as much precision as possible, the nature of the deficiencies and, in the case of revisions to the thesis, the extent of the
  revisions required. Where the oral defence is unsatisfactory, it may be necessary to arrange some discussion periods with the student prior to reconvening the
  examination
- Decide upon a date to reconvene. If the date of the reconvened examination depends upon the completion of a research task or a series of discussions, it
  should be made clear which committee members will decide on the appropriate date to reconvene. This new examination must be held within six months of the
  initial examination.
- Make it clear to the student what will be required by way of approval before the examination is reconvened (e.g., approval of the committee chair or supervisor, approval of the entire committee, or of select members of the committee).
- Specify the supervision and assistance the student may expect from the committee members in meeting the necessary revisions.
- Advise the Dean, FGSR, in writing of the adjournment and the conditions.
- When the date is set for the adjourned final examination, the department will notify the FGSR. Normally a Pro Dean attends the examination. The Pro Dean should be included on all correspondence for the rescheduling of the examination.

Pass: Pass is the decision given when the only revisions required are typographical or minor editorial changes. All or all but one of the examiners must agree to an outcome of Pass. If the student passes the examination, the department should submit a completed Thesis Approval/Program Completion form to the FGSR. If one of the examiners fails the student, that examiner does not have to sign this form.

Pass subject to revisions: All or all but one of the examiners must agree to an outcome of Pass subject to revisions. The student has satisfactorily defended the thesis but the revisions to the thesis will not require a reconvening of the examining committee.

If the examining committee agrees to a "Pass subject to revisions" for the student, the chair of the examining committee must provide in writing, within five working days of the examination, to the to the student, the graduate coordinator, and FGSR:

- the reasons for this outcome,
- the details of the required revisions,
- the approval mechanism for meeting the requirement for revisions (e.g., approval of the examining committee chair or supervisor, or approval of the entire examining committee, or select members of the committee), and
- the supervision and assistance the student can expect to receive from committee members.

The student must make the revisions within six months of the date of the final examination. Once the required revisions have been made and approved, the department shall submit a completed Thesis Approval/Program Completion form to the FGSR indicating the committee decision was "pass subject to revisions". If one of the examiners fails the student that examiner does not have to sign the form. If the required revisions have not been made and approved by the end of the six months deadline, the student will be required to withdraw.

Fail: All or all but one of the examiners must agree to an outcome of Fail. If the examination result is a Fail, no member of the examining committee signs the Thesis Approval/Completion form.

When the outcome is a Fail, the committee chair will provide the reasons for this decision to the department. The department will then provide this report, together with its recommendation for the student's program, to the Dean, FGSR, and to the student.

An Associate Dean, FGSR will normally arrange to meet with the student, the graduate coordinator, and others if needed, before acting upon any departmental recommendation that affects the student's academic standing.

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#### **Doctoral Candidacy Examination**

**Establishing Candidacy Examination Procedures:** Each department offering a doctoral degree is responsible for establishing detailed examination policies and procedures for the candidacy examination. These documents should be publicly available.

The candidacy examination is an oral examination; some departments may also require that students take comprehensive written examinations prior to the candidacy examination, but such examinations do not form part of the candidacy examination itself.

For candidacy examinations, students must demonstrate to the satisfaction of the examining committee that they possess:

- an adequate knowledge of the discipline and of the subject matter relevant to the thesis;
- the ability to pursue and complete original research at an advanced level;
- the ability to meet any other requirements found in the department's published policy on candidacy examinations.

The candidacy examination must be held within three years of the commencement of the program in accordance with the Degree of PhD of the University Calendar. The candidacy examination must be passed no less than six months prior to taking the final examination.

**Decision of the Candidacy Committee:** The candidacy examination may result in one of the following outcomes:

- 1. Adjourned
- 2. Pass
- 3. Conditional pass
- 4. Fail and repeat the candidacy
- 5. Fail with a recommendation to terminate the doctoral program or for a change of category to a master's program.

If the Examining Committee fails to reach a decision, the department will refer the matter to the Dean, FGSR, who will determine an appropriate course of action.

When the decision is Conditional Pass or Fail, chairs may refer to the decision process flowchart found on the FGSR website.

**Adjourned:** A majority of examiners must agree to an outcome of Adjourned. The candidacy examination should be adjourned in the event of compelling, extraordinary circumstances such as a sudden medical emergency taking place during the examination or possible offences under the Code of Student Behaviour after the examination has started.

**Pass:** All or all but one of the examiners must agree to an outcome of Pass. If the student passes the candidacy examination, the department should complete the Report of Completion of Candidacy Examination form and submit it to the FGSR.

Conditional Pass: A Conditional Pass is appropriate when the student has satisfied the committee in all but a very discrete area of deficiency that can addressed through a reasonable requirement (e.g., coursework, literature review, upgrading of writing skills). Reworking of the entire candidacy proposal is not an acceptable condition and the examiners should consider the options available for a student that has failed the examination.

A majority of examiners must agree to an outcome of Conditional Pass. If the candidacy examining committee agrees to a conditional pass for the student, the chair of the examining committee will provide in writing within five working days to the Dean, FGSR, the graduate coordinator and the student:

- the reasons for this recommendation,
- the details of the conditions.
- the timeframe for the student to meet the conditions, but which should be no less than six weeks and no more than six months.
- the approval mechanism for meeting the conditions (e.g., approval of the committee chair or supervisor, or approval of the entire committee, or select members of the committee), and

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• the supervision and assistance the student can expect to receive from committee members

Conditions are subject to final approval by the Dean, FGSR. At the deadline specified for meeting the conditions, two outcomes are possible:

- All the conditions have been met. In this case, the department will complete the Report of Completion of Candidacy Examination form and submit it to the EGSR: or
- If the conditions are not met by the deadline, the outcome of the examination is a fail and the committee must be reconvened to make the recommendation as described in the following section.

Fail: All or all but one of the examiners must agree to an outcome of Fail.

The options available to the examining committee when the outcome of a student's candidacy exam is "Fail" are

- Repeat the Candidacy: Repeating the Candidacy is not an option after a second failed examination. A majority of examiners must agree to an outcome of Fail and Repeat the Candidacy. If the student's first candidacy exam performance was inadequate but the student's performance and work completed to date indicate that the student has the potential to perform at the doctoral level, the examining committee should consider the possibility of recommending that the student be given an opportunity to repeat the candidacy exam. Normally, the composition of the examining committee does not change for the repeat candidacy exam.
  - If the recommendation of a repeat candidacy is formulated by the examining committee and approved by the FGSR, the student and graduate coordinator are to be notified in writing of the student's exam deficiencies by the chair of the examining committee. The second candidacy exam is to be scheduled no later than six months from the date of the first candidacy. In the event that the student fails the second candidacy, the examining committee shall recommend one of the following two options to the department:
- Change of Category to a Master's Program: All or all but one of the examiners must agree to an outcome of Fail and Change of Category to a Master's
  Program. This outcome should be considered if the student's candidacy examination performance was inadequate and the student's performance and work
  completed to date indicates that the student has the potential to complete a master's, but not a doctoral, program; or
- **Termination of the Doctoral Program:** All or all but one of the examiners must agree to an outcome of Fail and Terminate the Doctoral Program. If the student's performance was inadequate, and the work completed during the program is considered inadequate, then the examining committee should recommend termination of the student's program.

If the candidacy examining committee agrees that the student has failed, the committee chair will provide the reasons and the recommendation for the student's program to the department. The graduate coordinator will then provide this report, together with the department's recommendation for the student's program, to the Dean, FGSR, and to the student

For failed candidacy examinations, an Associate Dean, FGSR, normally arranges to meet with the student (and others as required) before acting upon any department recommendation.

#### Final Doctoral Examination

Each department offering a doctoral degree is required to establish detailed examination procedures for final examinations. These procedures must be made available publicly.

Preliminary Acceptance of the Thesis: Before the thesis is forwarded to the External, the supervisory committee members must declare in writing to the supervisor(s) either that the thesis is of adequate substance and quality to warrant that the student proceed to the final examination or that the thesis is unsatisfactory and the student should not be allowed to proceed to the final examination.

The purpose of this process is to ensure the thesis is vetted by the supervisor(s) and all supervisory committee members and to verify that it is of sufficient substance and quality to proceed to the final examination.

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This process is critical to protect and uphold the reputation of the department and the University of Alberta for excellence in graduate programs. It is also critical to ensure that Externals and other additional members of the examining committee are not asked to invest time reading a thesis that is substandard.

Departments may choose to prepare a "Preliminary Acceptance of Thesis" signature sheet for their own records.

Attendance at Doctoral Examinations: Faculty members of the student's home department as well as members of FGSR Council (or their alternates) have the right to attend doctoral examinations but should notify the chair of the examining committee. Other persons may attend the examination only with special permission of the Dean of the department's Faculty, the Dean, FGSR, or the chair of the examining committee.

Except for a Dean or a Pro Dean who may participate fully in the examination, persons who are not members of the examining committee:

- may participate in the questioning only by permission of the chair of the committee, but
- are not permitted to participate in the discussion of the student's performance and must withdraw before such discussion commences

**Inviting the External Examiner or Reader:** Every Final Doctoral Examining Committee must have an External i.e., an arm's length examiner from outside the University of Alberta. The term External Examiner refers to an External who attends the examination, whereas the term External Reader refers to an External who provides a written evaluation of the thesis and questions to be asked during the examination. External Readers are deemed to be in attendance at the examination.

It is the responsibility of the department to recommend an External Examiner or Reader and to submit the name to the Dean of the department's Faculty for approval. Normally, this should be done at least two months in advance of the examination date. The submission must follow the procedures established by the Dean of the department's Faculty.

#### The External:

- Will be a recognized authority in the specific field of research of the student's thesis;
- Will be experienced in evaluating doctoral area work; and
- Must be in a position to review the thesis objectively and to provide a critical analysis of the work and the presentation.

It is essential that the External not have an association with the student, the supervisor, or the department within the last six years as this could hinder objective analysis. For example, a proposed External who has within the last six years been associated with the student as a research collaborator or coauthor would not be eligible. Also, a proposed External must not have had an association within the last six years with the doctoral student's supervisor (as a former student, supervisor, or close collaborator, for instance).

Under normal circumstances the same person will not be used as an External at the University of Alberta if that External has served in the same capacity in the same department at this University within the preceding two years; this does not preclude an External serving in another department.

Once the External has been approved an official letter of invitation is issued to the External by the department.

**Approval of the Doctoral Final Examining Committee:** The department will recommend the names of all members of the final examining committee and forward them to the Dean of the department's Faculty, if decanal approval is required, following the procedures established by their Faculty.

External Readers: Do not attend the examination. Instead, the External Reader is asked in the letter of invitation to prepare a written report consisting of:

- an evaluation of the scope, structure, methodology, and findings of the thesis,
- a list of minor errors (if any), and
- either a list of clear, direct, contextualized questions to be posed to the candidate during the examination, or a brief written commentary of the thesis which can be read to the candidate for response during the examination.

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The External Reader must include a statement that the thesis falls into one of the following two categories:

- Acceptable with minor or no revisions: In this case, the External Reader submits the report to the Graduate Coordinator at least one week before the
  examination. If the External Reader considers the thesis to be of a calibre worthy of consideration for an award, the External Reader comments on this in the
  written evaluation; or
- Unacceptable without major revisions: In this case, the External Reader contacts the Dean of the FGSR immediately by email as the examination may need to be postboned.

The questions or commentary will be made available to the student for the first time during the examination and the committee will evaluate the student's answers as part of the examination.

**External Examiners:** Attend the examination in person. In the letter of invitation, the External Examiner is requested to prepare and send to the Graduate Coordinator, at least one week in advance of the examination, an evaluation of the thesis placing it temporarily in one of the following categories:

- the thesis is acceptable with minor or no revisions,
- the External Examiner wishes to reserve judgment until after the examination, or
- the thesis is unacceptable without major revisions.

In the first two cases, the External Examiner is asked to provide a brief written commentary (approximately two to three pages) on the structure, methodology, quality, significance and findings of the thesis for the reference of both the student and supervisor. The commentary should not be given to the student prior to the examination.

If the thesis is judged by the External Examiner to fall into the "Unacceptable" category, then the External Examiner is asked to contact the Dean of the FGSR immediately, since the final examination may need to be postponed.

The Examination: The examining committee should conduct a final examination, based largely on the thesis.

The graduate coordinator should ensure that the chair of the examining committee, the student, and all examiners have a final copy of the thesis at the examination.

The student should make a brief presentation about the thesis.

The most time should be allotted to the arm's length examiners, including the External Examiner, while the least time is allocated to the supervisor(s).

No final decision should be made without each examiner having given an opinion.

**Decision of the Doctoral Final Examining Committee:** The decision of the examining committee will be based both on the content of the thesis and on the student's ability to defend it. The final examination may result in one of the following outcomes:

- Adjourned
- Pass
- Pass subject to revisions
- Fai

There is no provision for a final examination to be "passed subject to major revisions".

If the Examining Committee fails to reach a decision, the department will refer the matter to the Dean, FGSR, who will determine an appropriate course of action.

**Adjourned:** An adjourned examination is one that has been abandoned officially. A majority of examiners must agree to an outcome of Adjourned. The final examination should be adjourned in the following situations:

• The revisions to the thesis are sufficiently substantial that it will require further research or experimentation or major reworking of sections, or if the committee is so dissatisfied with the general presentation of the thesis that it will require a reconvening of the examining committee. In such circumstances the committee cannot pass the student, and must adjourn the examination.

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- The committee is dissatisfied with the student's oral presentation and defence of the thesis, even if the thesis itself is acceptable with or without minor revisions
- Compelling, extraordinary circumstances such as a sudden medical emergency taking place during the examination.
- Discovery of possible offences under the Code of Student Behaviour after the examination has started.

If the examination is adjourned, the committee should:

- Specify in writing to the student, with as much precision as possible, the nature of the deficiencies and, in the case of revisions to the thesis, the extent of the
  revisions required. Where the oral defence is unsatisfactory, it may be necessary to arrange some discussion periods with the student prior to reconvening the
  examination.
- Decide upon a date to reconvene. If the date of the reconvened examination depends upon the completion of a research task or a series of discussions, it
  should be made clear which committee members will decide on the appropriate date to reconvene. The final date set for reconvening shall be no later than six
  months from the date of the examination. This new examination must be held within six months of the initial examination.
- Make it clear to the student what will be required by way of approval before the examination is reconvened (e.g., approval of the committee chair or supervisor, approval of the entire committee, or of select members of the committee).
- Specify the supervision and assistance the student may expect from the committee members in meeting the necessary revisions.
- Advise the Dean of the department's Faculty following the procedures established for this purpose.
- Advise the FGSR in writing of the adjournment and the conditions.
- When the date is set for the adjourned final examination, the department will notify the Dean of the department's Faculty and the FGSR. Normally a Pro Dean
  attends the examination.

Pass: Pass is the decision given when the only revisions required are typographical or minor editorial changes. All or all but one of the examiners must agree to an outcome of Pass. If the student passes the examination, the department should submit a completed Thesis Approval/Program Completion form to the FGSR. If one of the examiners fails the student, that examiner does not have to sign this form.

Pass Subject to Revisions: All or all but one of the examiners must agree to an outcome of Pass Subject to Revisions. The student has satisfactorily defended the thesis but the revisions to the thesis it will not require a reconvening of the examining committee. If the examining committee agrees to a "Pass subject to revisions" for the student, the chair of the examining committee must provide in writing, within five working days of the examination, to the student, the graduate coordinator, and FGSR:

- the reasons for this outcome,
- the details of the required revisions,
- the approval mechanism for meeting the requirement for revisions (e.g., approval of the examining committee chair or supervisor, or approval of the entire examining committee, or select members of the committee), and
- the supervision and assistance the student can expect to receive from committee members.
- A date for the revisions to be resubmitted, as negotiated with the student, but which should be no less than six weeks and no more than six months.

The student must make the revisions within six months of the date of the final examination. Once the required revisions have been made and approved, the department shall submit a completed Thesis Approval/Program Completion form to the FGSR indicating the committee decision was "pass subject to revisions". If one of the examiners fails the student that examiner does not have to sign the form. If the required revisions have not been made and approved by the end of the six months deadline, the student will be required to withdraw.

Fail: All or all but one of the examiners must agree to an outcome of Fail. If the examination result is a Fail, no member of the examining committee signs the Thesis Approval/Completion form.

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When the outcome is a Fail, the committee chair will provide the reasons for this decision to the graduate coordinator. The department will then provide this report, together with its recommendation for the student's program, to the Dean of the department's Faculty, the FGSR, and to the student.

An Associate Dean, FGSR will normally arrange to meet with the student and with the graduate coordinator before acting upon any department recommendation that affects the student's academic standing.

#### Thesis Requirements

#### Regulations and Outline of Responsibilities

All students in a thesis degree program must present and defend a thesis embodying the results of their research. The topic of the master's and doctoral thesis must have been approved by the student's supervisor and supervisory committee respectively.

Departments may set specific requirements for student theses, including requirements pertaining to traditional format theses, paper-based theses (e.g., theses consisting of published, accepted or submitted papers), and mixed format theses (combining the traditional format and the paper-based format). Clarity is recommended in setting departmental requirements to avoid disputes later.

For students in a master's degree program, the thesis, at a minimum, should reveal that the student is able to work in a scholarly manner and is acquainted with the principal works published on the subject of the thesis. As far as possible, it should be an original contribution.

A doctoral thesis, at a minimum, must embody the results of original investigations and analyses and be of such quality as to merit publication, meeting the standards of reputable scholarly publications. It must constitute a substantial contribution to the knowledge in the student's field of study.

The thesis should normally be written in English. In some departments, students may be permitted to write their thesis in a language other than English, provided that language has been approved for use by the supervisory committee, the department, and the Dean of the department's Faculty. Theses written in a language other than English must have two abstracts, one in the language of the thesis, and the other in English.

Students are responsible for following the FGSR Minimum Thesis Formatting Requirements found at https://uofa.ualberta.ca/graduate-studies/currentstudents/academic-requirements/thesis-requirementand-preparation.

It is the responsibility of both the student and the supervisor(s) to be aware of any specific requirements of the student's department with respect to the student's thesis.

#### Policy on Public Access to Thesis Results

A thesis will be made freely available to the public as soon as possible after a student's convocation. It is the responsibility of the supervisor and the supervisory committee to inform the student of the University's policy on public access to thesis results and to explore with the student the possible ramifications of the student's research, at the outset of the thesis project. In principle, graduate students should not undertake, nor supervisors involve, students in research for a thesis when the thesis project is part of a contract which prohibits public access to a thesis.

#### Restricting Access to the Publication of a Thesis

It is University policy that a thesis be made freely available to the public as soon as possible after a student's convocation. A general policy of "open access" is also embraced by Tri-Council and other funding agencies. However, it is recognized that circumstances may arise that justify restricting access to a thesis for a specified period of time initially up to a maximum of one year (also known as an embargo period). The student's department has been delegated the authority to receive and approve a request for restricting access to a thesis for up to two years.

The likely circumstances for restricting access to a thesis include:

- Contractual, where a contract with a company, funding agency or sponsor requires that the research conducted for the thesis must remain confidential for a specified period of time;
- Patent Pending, where a patent application has been lodged by the student, or by another on the student's behalf, relating to a discovery or novel method in a
  thesis.
- Publication Pending, where a student has a contract with a publisher indicating that the publisher regards the electronic availability of a thesis as a prior
  publication and will reject any work based on a publicly available thesis, or for a student who has not yet obtained a publishing contract, where a student can
  show that the practice of the likely publishers in the student's discipline is to consider the electronic availability of a thesis as a prior publication; and
- Ethical Confidentiality, where a thesis requires an embargo period in order for additional steps to be taken to remove information from the thesis where electronic access to the thesis in a university repository without amendment could endanger the physical or mental health or the safety of people.
- Losing originality of research dissemination.

Students wanting to restrict public access to their theses for a temporary period of time must submit a written request with supporting documentation to their department. If approved by the department, the form request must be submitted to the FGSR for processing at the time of submission of the thesis to FGSR.

At the end of an approved embargo period, the thesis will become accessible. An accessible thesis can be located by a Google search or other internet search engine. It is a student's responsibility to contact the Dean of FGSR if there are any extenuating circumstances that warrant an extension to the original embargo period.

University policy requires compliance with copyright law.

# **Graduate Programs**

#### **General Information**

A brief description of each program offered under the auspices of the Faculty of Graduate Studies and Research is given in the following section. Entries are arranged alphabetically by department. Prospective applicants should note, in addition to the general requirements of the Faculty of Graduate Studies and Research, the particular admission requirements, potential fields of research and the specific requirements for each program. Graduate and undergraduate courses that may be taken in order to fulfil the requirements for a graduate program are listed in Course Listings.

The Faculty of Graduate Studies and Research supports the concept of interdisciplinary studies. Guidelines for proposing such a program are available from the Faculty of Graduate Studies and Research office.

# **Graduate Financial Support**

The Faculty of Graduate Studies and Research (FGSR) administers numerous graduate awards and scholarships and distributes information on sources of graduate student funding.

#### Graduate Teaching or Research Assistantships

Please see the Collective Agreement for Academically-employed Graduate Students for detailed information about graduate assistantships.

# GRADUATE STUDIES AND RESEARCH

#### University-Administered Awards—General Information

Through the Graduate Scholarship Committee (GSC), the FGSR approves and adjudicates numerous awards and scholarships, and develops and approves new awards policy. The GSC also administers and adjudicates the annual general awards competition, approves new awards, and develops graduate awards policy.

For general FGSR awards and scholarships policy, please see the Awards Winners Handbook.

#### Loans and Bursaries

See Bursary Information and the FGSR website.

# **Programs**

#### Graduate

# Agricultural, Food, and Nutritional Science [Graduate]

Department of Agricultural, Food, and Nutritional Science 4-10 Agriculture/Forestry Centre University of Alberta Edmonton, Alberta T6G 2P5 E-mail: afns.grad@ualberta.ca

#### **General Information**

The Department of Agricultural, Food, and Nutritional Science offers thesis programs leading to Master of Science and Doctor of Philosophy degrees, as well as course-based programs leading to Master of Agriculture, Master of Engineering and Master of Science degrees.

The Department has active research programs in

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- 1. Animal Science: Research on basic animal biology and livestock management with applications in the fields of animal physiology and metabolism, immunology, reproduction, animal housing, health and welfare, as well as genomics, bioinformatics and proteomics.
- 2. Plant Science: Studies in plant biology, applied ecology and agronomy within cereal, oilseed, forage and specialty crop production, incorporating plant biochemistry and proteomics, biotechnology, plant breeding and genomics, integrated pest management, as well as plant and field crop physiology.
- 3. Food Science and Technology: Food research encompassing chemistry, microbiology, physics, processing and sensory science with areas of excellence in cereal utilization, dairy science, food safety, functional foods and nutraceuticals, lipid utilization, and pre- and probiotics.
- 4. Nutrition and Metabolism: Clinical, community, metabolic and public health nutrition, as they relate to nutrition policy, infant and child health, and to chronic diseases such as diabetes, obesity, and cancer. Animal based programs include livestock nutrition, feed evaluation and processing.
- 5. Bioresource and Food Engineering: Engineering applications related to bioresource utilization including food processing, bioproducts, bioenergy, biorefining, and agri-waste management.
- 6. Rangeland and Wildlife Resources: Examination of rangeland ecosystems, emphasizing applications in livestock or wildlife productivity, applied plant ecology, and rangeland or wildlife resources management.

# GRADUATE STUDIES AND RESEARCH

The Department research facilities at the Edmonton Research Station include: Crops and Land Resources, Alberta Poultry Research Centre, Swine Research and Technology Centre, Dairy Research and Technology Centre, Composting and Feedmill Facilities, the Laird McElroy Metabolism and Environmental Research Centre and Agri-Food Discovery Place. Additional Research Stations an hour drive from campus include the Ministik Wildlife Field Station and the Kinsella Research Ranch used for extensive beef cattle research.

On the main campus the Department is home to laboratory space and equipment including greenhouses, plant growth facilities, a Human Nutrition Research Unit, an Agri-Food Materials Science Lab, an Agriculture Genomics and Proteomics lab, a Food Microbiology lab, and extensive sensory and consumer science facilities.

Course requirements in graduate programs are based on the student's previous training and anticipated needs in the student's field of specialization. Students should contact the Department for further information concerning course requirements.

#### **Entrance Requirements**

The Department's minimum admission requirements for an MSc, MAg, or MEng degree are an undergraduate degree with a grade point average (GPA) of at least 3.3 in the last two years of study at the University of Alberta, or an equivalent qualification from a recognized institution, and a TOEFL score of 550 (paper-based) or 88 (internet-based) where applicable. For admission to the PhD program the minimum requirements are a grade point average of at least 3.5 in the last two years of study at the University of Alberta, or an equivalent qualification from a recognized institution, and a TOEFL score of 550 (paper-based) or 88 (internet-based) where applicable (see English Language Requirement).

#### Financial Assistance

A limited number of assistantships in teaching and research are available to highly-qualified candidates. Most students are either on scholarship or funded by research grants obtained by professors in the Department.

For further information on the graduate programs and financial assistance, prospective students should direct their inquiries to the Department Graduate Student Support Office.

# **Graduate Program Requirements**

- The Degree of MSc
- The Degree of MAg
- MBA/MAg Joint Program
- The Degree of MEng
- The Degree of PhD

# The Degree of MSc (Agricultural, Food, and Nutritional Science) [Graduate]

## **Program Requirements**

The Department offers a thesis-based MSc and a course-based MSc.

For the thesis-based MSc, in addition to satisfying the general requirements of the Faculty of Graduate Studies and Research, candidates for the MSc degree must

# ALBERTA

# GRADUATE STUDIES AND RESEARCH

- 1. Normally complete three  $\pm 3$  graduate courses as recommended by the supervisor and supervisory committee.
- 2. Complete AFNS 601 Seminar students normally register for one term in year two and are required to present one seminar.
- 3. Prepare an acceptable thesis presenting results of the research conducted. Candidates will be examined orally on their thesis by committees formed according to Faculty of Graduate Studies and Research regulations.
- 4. Complete the minimum period of residence of two, four-month terms of full-time attendance at the University of Alberta.

No language other than English is required for the thesis-based MSc degree.

For the course-based MSc degree, candidates normally are expected to

- Complete eight ★3 graduate courses as recommended by the supervisor and supervisory committee.
- 2. Complete AFNS 601 Seminar- students normally register for one term in year two and are required to present one seminar.
- 3. Complete a research project equivalent to at least  $\pm 3$ .

No language other than English is required for the course-based MSc degree.

#### Length of Program

For the thesis-based MSc, the time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken. Normally two years of study and research are needed to complete the degree program. There is a four-year time limit.

The time required to complete the course-based MSc will vary; however, the time limit for program completion is six years from the date of initial registration.

# The Degree of MAg (Agricultural, Food, and Nutritional Science) [Graduate]

#### **Program Requirements**

For the MAg degree, candidates normally are expected to

- Complete eight ★3 graduate courses as recommended by the supervisor and supervisory committee.
- 2. Complete AFNS 601 Seminar students normally register for one term in year two and are required to present one seminar.
- 3. Complete a research project equivalent to at least  $\pm 3$ .

No language other than English is required for the MAg degree.

# Length of Program

The time required to complete the MAg program will vary; however, the time limit for program completion is six years from the date of initial registration.

# MBA/MAg Joint Program (Agricultural, Food, and Nutritional Science) [Graduate]

The Faculty of Business and the Faculty of Agricultural, Life and Environmental Sciences offer a program of joint study which permits students to earn both the MBA and MAg degrees after two calendar years of full-time study.

Refer to The MBA/MAg Combined Program under Business for program details.



# The Degree of MEng (Agricultural, Food, and Nutritional Science) [Graduate]

Effective Fall 2016, applications to MEng degree program offered by the Department of Agricultural Food and Nutritional Science are no longer accepted.

Students currently enrolled in the program will be allowed to finish their degree requirements no later than December 31, 2021.

# The Degree of PhD (Agricultural, Food, and Nutritional Science) [Graduate]

# **Program Requirements**

The PhD program normally consists of

- 1. Three  $\bigstar 3$  graduate courses as recommended by the supervisor and the supervisory committee.
- 2. AFNS 601 students normally register for one term in each of year one and three, and are required to present one seminar per term.
- 3. Preparation of an acceptable thesis presenting results of the research conducted. Candidates will be examined orally on their thesis by committees formed according to the Faculty of Graduate Studies and Research regulations.
- 4. A minimum residence requirement of four, four-month terms of full-time attendance at the University of Alberta.

There is no language requirement other than English for the degree.

Outstanding MSc candidates in the Department can transfer to a PhD program after approval by the Department.

# Length of Program

Normally four years are required to complete the PhD degree. There is a six-year time limit.

# Anesthesiology and Pain Medicine [Graduate]

Department of Anesthesiology and Pain Medicine 8-120 Clinical Sciences Building University of Alberta Edmonton, Alberta T6G 2B7 E-mail: bruce.dick@ualberta.ca

#### **General Information**

The Department of Anesthesiology and Pain Medicine provides a program leading to the degree of Master of Science (MSc) in Anesthesiology and Pain Medicine jointly with the Medical Sciences Program. Further information on these two programs can be found below and in the Medical Sciences Section.

Research may be carried out in a variety of Anesthesiology and Pain Medicine related disciplines (i.e., neuroscience, regional anesthesia, and cognition). Inquiries should be directed to the Graduate Coordinator of the Department of Anesthesiology and Pain Medicine.

## **Entrance Requirements**

Candidates must hold a baccalaureate or its academic equivalent to enter this program. The Department generally does not accept students with an overall grade point average of less than 3.1 in their undergraduate years at the University of Alberta, or an equivalent qualification from a recognized institution. Where applicable (see English Language Requirement), candidates must obtain a TOEFL score of at least 570 (paper-based) or 95 (internet-based), or equivalent IELTS, MELAB or CAEL scores.

#### Financial Assistance

Funding from fellowships and studentships is available from external agencies on a competitive basis. Supervisors may support students from operating grants.

#### **Graduate Program Requirements**

The Degree of MSc

# The Degree of MSc (Anesthesiology and Pain Medicine) [Graduate]

## **Program Requirements**

The MSc degree program in the Department is jointly administered by the Department of Anesthesiology and Pain Medicine and the Medical Sciences Graduate Program Committee. Approved courses offered by other departments may be included in the candidate's program. Refer to Medical Sciences for more information regarding the degree of MSc in the Department of Anesthesiology and Pain Medicine.

# Anthropology [Graduate]

Department of Anthropology 13-15 Tory Building University of Alberta Edmonton, Alberta T6G 2H4 E-mail: anthgrad@ualberta.ca www.anthropology.ualberta.ca

#### **General Information**

The Department of Anthropology offers the Master of Arts (thesis-based), Master of Arts in Humanities Computing (thesis-based) and Doctor of Philosophy degrees. Students contemplating graduate work in Anthropology should direct their inquiries to the Associate Chair (Graduate Programs) of the Department.

If you wish to be considered by the Department for nomination for a recruitment scholarship, a completed application is due November 15.

Deadline for receipt of completed applications for admission is January 5.

#### **Entrance Requirements**

The Department's minimum admission requirements are

- For the MA programs (thesis-based), a four-year undergraduate degree with a grade point average of 3.3 in the last ★60 (or equivalent) at the University of Alberta or an equivalent qualification from a recognized institution;
- For the PhD program, a thesis based master's degree; and a grade point average of 3.3 in the last ★60 (or equivalent) of undergraduate or graduate study at the University of Alberta or an equivalent qualification from a recognized institution. In exceptional cases, the department may grant admission to the PhD program directly from a bachelor's program in Anthropology. Generally, students with a degree in a concentration other than Anthropology are advised to complete at least one year as a special student or a qualifying student before applying for a graduate degree program.

Where applicable (refer to English Language Requirement), candidates must have a minimum satisfactory score on one of the following approved English language examinations in order to be considered for admission: TOEFL score of 550 (paper-based) or 88 (internet-based); MELAB score of 85; IELTS overall band score of 6.5; CAEL overall score of 60 with at least 60 on each subtest; PTE overall score of 59.

#### <u>Financial Assistance</u>

Graduate teaching and research assistantships and a number of scholarships are available to qualified students.

#### **Graduate Program Requirements**

- 1. The Degree of MA
- 2. The Degree of MA in Humanities Computing
- 3. The Degree of PhD

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading Anthropology (ANTHR).

# The Degree of MA (Anthropology) [Graduate]

# Program Requirements

In addition to satisfying the general requirements of the Faculty of Graduate Studies and Research, candidates for the MA degree must complete the following:

- 1. Four ★3 courses in Anthropology of which one must be ANTHR 501. The other three courses must be in areas relevant to their specialization.
- Two ★3 courses in areas outside their specialization, one from within Anthropology and one course from another department, or both courses from within Anthropology.

Specific courses taken to meet these requirements must be chosen in consultation with the student's supervisor and the Associate Chair. The normal course load is three courses in each of the Fall and Winter Terms of the first year.

During the course of their program, MA students will be required to attend two two-hour Professional Development Seminars offered by the Department of which one shall be the departmental graduate student research ethics workshop.

# GRADUATE STUDIES AND RESEARCH

In addition to the course requirements, candidates must prepare an acceptable MA thesis according to Faculty of Graduate Studies and Research regulations and Department expectations. Candidates must demonstrate to the satisfaction of the examining committee proficiency in the handling of any research tools, such as statistics or a foreign language, necessary for the MA thesis.

Residence requirements are met upon the completion of two terms of fulltime attendance at the University ( $\star$ 18).

#### Length of Program

Normally, two years of study and research are necessary to complete the requirements for the degree of MA within a four-year time limit (Time Limit for Completion of Graduate Programs).

# The Degree of MA in Humanities Computing (Anthropology) [Graduate]

#### **Program Requirements**

In addition to satisfying the general requirements of the Faculty of Graduate Studies and Research, candidates for the MA degree must complete the following.

- Three ★3 courses in Anthropology.
- 2. Four  $\bigstar$ 3 required courses in Humanities Computing (DH 500, DH 510, DH 520, DH 530).
- 3. Two option courses ★3 in Humanities Computing.

It is normally expected that students will take two Humanities Computing courses and one course in Anthropology in each of the first three terms, and complete their thesis in the fourth term. Specific courses to meet these requirements must be chosen in consultation with the student's supervisor and the Associate Chair. Successful progress through the program depends on satisfaction of both Anthropology and Humanities Computing. (Time Limit for Completion of Graduate Programs)

During the course of their program, MA students will be required to attend two two-hour Professional Development Seminars offered by the Department of which one shall be the departmental graduate student research ethics workshop.

It is normally expected that a representative of both Anthropology and the Humanities Computing program will sit on the thesis supervisory committee.

In addition to course requirements, candidates must prepare an acceptable MA thesis according to the FGSR regulations (Thesis Requirements) and Department expectations. Candidates must demonstrate to the satisfaction of the examining committee proficiency in the application of any research tools necessary for the MA thesis.

#### Length of Program

The time required to complete the MA in Humanities Computing may vary according to the previous training of the applicant and the nature of research undertaken; however, the program is designed to be completed within two years.



# The Degree of PhD (Anthropology) [Graduate]

#### **Program Requirements**

- Students entering the PhD program must have completed an MA for which a written thesis is a requirement. Applicants must successfully defend
  their MA thesis by August 31 of the admission year and meet the Fall convocation deadline of their university. Failure to provide the University of
  Alberta with notification of the MA thesis defense by August 1 of the admission year can negate the offer of admission.
- Residence requirements are those of the Faculty of Graduate Studies and Research (Residence Requirement)—a minimum of two years.
   Provisional PhD candidates must enrol in three ★3 courses per term in the first year of residence. The nature of the course work will be determined by the student and the supervisor with the following requirement: ANTHR 601, normally taken in the first term, is required of all new PhD students who did not complete ANTHR 501 as an MA student in this Department.
- 3. During the course of their program, PhD students will be required to attend two two-hour Professional Development Seminars offered by the Department of which one shall be the departmental graduate student research ethics workshop except where the student has already taken this workshop in the MA Anthropology program.
- 4. In accordance with Faculty regulations, a supervisory committee will be struck as soon as possible. This supervisory committee will formulate a program of advanced study and research and will require demonstration of proficiency in any research tools necessary for writing the thesis.
- 5. The Department does not have a universal language requirement for the doctoral program; however, it is recognized that there are areas of research within the Department that may require knowledge of an additional language (or languages). The need for additional language skills will be decided between the doctoral student and supervisor as part of the planning of the student's program, and will be reviewed by the Associate Chair (Graduate Programs).
- 6. Prior to the candidacy examination, the student must submit a satisfactory research proposal that will lead to production of a thesis of publishable quality based on original advanced research and theoretical interpretation.
- According to Faculty regulations (Time Line for the Appointment of Supervisors) the student shall pass an oral candidacy examination in subjects relevant to the general field of research. Normally the candidacy examination shall be held at the end of the second year or the beginning of the third year.
- 8. The dissertation shall be examined by a committee, the composition of which is specified in Faculty regulations (Thesis Requirements).
- 9. The final PhD examination will include a public lecture followed by a closed oral examination.

# Length of Program

The time limit for completing the PhD degree is a maximum of six years from the date of first registration in the program.

# Art and Design [Graduate]

Department of Art and Design 3-98 Fine Arts Centre University of Alberta, Edmonton, Alberta T6G 2C9

E-mail: artdes@ualberta.ca

# GRADUATE STUDIES AND RESEARCH

#### **General Information**

The Department of Art and Design offers graduate programs leading to the Doctor of Philosophy in the History of Art, Design and Visual Culture and Master of Fine Arts and Master of Design degrees in a wide range of studio disciplines. The Department also offers graduate programs leading to the Master of Arts degree in History of Art, Design, and Visual Culture.

Programs leading to the MDes degree provide advanced studies in Visual Communication Design or Industrial Design. Programs leading to the MFA degree are designed to provide advanced studies in Painting, Sculpture, Printmaking, or Drawing/Intermedia.

Programs leading to the MA and PhD degrees in the History of Art, Design, and Visual Culture provide for advanced study and research. The MA can be either course-based or thesis-based.

Graduate students in studio are provided with adequate independent working spaces and with access to all the equipment necessary to develop their studies and explorations. A well-endowed University library and a departmental visual resources centre featuring access to digital images and over 300,000 slides provide reference material. Eighteen full-time members in the academic staff are available for supervision and discussion.

Inquiries should be addressed to the Coordinator of Graduate Studies, Department of Art and Design.

#### **Entrance Requirements**

The Department's minimum admission requirements for all master's programs are a general undergraduate degree with a grade point average of 3.0 in the last two years of undergraduate work (or graduate work) at the University of Alberta, or an equivalent qualification from a recognized institution, and a minimum TOEFL score of 580 (paper-based) or 95 (internet-based, with at least 20 per section) or a minimum score of 65 on the Pearson Test of English where applicable (refer to English Language Requirement). A student with a MA in the History of Art (or a related field) may be admitted as a candidate for the PhD degree.

#### Financial Assistance

Graduate teaching and research assistantships and a number of scholarships are available to qualified students.

# **Graduate Program Requirements**

- The Degrees of MDes and MFA
- The Degree of MA in the History of Art, Design, and Visual Culture
- The Degree of PhD in the History of Art, Design, and Visual Culture

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the following subject headings:

Art (ART)

Design (DES)

History of Art, Design and Visual Culture (HADVC)



# The Degrees of MDes and MFA (Art and Design) [Graduate]

# **Entrance Requirements**

An applicant must normally hold a bachelor's degree in fine arts or design (or its equivalent) from a recognized institution. Candidates who, in the view of the Department, need to make up prerequisite courses will normally spend one additional year in preparation.

Applicants will be required to submit visual records or a portfolio of work and documentation of their previous experience to the Department by January 15 of the year of application.

## Program Requirements

In the first year of the program students will normally be required to take ★18 approved. All candidates require credit in ART 630 or DES 630.

Candidates in fine arts programs require credit in two studio courses at the 600-level and one history of art, design, and visual culture courses chosen from 500-level courses with consent of the Department.

Candidates in design programs require credit in

- DES 600 Concepts, Analysis and Criticism in Design I
- DES 601 Concepts, Analysis and Criticism in Design II
- DES 680 Theory and Research in Design Studies I

#### Additional Information

Course work must be completed before commencement of the thesis. First term studio courses may not be repeated; however, second term studio courses may be repeated with consent of the Department.

After all other program requirements have been satisfactorily met, candidates must make a major presentation of their creative work. Such a presentation will be considered the equivalent of a master's thesis. The Department of Art and Design reserves the right to select and retain up to two works from the final thesis presentation.

There is no language requirement for the degrees.

The minimum period of residence is two four-month terms of full-time attendance at the University of Alberta.

#### Length of Program

Candidates will normally require two academic years to complete their program of studies.



# The Degree of MA in the History of Art, Design, and Visual Culture (Art and Design) [Graduate]

#### **Entrance Requirements**

An applicant must normally hold a degree in the History of Art (or its equivalent) from a recognized institution.

Applicants with a bachelor's degree other than History of Art will be considered for admission provided that an adequate background in the History of Art can be demonstrated. Applicants are advised to have reading ability and course credits in a language other than English at a level satisfactory to the department. Applicants will be required to submit current samples of writing and documentation of previous education and work experience to the department by January 15 for admission in September of the year of application.

#### **Program Requirements**

Students who are accepted into the thesis-based MA program will normally require two academic years of full-time enrollment to complete their program of studies. Exceptions to this regulation will require the consent of the Department and the Faculty of Graduate Studies and Research.

Students in the course-based MA will normally require either one academic year in full-time enrollment or two to four years in part-time enrollment.

Students must declare whether they intend to follow the thesis-based or course-based program at the beginning of their graduate studies. Anyone wishing to change their program must obtain the approval of the HADVC Graduate Advisor.

#### Thesis-based MA:

In addition to satisfying the general requirements of the Faculty of Graduate Studies and Research, students in the thesis-based MA program must complete the following

- 1. ★18 approved
- of these ★18 approved, ★12 must be taken from History of Art, Design, and Visual Culture offerings at the 500- and 600-levels
- 3. up to ★6 of the ★18 required to be taken may, subject to the approval of the thesis or graduate advisor, be taken outside the Department.
- 4. Students will be required to pass a translation test in a language other than English, or a language reading course or approved equivalent with a minimum grade of C+ before proceeding to thesis.

The second year consists of the preparation, presentation and oral defense of a master's thesis on a topic approved by the department.

#### Course-based MA:

In addition to satisfying the general requirements of the Faculty of Graduate Studies and Research, students in the course-based MA program must complete the following:

- ★24 approved by the graduate advisor
- 2. HADVC 900 (★3), as part of the ★24, in which students will write a research paper on a topic of their choosing
- of these ★24 approved, ★18 must be taken from History of Art, Design, and Visual Culture offerings at the 500- and 600-levels

up to ★6 of the ★24 required to be taken may, subject to the approval of the HADVC graduate advisor, be taken outside HADVC.

#### Length of Program

The time required to complete the MA will vary; however, a minimum of 12 months is normally required. Candidates who, in the view of the Department, need to make up prerequisite courses will normally spend a longer period of time to complete their graduate program.

# The Degree of PhD in the History of Art, Design, and Visual Culture (Art and Design) [Graduate]

#### **Entrance Requirements**

An applicant must normally hold an MA degree in the History of Art (or its equivalent) from a recognized institution.

Applicants with a MA degree other than History of Art will be considered for admission provided that an adequate background in the History of Art, equivalent to an MA degree in the discipline, can be demonstrated. Applicants are advised to have reading ability and course credits in a language other than English at a level satisfactory to the department. Applicants will be required to submit current samples of writing and documentation of previous education and work experience to the department by January 15, for admission in September of the year of application.

#### **Program Requirements**

The program consists of  $\star$ 18 at the graduate-level: one required ( $\star$ 3) [HADVC 600 or HADVC 677 ( $\star$ 3)]; one  $\star$ 3 500- or 600-level course in the area of focus; and  $\star$ 12 in approved graduatelevel courses (which may include courses from other departments or Faculties, or an independent study course (museum apprenticeship). In addition competence in at least one applicable language other than English must be demonstrated. Coursework is selected by the student in consultation with the supervisor, the Graduate Advisor in HADVC, or the Associate Chair of Graduate Studies in the Department of Art and Design.

Students are strongly encouraged to participate in the non-credit Pro-Seminar Series organized by the Department.

During their second year, doctoral students will prepare for and successfully complete a candidacy examination including a written component, which will be evaluated during the oral candidacy examination.

During their third and fourth years students will prepare and defend a dissertation during a final oral examination in accordance with regulations established by the Faculty of Graduate Studies and Research.

# Length of Program

Students are normally expected to complete the PhD in four years of full-time study.

# **Biochemistry** [Graduate]

Department of Biochemistry 474 Medical Sciences Building University of Alberta Edmonton, Alberta T6G 2H7 E-mail: gradinfo@biochem.ualberta.ca

#### **General Information**

The Department of Biochemistry offers programs leading to the degrees of Master of Science and Doctor of Philosophy. Both require the completion of a research program and the preparation of a thesis.

The Department of Biochemistry strives to train scientists with both a broad knowledge of the disciplines of biochemistry, biophysics and molecular biology. It also strives to develop critical and creative scholars who can communicate effectively.

The Department provides a world-class training environment in a broad range of topics.

The Department of Biochemistry is the primary home of the Groups on Membrane Protein Research, Molecular and Cell Biology of Lipids, and the Signal Transduction Research Group. Many members of the Department are active in the Centre for prion and protein folding diseases, the Cardiovascular Research Centre (CVRC), the Alberta Diabetes Institute, the Li Ka Shing Institute of Virology, the Women and Children's Health Research Institute (WCHRI), and International Research Training Group (IRTG) in Membrane protein diseases.

The Department of Biochemistry is endowed with state-of-the art equipment and support facilities. Access to all major techniques utilized in modern biochemical, biophysical and molecular biological research is available to faculty, postdoctoral fellows and graduate students. The Department is also home to the National High Field Nuclear Magnetic Resonance Centre (NANUC).

#### **Entrance Requirements**

The Department's minimum admission requirements are an undergraduate degree with an admission GPA of at least 3.3 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\bigstar$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:

- TOEFL 100 (internet-based) or equivalent
- IELTS overall band score of 6.5 (with at least 5.5 on each academic test band).

In addition, all applicants must submit the following:

- Three letters of reference
- A current curriculum vitae
- A Statement of Intent
- A list and description of all biochemistry courses that have been taken outside of the University of Alberta
- Copies of any research papers or publications.

# **GRADUATE STUDIES AND RESEARCH**

All applicants require a research supervisor. Applicants should correspond with faculty members and have a tentative supervisory arrangement prior to applying for admission. For further information see the Department of Biochemistry website.

The deadlines for submitting applications for admission are July 1 for September admission and November 1 for January admission. International applicants are encouraged to apply early to account for the processing time required to have a study permit issued.

#### Financial Assistance

Financial assistance in the form of graduate assistantships is usually available for students that are admitted to the program. Exceptionally qualified applicants may be nominated for University of Alberta entrance scholarships. Students are encouraged to apply for competitive student awards.

## **Graduate Program Requirements**

- The Degree of MSc
- The Degree of PhD

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading Biochemistry (BIOCH).

# The Degree of MSc (Biochemistry) [Graduate]

# **Program Requirements**

Students are required to complete a minimum of ★13 in course work and a thesis. Additional course work will be necessary when the undergraduate degree is in a different discipline.

#### Required courses (★10)

- BIOCH 670 Recent Advances in Biochemistry
- BIOCH 671 Recent Advances in Biochemistry
- One of:
  - O BIOCH 623 Special Topics in Research on Polynucleotides
  - O BIOCH 626 Special Topics in Protein Research
  - O BIOCH 640 Special Topics in Research on Biomembranes
  - BIOCH 650 Signal Transduction
  - BIOCH 651 Special Topics in Lipid and Lipoprotein Research

#### Elective courses $(\bigstar 3)$

#### At least one of

- BIOCH 609 Macromolecular Structure Analysis
- BIOCH 620 Selected Topics in Protein Structure, Function, and Regulation
- BIOCH 630 Selected Topics in Modern Molecular Biology
- BIOCH 641 Selected Topics on the Structure and Function of Biological Membranes
- BIOCH 655 Advances in Lipid and Lipoprotein Research
- BIOCH 675 Magnetic Resonance in Biology and Medicine II
- An approved graduate course from another department.

#### **Thesis**

Registration in 900-level THES. Students must prepare an acceptable thesis describing the results of their research activities.

#### **Ethics Requirement**

Students are required to complete 11 hours of training in research ethics. This training component will normally include participation in the following activities:

- The Annual Ethics and Scientific Integrity Days. (5 hours of training).
- Introduction to Ethics, Integrity, and Responsibility in the Laboratory for First Year Graduate Students. (1 hour of training).
- GET Program (Graduate Ethics Training) a WebCT course organized by the FGSR. (5 hours of training).

In some cases this requirement can be completed by participation in other research ethics activities that have been approved by the Department of Biochemistry.

The Department of Biochemistry requires that these activities be completed within the first two years of the MSc program.

#### Academic Standing Requirement

Students must maintain a cumulative GPA of not less than 3.0. The calculation of the GPA does not include marks in seminar courses. Failure in two courses with a cumulative GPA lower than 3.0 will normally result in a recommendation to FGSR that the student be required to withdraw.

## Language Requirement

The Department does not require knowledge of any language other than English for the MSc degree.

# Length of Program

The time required to complete the program varies; however, a minimum of two years is normally required.

The maximum time to complete the thesis-based MSc program as set by the Faculty of Graduate Studies and Research is four years.

# The Degree of PhD (Biochemistry) [Graduate]

# **Program Requirements**

Students are required to complete a minimum of ★16 in course work and a thesis. Additional course work will be necessary when the undergraduate degree is in a different discipline.

#### Required courses (★10)

- BIOCH 670 Recent Advances in Biochemistry
- BIOCH 671 Recent Advances in Biochemistry
- One of:
  - BIOCH 623 Special Topics in Research on Polynucleotides
  - BIOCH 626 Special Topics in Protein Research
  - O BIOCH 640 Special Topics in Research on Biomembranes
  - O BIOCH 650 Signal Transduction
  - O BIOCH 651 Special Topics in Lipid and Lipoprotein Research

#### Elective courses (★6)

- At least **one** of:
  - BIOCH 609 Macromolecular Structure Analysis
  - BIOCH 620 Selected Topics in Protein Structure, Function, and Regulation
  - BIOCH 630 Selected Topics in Modern Molecular Biology
  - BIOCH 641 Selected Topics on the Structure and Function of Biological Membranes
  - O BIOCH 655 Advances in Lipid and Lipoprotein Research
  - O BIOCH 675 Magnetic Resonance in Biology and Medicine II
  - An approved 600-level course
- One 500- or 600-level course in Biochemistry or an approved graduate course from another department.

#### **Thesis**

Registration in 900-level THES. Students must prepare an acceptable thesis describing the results of their research activities.

#### Candidacy examination

PhD students must take a candidacy examination consisting of written and oral sections within 36 months of initial registration.

#### **Ethics Requirement**

Students are required to complete 11 hours of training in research ethics. This training component will normally include participation in the following activities:

- The Annual Ethics and Scientific Integrity Days. (5 hours of training).
- Introduction to Ethics, Integrity, and Responsibility in the Laboratory for First Year Graduate Students. (1 hour of training).
- GET Program (Graduate Ethics Training) a WebCT course organized by the FGSR. (5 hours of training).

In some cases this requirement can be completed by participation in other research ethics activities that have been approved by the Department of Biochemistry.

The Department of Biochemistry requires that these activities be completed within the first two years of the PhD program.

## **Academic Standing Requirement**

Students must maintain a cumulative GPA of not less than 3.3. The calculation of the cumulative GPA does not include marks in seminar courses. Failure in two courses with a cumulative GPA lower than 3.3 will normally result in a recommendation to FGSR that the student be required to withdraw.

#### Language Requirement

The Department does not require knowledge of any language other than English for the PhD degree.

## Length of Program

The time required to complete the PhD will vary according to the previous training of the candidate and the nature of the research undertaken; however a minimum of four years of study and research is normally required.

The maximum time to complete the PhD program as set by the Faculty of Graduate Studies and Research is six years.

# **Biological Sciences [Graduate]**

Department of Biological Sciences CW312 Biological Sciences Building University of Alberta Edmonton, Alberta T6G 2E9 www.biology.ualberta.ca

#### **General Information**

The Department of Biological Sciences offers programs leading to the degrees of Master of Science and Doctor of Philosophy. It strives to develop scholars familiar with literature in their field, capable of identifying new problems and new directions of endeavour in their field, and competent with the methods of data collection and analysis essential to do research. Students will fulfil these objectives through several forums: a supervised research program, coursework, participation in seminar programs, and defending their dissertation.

The Department has research laboratories and instructional facilities for 250–300 graduate students. There are facilities for digital image processing, electron and confocal microscopy, analytical chemistry, molecular biology, fermentation, biotechnology, DNA synthesis and sequencing, cultivation of microbial cells and cells of yeasts, plants, insects and mammals. Facilities include large holding tanks for aquatic animals, and controlled environment rooms including an extensive greenhouse complex. Off-campus

# GRADUATE STUDIES AND RESEARCH

facilities include the Devonian Botanic Garden and mycology herbarium, several field stations including the Meanook Biological Research Station and Ellerslie Plant Genetics Station, all near Edmonton, and the Bamfield Marine Sciences Centre on Vancouver Island. Extensive reference collections are available for research with microfungi, vascular and cryptogamic plants as well as vertebrates and invertebrates, including major collections of fishes, fossil plants and vertebrates, insects and parasites.

There are six research interest groups (RIG) within the Department: Ecology; Microbiology and Biotechnology; Molecular Biology and Genetics; Physiology, Cell and Developmental Biology; Plant Biology; and Systematics and Evolution. Students either register in one of these areas of specialization for their program or, with permission of the supervisor and approval of the Associate Chair (Graduate Studies), register toward a degree of MSc or PhD with specialization in Biological Sciences. Declared specialization in one of the six research interest areas can be indicated on a student's thesis title page, degree diploma, and transcript.

Potential applicants, especially PhD students, are encouraged to first correspond with academic staff in whose research laboratories they might want to study. Additional information is found at www.biology.ualberta.ca (see links to – Graduate Program – Prospective Students).

#### **Entrance Requirements**

The Department's minimum admission requirements are a four-year undergraduate degree, or its academic equivalent, from a recognized university, and a grade point average of at least 3.3 in the last two years of undergraduate study. A minimum Test of English as a Foreign Language (TOEFL) of 600 (paper-based) or 100 (internet-based) is required, where applicable (see English Language Requirement). The Graduate Record Examination (GRE) general and subject tests are preferred, but are not required.

#### Financial Assistance

All students entering the graduate program receive financial support for at least the first two years and four months of a full-time MSc program, and the first five years of a full-time PhD program, at the minimum rate of \$22,790 per year.

The sources of financial support for graduate students include: 1) Scholarships from Natural Sciences and Engineering Research Council, Alberta Innovates Technology Futures, Province of Alberta, University of Alberta; 2) Graduate Teaching and Research Assistantships; 3) University of Alberta General Awards; 4) other external agencies; 5) supervisor's research funds.

International students whose first language is not English and who wish to receive a Graduate Teaching Assistantship normally require a minimum TOEFL score of 630 (paper-based) or 109 (internet-based) with a minimum score of 26 on the speaking component.

# **Graduate Program Requirements**

- The Degree of MSc
- The Degree of PhD

# The Degree of MSc (Biological Sciences) [Graduate]

# Program Requirements

Required courses depend on the area of specialization (see below) and the undergraduate background of the student; however, the MSc program requires registration in a combination of coursework and thesis research comprising the equivalent of a minimum of  $\star$ 24. This normally consists of a minimum of  $\star$ 6 graded courses (equivalent to two single-term graduate-level, or approved undergraduate, graded courses) and a thesis. Where graded credits are required as

# GRADUATE STUDIES AND RESEARCH

part of the formal coursework toward a MSc degree, project courses or individual study courses may not be included in the minimal requirements. These include BIOL 490, BIOL 498, or BIOL 499, or similar courses in other departments or faculties at the 400, 500, or 600 level. The Associate Chair (Graduate Studies), with advice from the coordinator of the RIG under which a particular graduate program is administered, will maintain a current list of excluded courses. These courses may be taken for credit in addition to the minimal graded requirement on the recommendation of the supervisory committee with approval of the Associate Chair (Graduate Studies).

Generally, courses should be taken in the first year of the program. Beyond the basic course requirements of the Department, each student's individual program will be developed by agreement between the student and the supervisor or the supervisory committee.

Students will be asked to present their thesis research to the Department in the form of a public seminar within two weeks prior to the date of the thesis defence. In addition, students will be encouraged to present progress reports (oral and poster formats) to the Department or research group in an informal setting at an early stage in their research program.

There is no language requirement for the degree of MSc. Candidates for the master's degree must complete a minimum of two (fourmonth) terms in full-time residence at the University of Alberta.

#### Requirements within Research Groups

#### The Degree of MSc with Specialization in Biological Sciences

The MSc program consists of research leading to a thesis, and a minimum of  $\bigstar$ 6 graded course work, of which  $\bigstar$ 3 must be in a graded seminar or discussion-oriented course. Attendance/participation in an appropriate seminar series is required as determined by the supervisor/supervisory committee.

#### The Degree of MSc with Specialization in Ecology

The MSc program consists of research leading to a thesis, and a minimum  $\bigstar$ 6 graded course work, of which  $\bigstar$ 3 must be in a graded seminar or discussion-oriented course. Enrolment in BIOL 603 is recommended. Students are encouraged to complete these requirements in their first year. Students are encouraged to register in BIOL 631 in their first year and to register and/or participate in BIOL 631 in subsequent years.

#### The Degree of MSc with Specialization in Microbiology and Biotechnology

The MSc program consists of research leading to a thesis and a minimum of ★6 in graded courses, which include MICRB 514 in the first or second year and MICRB 607 in the second year. In addition to registration in MICRB 607, all students must register and/or participate in MICRB 606 in the first and third year.

#### The Degree of MSc with Specialization in Molecular Biology and Genetics

The MSc program consists of research leading to a thesis, and a minimum of  $\star 6$  graded course work. In their first year, students typically register in GENET 500 (Term I) and GENET 510 (Term II). In special cases, students may opt out of one of these courses on recommendation of their supervisory committee, however, the substituted course must be at the 400-level or higher. All students must register in at least  $\star 3$  graded courses in their first year. All students will register in GENET 601 and GENET 605 each term these courses are offered during the student's guaranteed funding.

#### The Degree of MSc with Specialization in Physiology, Cell, and Developmental Biology

The MSc program consists of research leading to a thesis, and a minimum of ★6 graded course work of which ★3 must be in a graded seminar or discussionoriented course. Students will register in BIOL 642 during each Fall/Winter term of their program. Students are required to present one seminar in the BIOL 642 seminar course. Normally this would be in the second year of their thesis work. Presentation in BIOL 642 is not to be used as the pre-thesis or any other seminar course, as determined by the supervisory committee.

#### The Degree of MSc with Specialization in Plant Biology

The MSc consists of research leading to a thesis, and a minimum of ★6 graded course work. Students will register in BOT 600 during the first year of their program. Students are encouraged to complete these requirements in their first year. Continued participation in BOT 600 in subsequent years is recommended.

#### The Degree of MSc with Specialization in Systematics and Evolution

The MSc program consists of research leading to a thesis, and a minimum of  $\star$ 6 graded course work. In addition, students must register in the seminar courses BIOL 506 and 507 at least once during their program (resulting in a total of  $\star$ 9). Continued participation in BIOL 507 in subsequent years is recommended. Students are encouraged, but not required, to select graded courses from the following list after consultation with their supervisor or supervisory committee:

- BIOL 221 Mechanisms of Evolution
- BIOL 335 Principles of Systematics
- BIOL 380 Genetic Analysis of Populations
- BIOL 430 Experimental Biology
- BIOL 521 Advanced Molecular Evolution and Systematics
- BIOL 592 Laboratory Techniques in Molecular Ecology and Systematics

#### Length of Program

The time required to compete the MSc degree will vary according to the previous training of the applicant and the nature of the research undertaken; however, a minimum of two years is normally required. Candidates must complete their degree program within four years of the time they first register.

# The Degree of PhD (Biological Sciences) [Graduate]

# Program Requirements

Required courses depend on the area of specialization (see below) and the undergraduate background of the student; however, the PhD program requires registration in a combination of coursework and thesis research comprising the equivalent of a minimum of ★36. This normally consists of a minimum of ★6 graded courses (equivalent to two single-term graduate-level graded courses) and a thesis. Where graded credits are required as part of the formal coursework toward a PhD degree, project courses or individual study courses may not be included in the minimal requirements. These include BIOL 490, BIOL 498, or BIOL 499, or similar courses in other departments or faculties at the 400, 500, or 600 level. The Associate Chair (Graduate Studies), with the advice from the coordinator of the RIG under which a particular graduate program is administered, will maintain a current list of excluded courses. These courses may be taken

# GRADUATE STUDIES AND RESEARCH

for credit in addition to the minimal graded requirement on the recommendation of the supervisory committee with approval of the Associate Chair (Graduate Studies).

Generally, courses should be taken in the first year of the program. Beyond the basic course requirements of the Department, each student's individual program will be developed by agreement between the student and the supervisor or the supervisory committee.

Students will be asked to present their thesis research to the Department in the form of a public seminar either on the same day, or the day before, the thesis defence. In addition, students will be encouraged to present progress reports (oral and poster formats) to the Department or research group in an informal setting at an early stage in their research program.

There is no language requirement for the degree of PhD. Candidates for the PhD degree must complete a minimum of two academic years (equivalent to four terms) in full-time residence at the University of Alberta.

#### Requirements within Research Groups

#### The Degree of PhD with Specialization in Biological Sciences

The PhD program consists of research leading to a thesis, and a minimum of  $\bigstar$ 6 graded course work, of which  $\bigstar$ 3 must be in a graded seminar or discussion-oriented course. Attendance/participation in an appropriate seminar series is required as determined by the supervisor/supervisory committee.

#### The Degree of PhD with Specialization in Ecology

The PhD program consists of research leading to a thesis, and a minimum of ★6 graded course work, of which ★3 must be in a graded seminar or discussionoriented course. Enrolment in BIOL 603 is recommended. Students are encouraged to complete these requirements in their first two years. Students are encouraged to register in BIOL 631 in their first two years and to register and/or participate in BIOL 631 in subsequent years.

#### The Degree of PhD with Specialization in Microbiology and Biotechnology

The PhD program consists of research leading to a thesis, and a minimum of ★9 in graded course work, which includes MICRB 514 in the first or second year, MICRB 607 in the second year, and a ★3 graded course selected from the graduate course list (found in Course Listings) and approved by the student's supervisor/supervisory committee. In addition to registration in MICRB 607, students must also register and/or participate in MICRB 606 in all other terms, to a maximum of nine terms.

#### The Degree of PhD with Specialization in Molecular Biology and Genetics

The PhD program consists of research leading to a thesis, and a minimum of  $\star 6$  graded course work. In their first year, students typically register in GENET 500 (Term I) and GENET 510 (Term II). In special cases, student may opt out of one of these courses on the recommendation of their supervisory committee, however, the substituted course must be at the 400-level or higher. All students must register in at least  $\star 3$  graded courses in their first year. All students will register in GENET 601 and GENET 605 each term these courses are offered during the student's guaranteed funding.

# **GRADUATE STUDIES AND RESEARCH**

#### The Degree of PhD with Specialization in Physiology, Cell, and Developmental Biology

The PhD program consists of research leading to a thesis, and a minimum of ★6 graded course work, of which ★3 must be in a graded seminar or discussionoriented course. Students will register in BIOL 642 during each Fall/Winter term of their program. Students are required to present two seminars in the BIOL 642 seminar course during their PhD program. Normally this would be once in the second and again in subsequent years of their thesis work. Presentation in BIOL 642 is not to be used as the pre-thesis public seminar.

#### The Degree of PhD with Specialization in Plant Biology

The PhD consists of research leading to a thesis, and a minimum of  $\star$ 6 graded course work. Students will register in BOT 600 during each of the first two years of their program. Students are encouraged to complete these requirements in their first two years. Continued participation in BOT 600 in subsequent years is recommended.

#### The Degree of PhD with Specialization in Systematics and Evolution

The PhD program consists of research leading to a thesis, and a minimum of  $\star$ 6 graded course work. In addition, students must register in the seminar courses in BIOL 506 and 507 at least once during the program (resulting in a total of  $\star$ 9). Continued participation in BIOL 507 in subsequent years is recommended. Students are encouraged to select graded courses from the following list after consultation with their supervisor or supervisory committee:

- BIOL 221 Mechanisms of Evolution
- BIOL 335 Principles of Systematics
- BIOL 380 Genetic Analysis of Populations
- BIOL 430 Experimental Biology
- BIOL 521 Advanced Molecular Evolution and Systematics
- BIOL 592 Laboratory Techniques in Molecular Ecology and Systematics

## Length of Program

The time required to compete the PhD degree will vary according to the previous training of the applicant and the nature of the research undertaken; however, a minimum of three years is normally required. Candidates must complete their degree program within six years of the time they first register.

# Biomedical Engineering [Graduate]

Department of Biomedical Engineering 1098 Research Transition Facility University of Alberta Edmonton, Alberta T6G 2V2 E-mail: bmegrad@ualberta.ca www.bme.med.ualberta.ca

# GRADUATE STUDIES AND RESEARCH

#### **General Information**

Research facilities and lecture courses for graduate programs are offered by the Department of Biomedical Engineering. The Department offers programs leading to the degrees of Master of Science and Doctor of Philosophy in Biomedical Engineering, as well as the Master of Science and Doctor of Philosophy with a specialization in Biomedical Sciences. The degrees differ according to the undergraduate preparation of the student, the former for students with a background in engineering or academically similar areas, and the latter in biological sciences. Under the Individual Interdisciplinary Studies program (see Conduct of Examinations) students may study and carry out their research in the Department of Biomedical Engineering and another department in the University. The Department of Biomedical Engineering is part of both the Faculty of Engineering and the Faculty of Medicine and Dentistry.

The research activities of members of the Department are directed at aspects of biomedical engineering, including but not limited to digital image processing, nano structured biomaterials, in-vivo nuclear magnetic resonance, including vascular imaging, stroke, functional magnetic resonance imaging (fMRI), as well as non-invasive biochemical analysis through spectroscopic methods, MRI of cerebral vascular disease, and restoration of function following spinal cord injury. In addition, research is performed by members of other departments who collaborate with those of the Department in areas that include adaptive controllers in medicine, aerosol inhalation and delivery, assistive technologies, biofilms, biomaterials and drug delivery, biomechanics of bone, biomechanics of walking, biomedical modeling, biophotonic and ultrasonic imaging, bracing and wheelchairs, cardiovascular biomaterials, cell and tissue cryobiology, computational neuroscience, control and restoration of motor movement, functional electrical stimulation, lab-on-a-chip, laser applications in medicine, mathematical modeling of drug delivery, mathematical modeling of the immune system, medical image processing, micro-computed tomography, modeling of biomedical processes, nano-bio-mechanical systems, nanotechnology and drug delivery, nanotechnology in medicine, oral/facial prosthetic reconstruction, orthodontic retraction appliances, rehabilitation engineering, rehabilitation robotics, resorbable implants, scoliosis and spinal column correction, spinal disorder assessment and treatment, therapeutic ultrasound and biomechanics in dentistry, tissue engineering, and ultrasound applications in medicine.

#### Professional Associations and Technical Societies

It should be clearly understood that an MSc or PhD awarded by the Department of Biomedical Engineering does not automatically qualify one for membership in the Association of Professional Engineers, Geologists, and Geophysicists of Alberta (APEGGA).

#### **Entrance Requirements**

The Department's minimum admission requirements are an undergraduate degree with a grade point average of at least 3.3 in the last two years of undergraduate work (or graduate work) at the University of Alberta, or an equivalent qualification from another institution, and a TOEFL score of 600 or higher on the paper-based test or 95 on the internet-based test where applicable (refer to English Language Requirement).

#### Financial Assistance

Students who receive scholarships from external agencies, including the Natural Sciences and Engineering Research Council of Canada (NSERC), the Canadian Institutes of Health Research (CIHR), and the Alberta Heritage Foundation for Medical Research (AHFMR), may hold these awards in the Department of Biomedical Engineering. Exceptionally qualified applicants may be nominated by the Department for a master's thesis-based Scholarship, a PhD Scholarship, or an FS Chia PhD Scholarship. Information concerning these scholarships is available at www.gradstudies.ualberta.ca.

# **Graduate Program Requirements**

- The Degree of MSc
- The Degree of PhD

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the following subject headings:

Biomedical Engineering (BME)
Chemical Engineering (CH E)
Electrical and Computer Engineering/Biomedical Engineering (EE BE)
Mechanical Engineering (MEC E)

# The Degree of MSc (Biomedical Engineering) [Graduate]

# **Program Requirements**

The requirements for this degree consist of coursework and a thesis. Required courses depend on the undergraduate background of the student; however, normally a minimum of ★9 in graduate courses must be completed. Of the required courses, a minimum ★6 must be obtained through credit in BME 513, 529, BME 530, 541, BME 553, BME 564, 575, BME 579, 583, BME 599, and BME 630, or EE BE 512, 540. The remaining courses are determined by the student's supervisory committee and are relevant to the chosen area of research. Undergraduate courses taken for graduate credit carry only half the course weight assigned to that course.

The minimum period of residence is two four-month terms of full-time attendance at the University of Alberta.

# Length of Program

The time required to complete the program will vary according to the previous training of the applicant and the nature of research undertaken; however, a minimum of two years is normally required.

# The Degree of PhD (Biomedical Engineering) [Graduate]

# **Program Requirements**

The PhD program normally consists of a minimum of  $\bigstar$ 12 in graded graduate courses or approved equivalents ( $\bigstar$ 6 after a MSc degree), a candidacy examination normally taken within the first two years of the program, and the preparation and defence of a dissertation on an approved topic.

No language other than English is required for the degree.

The minimum period of residence is two academic years of full-time attendance at the University of Alberta.

## Length of Program

A minimum of three years is required to complete the PhD.

# **Business** [Graduate]

Faculty of Business 323 Faculty of Business Building University of Alberta Edmonton, Alberta T6G 2R6 www.mba.net

#### **General Information**

The Faculty of Business offers programs leading to the degrees of Master of Business Administration, Master of Financial Management, Master of Accounting, and Doctor of Philosophy. In addition to the standard MBA program, specializations are available in International Business, Innovation and Entrepreneurship, Natural Resources, Energy and the Environment, Finance, Public Policy and Management, and Sustainability. PhD specializations are Accounting, Finance, Marketing, Operations & Information Systems, and Strategic Management & Organization.

#### **Entrance Requirements**

#### Master's programs:

The minimum admission requirements of the Faculty of Business are those of the Faculty of Graduate Studies and Research; namely, an undergraduate degree with an average of at least 3.0 in the last two years of undergraduate work (or graduate work) at the University of Alberta, or an equivalent qualification from a recognized institution.

All applicants are required to write the Graduate Management Admission Test, and have their scores forwarded to the Associate Dean – Master's Programs. Although no arbitrary standard is employed, a score above 550 is desirable.

In addition to the above requirements, all students must demonstrate English language proficiency prior to admission as described in English Language Requirement.

Where degree programs offered by the Faculty of Business are approved to be delivered in a language other than English, the English language proficiency requirement may be waived.

Additional entrance requirements are listed below, under the heading of the specific degree program.

#### **Doctoral Programs:**

For the PhD in Business the minimum admission requirements are an undergraduate degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\bigstar$ 60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework. Completion of a Master's degree is not a requirement.

An academic background in business is not required; demonstrated aptitude for conducting research and familiarity with a scholarly discipline are valued credentials.

Applicants to the Accounting specialization must provide evidence of accounting expertise, such as a professional accounting designation.

Where applicable, applicants must meet the minimum English Language Requirement.

# **GRADUATE STUDIES AND RESEARCH**

All applicants are required to submit their scores from the Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE). Scores must be from a test taken within the past five years; scores above the 90th percentile are desirable.

Applicants are also required to provide:

- A current resume or curriculum vitae;
- Three letters of reference;
- A statement of purpose identifying what specific topics within the area of specialization they are interested in and why; relevant skills and past experiences;
   and tentative plans upon completion of the program. The applicant should also identify appropriate faculty members as potential supervisors.

#### Academic Standing Requirements

#### Doctoral Program:

All students in the Business PhD program must maintain a minimum cumulative grand point average of 3.0 throughout the course of the program.

#### <u>Financial Assistance</u>

For Master's programs, a limited number of bursaries and scholarships are available.

For Doctoral programs, the Faculty of Business normally offers funding for four years (in exceptional cases for five years) made up of several kinds of support. Tuition is normally paid for the first four years. A number of fellowships are available (see Graduate Financial Support section of this Calendar).

# **Graduate Program Requirements**

- 1. The Degree of Master of Business Administration (MBA)
- 2. The MBA/Doctor of Pharmacy Combined Degrees Program (Business)
- 3. The MBA/JD Combined Program
- 4. The MBA/MAg Combined Program
- 5. The MBA/MEng Combined Program
- 6. The MBA/MF Combined Program
- 7. The MD/MBA Combined Program
- 8. The MBA/BSc in Pharmacy Combined Degrees Program
- 9. The MBA/MLIS Combined Program
- 10. The MBA/MScPT Combined Program (Business) [Graduate]
- 11. The MBA with Specialization in Innovation and Entrepreneurship
- 12. The MBA with Specialization in International Business
- 13. The MBA with Specialization in Natural Resources, Energy and the Environment
- 14. The MBA with Specialization in Finance
- 15. The MBA with Specialization in Public Policy and Management
- 16. The MBA with Specialization in Sustainability
- 17. The Degree of Master of Financial Management (MFM)
- 18. The FastTrack MBA for Business Graduates
- 19. Executive MBA

- 20. The Degree of PhD
  - 1. The Degree of PhD in Business with a Specialization in Accounting
  - 2. The Degree of PhD in Business with a Specialization in Finance
  - 3. The Degree of PhD in Business with a Specialization in Marketing
  - 4. The Degree of PhD in Business with a Specialization in Operations & Information Systems
  - 5. The Degree of PhD in Business with a Specialization in Strategic Management & Organization
- 21. The MBA-PhD Joint Program (not offered in 2015-2016)
- 22. Post-Master's Certificate in Innovation and Entrepreneurship
- 23. Post-Master's Certificate in Business Fundamentals
- 24. The Degree of Master of Accounting

#### **Graduate Courses**

Graduate courses in Business can be found in Course Listings, under the following subject headings:

Accounting (ACCTG)

Business (BUS)

Business Economics (BUEC)

Finance (FIN)

Human Resources Management (HRM)

Management Information Systems (MIS)

Management Science (MGTSC)

Marketing (MARK)

Organizational Analysis (ORG A)

Operations Management (OM)

Strategic Management and Organization (SMO)

## The Degree of Master of Business Administration (Business) [Graduate]

## **Entrance Requirements**

Admission to a program of graduate studies in the Faculty of Business is based on the applicant's undergraduate grades, three letters of reference, a statement of purpose explaining how the MBA relates to the applicant's career goals, and the applicant's Graduate Management Admission Test score. For candidates interested in this program, a minimum of two years' work experience is also desirable. A resume outlining past work experience is required as part of the application materials.

## Program Requirements

The MBA program is designed for students from various educational backgrounds; no specific undergraduate major is required for entrance. All MBA students are required to fulfil a total of  $\star$  60 (including thesis or course-based). Students who fail three or more courses will be required to withdraw from the MBA program.

## WINIVERSITY OF ALBERTA

## GRADUATE STUDIES AND RESEARCH

Individuals who have completed a certificate program through the Alberta School of Business Executive Education may be eligible for a three credit reduction in the MBA program requirements. Individuals are required to have successfully completed all requirements of the certificate program. Only those Executive Education certificate programs with a minimum of 12 full days of instruction are eligible for the ★3 reduction and the completion of a maximum of one certificate program is eligible for credit reduction. The Senior and Executive Managers' Development Program (SEMDP) is grandfathered from this policy. Individuals who complete SEMDP are eligible for up to a ★6 reduction in the MBA program requirements.

#### Phase one:

The first eight months of the MBA program provides a foundation of courses covering basic managerial skills. The program begins with a required business skills orientation prior to the start of Fall Term classes. Because the first-year full-time courses are cohort-based involving teamwork, exemptions are not normally permitted. Completion of all ★30 in the core courses requires one full academic year (September – April).

The second phase of the program provides students with the opportunity to pursue, in some depth, courses in fields of their choice.

#### Phase two:

The course-based option consists of  $\pm 30$ , which includes a capstone course.

The thesis-based option consists of  $\star$ 15. SMO 641 is required along with  $\star$ 12 in electives. The thesis is equivalent to  $\star$ 12 and is undertaken with the supervision of an advisor and a committee.

#### Note:

Individuals who have completed a certificate program through the Alberta School of Business Executive Education may be eligible for a three credit reduction in the MBA program requirements. Individuals are required to have successfully completed all requirements of the certificate program. Only those Executive Education certificate programs with a minimum of 12 full days of instruction are eligible for the ★3 reduction and the completion of a maximum of one certificate program is eligible for credit reduction. The Senior and Executive Managers' Development Program (SEMDP) is grandfathered from this policy. Individuals who complete SEMDP are eligible for up to a ★6 reduction in the MBA program requirements.

## Length of Program

The equivalent of two full-time academic years are normally required to complete the program; however, it may be possible to accelerate studies with the completion of courses during Spring/Summer. The course-based MBA may be taken on a part-time evening basis; however, the program must be completed within six consecutive years from initial registration in the program.

For the thesis-based MBA, the minimum period of residence is two four-month terms of full-time attendance.

## The MBA/Doctor of Pharmacy Combined Degrees Program (Business) [Graduate]

The Faculty of Pharmacy and Pharmaceutical Sciences and the Faculty of Business offer a program of combined study that permits highly qualified students to earn both the Doctor of Pharmacy (PharmD) and the MBA degrees in five years.

## UNIVERSITY OF ALBERTA

## GRADUATE STUDIES AND RESEARCH

Each student must first be admitted to the PharmD, Faculty of Pharmacy and Pharmaceutical Sciences. Students that have completed the second year of the regular Pharmacy degree program are eligible to apply to the Faculty of Graduate Studies and Research for the Combined Degrees program, and must indicate on their online graduate application that they are applying to the combined MBA/PharmD program.

#### **Entrance Requirements**

Acceptance by the Faculty of Business (for admission into the MBA program) and by the Faculty of Pharmacy and Pharmaceutical Sciences (for admission into the MBA/PharmD Combined Degrees program. Admission into each Faculty will be determined by the same selection process and criteria as for other students. In addition, each student must be admitted into the Combined Degrees program, admission will be determined by a selection committee composed of representatives of the Faculty of Pharmacy and Pharmaceutical Sciences and the Faculty of Business. Because this is a special program, particular attention in the selection process will be given to:

- 1. The student's past academic achievement; and
- The student's maturity, interest and a rationale of how such a combined program will enhance the student's career and professional skills [University of Alberta Calendar, The Degree of MBA (Business)]

## **Program Requirements**

The first three years are taken entirely within the PharmD program. The fourth year is entirely within the MBA program. The fifth year (final year) is then completed entirely in the PharmD program. The pharmacy portion of the program consists of the normal requirements of the PharmD program. The Business portion of the program consists of  $\bigstar 42$ .

MBA courses: students who obtain a grade of less than C+ or who fail to complete one of the MBA courses may, upon the recommendation of the Associate Dean (MBA), with the approval of the Faculty of Graduate Studies and Research, retake the course(s) or take an alternate course(s). Students repeating or taking an alternate course(s) must obtain a minimum grade of C+ and must maintain a cumulative grade point average of 2.7 (University of Alberta Calendar, Minimum Faculty Requirements).

Upon the successful completion of the five-year program, (i.e., successful completion of the PharmD and the MBA degrees), candidates will receive both the PharmD and the MBA degrees. The MBA degree will not be conferred prior to the completion of the PharmD degree.

Inquiries regarding the combined MBA/PharmD Combined Degrees program may be directed to the Assistant Dean for Professional Programs in the Faculty of Pharmacy and Pharmaceutical Sciences, or the Masters Programs Office in the Faculty of Business.

## **Academic Standing**

A student is subject to the academic standing regulations and routes of appeal for grades and for academic standing of the Faculty in which the student is registered.

If a student withdraws from the MBA programs or is required to withdraw because of unsatisfactory academic standing, but wishes to remain in the PharmD degree program, the student may be permitted to continue provided the student retains good academic standing in that program.

## Length of Program

Students enrolled in the combined program on a full-time basis can complete the program in five calendar years. The duration of the total program must not exceed six consecutive calendar years.

## The MBA/JD Combined Program (Business) [Graduate]

The Faculty of Business and the Faculty of Law offer a program of combined study which permits highly qualified students to earn both the MBA and JD degrees in four years.

Each student must apply separately to the Faculty of Law (for admission into the JD program) and to the Faculty of Graduate Studies and Research (for admission into the MBA program).

In addition, students must indicate on their online graduate application that they are applying to the combined MBA-JD program.

In addition to new entrants, students in the first year of the regular MBA program or the first two years of the Faculty of Law are eligible to apply for the combined program.

## **Entrance Requirements**

Acceptance by the Faculty of Graduate Studies and Research (for admission into the MBA program) and by the Faculty of Law (for admission into the JD program) separately, are prerequisites for admission into the MBA/JD program. Admission into each Faculty will be determined by the same selection process and criteria as for other students. In addition, each student must be admitted into the combined program; in this case admission will be determined by a selection committee composed of representatives of the Faculty of Law and the Faculty of Business. Since this is a special program, particular attention in the selection process will be given to:

- 1. The student's past academic achievement; and
- 2. The student's maturity, interest and a rationale of how such a combined program will enhance the student's career and professional skills.

## <u>Program Requirements</u>

The first year is usually taken entirely within one program (Law or MBA), and the second year entirely within the other with the sequence being at the student's option. The third year will usually consist of a mixed program in both Faculties, with the fourth year in the Faculty of Law. If the first two years of the joint program are completed entirely in Law, the third year will be taken entirely within the MBA Program and the fourth year will consist of a mixed program in both Faculties. The Law portion of the program consists of approximately 75 hours of coursework while the Business portion of the program consists of 45 hours of coursework.

During the combined year of the MBA/JD program, the courseload requirements are as follows: Students must register in the Faculty of Graduate Studies and Research in Fall/Winter and must successfully complete a minimum of  $\pm 24$  for credit, of which at least  $\pm 15$  must be Law courses/credits.

MBA courses: students who obtain a grade of less than C+ or who fail to complete one of the MBA courses may, upon the recommendation of the Associate Dean (MBA), with the approval of the Faculty of Graduate Studies and Research, retake the course(s) or take an alternate course(s). Students repeating or taking an alternate course(s) must obtain a minimum grade of C+ and must maintain a cumulative grade point average of 2.7 (U of A Calendar, Minimum Faculty Requirements).

## UNIVERSITY OF ALBERTA

## GRADUATE STUDIES AND RESEARCH

Law courses: students who obtain a grade of C- will have passed that course according to the Faculty of Law regulations but will have failed according to the Faculty of Graduate Studies and Research regulations. In these instances, students will take a substitute but equivalent Law course in the fourth year of their program. This alternate Law course is to be recommended by the Associate Dean (Law) and approved by the Faculty of Graduate Studies and Research *prior to* students beginning their fourth year in the MBA-JD program. Students must register for this course(s) in the Faculty of Graduate Studies and Research and must obtain a minimum grade of C+.

Students in the MBA/JD program may register in Spring/Summer; however, in the mixed year of this program, they must be registered in the Faculty of Graduate Studies and Research as outlined above.

Upon the successful completion of the mixed year, candidates will receive the MBA degree. Upon the successful completion of the fourth year, candidates will receive the JD degree.

Inquiries regarding the combined MBA/JD degree program may be directed to the MBA Office in the Faculty of Business or the Faculty of Law.

#### Academic Standing

During the first year of the combined program, a student is subject to the academic standing regulations and routes of appeal for grades and for academic standing of the Faculty in which the student is registered.

Therefore, if the student registers in the Faculty of Law in the first year of the combined program, the student shall refer to that Faculty's academic standing regulations and right of appeal procedures.

If the student registers in the Faculty of Graduate Studies and Research in the first year of the combined program, the student shall refer to the Faculty of Graduate Studies and Research's academic standing regulations and right of appeal procedures.

In the second year of the combined program, a student is subject to the academic standing regulations and routes of appeal for grades and for academic standing of the Faculty in which the student is registered.

Therefore, if the student registers in the Faculty of Law in the second year of the combined program, the student shall refer to that Faculty's academic standing regulations and right of appeal procedures.

If the student registers in the Faculty of Graduate Studies and Research in the second year of the combined program, the student shall refer to the Faculty of Graduate Studies and Research's academic standing regulations and right of appeal procedures.

In the mixed year of the combined program students must maintain a level of academic standing that is satisfactory to both Faculties. The student shall be subject to the routes of appeal for grades and for academic standing of the Faculty of Graduate Studies and Research.

If the fourth year's work is done entirely in the Faculty of Law to complete the JD degree, the student shall register in the Faculty of Law and shall be subject to the academic standing regulations and routes of appeal for grades and for academic standing of the Faculty of Law.

If a student withdraws from one of the degree programs or is required to withdraw because of unsatisfactory academic standing, but wishes to remain in the other degree program, the student may be permitted to continue the program of study in the Faculty in which the student retains good academic standing.

## Length of Program

Students normally finish all the requirements for the MBA degree, by the end of the third year, and will be awarded the MBA degree at this time. All requirements for the JD degree will be completed by the end of the fourth year.

## The MBA/MAg Combined Program (Business) [Graduate]

The Faculty of Agricultural, Life and Environmental Sciences and the Faculty of Business offer a program of combined study which enables students to earn both the MBA and MAg degrees after two calendar years of full-time study.

Each student must complete a Faculty of Graduate Studies and Research application form to be submitted to the Faculty of Business. A letter indicating the intention to apply to the MBA/MAg program including a statement of the applicant's agricultural specialization, background and interests should also be enclosed.

#### Entrance Requirements

Normally only students with a BSc degree in an agricultural-related discipline will be admissible to this program. Applicants must follow the admission procedures and meet the admission requirements of both the Faculty of Business and the specific department of the Faculty of Agricultural, Life and Environmental Sciences as governed by the regulations of the Faculty of Graduate Studies and Research. The recommendation for admission will be made by the MBA/MAg Combined Program Selection Committee consisting of representatives from the Faculty of Business and the Faculty of Agricultural, Life and Environmental Sciences. Admission will be recommended only for those students judged to have the ability and motivation to handle the significant demands of the program. Professional experience is highly desired.

## **Program Requirements**

- ★30 required MBA core courses
- Three ★3 elective MBA courses
- SM0 641 Business Strategy
- Two ★3 graduate elective courses (Business or Agricultural, Life and Environmental Sciences)
- Five ★3 approved graduate-level courses in agricultural-related disciplines
- A ★3 project in agriculture with a significant business component.

#### Note:

Students who decide to transfer out of the combined program into the regular MBA or MAg program will have to apply and meet the full degree requirements of that program.

## Length of Program

Students enrolled in the combined program on a full-time basis can complete the program in two calendar years. Students may undertake the combined program on a part-time basis. The duration of the total program must not exceed six consecutive calendar years.

## The MBA/MEng Combined Program (Business) [Graduate]

The Faculty of Business and the Faculty of Engineering offer a program of combined study which enables students to earn both the MBA and MEng degrees after two calendar years of full-time study.

Each student must complete a Faculty of Graduate Studies and Research application form to be submitted to the Faculty of Business. A letter indicating the intention to apply to the MBA/MEng program should also be enclosed.

## **Entrance Requirements**

Only students with an undergraduate degree in engineering will be admissible to this program. Applicants must follow the admission procedures and meet the admission requirements of both the Faculty of Business and the specific engineering department as governed by the regulations of the Faculty of Graduate Studies and Research. The recommendation for admission will be made by the MBA/MEng Combined Program Selection Committee consisting of representatives from the Faculty of Business and the Faculty of Engineering. Admission will be recommended only for those students judged to have the ability and motivation to handle the significant demands of the program.

## <u>Program Requirements</u>

The course requirements are as follows:

- 1. ★30 required MBA core courses
- 2. SM0 641
- 3. Four ★3 elective MBA courses
- 4. Five ★3 graduate engineering courses (excluding engineering management courses) for programs in Mechanical or Electrical Engineering, or seven ★3 graduate engineering courses for programs in other engineering departments
- 5. One engineering project equivalent to two ★3 courses. The required engineering project must have a significant business related component, and will be cosupervised by a professor from the Faculty of Business and a professor from the degree department within the Faculty of Engineering.

Students will normally take the  $\pm 30$  first-year MBA courses in their first two semesters but may defer up to  $\pm 6$  first-year MBA courses to the second year of the program and replace them in the first year with graduate engineering courses.

Students are eligible to receive financial assistance from either the Faculty of Business or the specific department within the Faculty of Engineering, but may not receive financial assistance from both Faculties simultaneously.

Students who decide to transfer out of the combined program into the regular MBA or MEng program will have to apply and meet the full degree requirements of that program.

## Length of Program

Students enrolled in the combined program on a full-time basis can complete the program in two calendar years. Students may undertake the combined program on a part-time basis but must include one term of full-time attendance within a specified department in the Faculty of Engineering if so required by the specific engineering department. The duration of the total program must not exceed six consecutive calendar years.

## The MBA/MF Combined Program (Business) [Graduate]

The Faculty of Agricultural, Life and Environmental Sciences and the Faculty of Business offer a program of combined study which enables students to earn both the MBA and MF degrees after two calendar years of full-time study.

## UNIVERSITY OF ALBERTA

## GRADUATE STUDIES AND RESEARCH

Each student must complete a Faculty of Graduate Studies and Research application form to be submitted to the Faculty of Business. A letter indicating the intention to apply to the MBA/MF program including a statement of the applicant's forestry specialization, background and interests should also be enclosed.

## **Entrance Requirements**

Normally only students with a BSc degree in Forestry will be admissible to this program. Applicants must follow the admission procedures and meet the admission requirements of both the Faculty of Business and the Department of Renewable Resources. The recommendation for admission will be made by the MBA/MF Combined Program Selection Committee consisting of representatives from the Faculty of Business and the Faculty of Agricultural, Life and Environmental Sciences. Admission will be recommended only for those students judged to have the ability and motivation to handle the significant demands of the program. Professional experience is highly desired.

## <u>Program Requirements</u>

The course requirements are normally as follows:

- ★30 required MBA core courses
- Four ★3 elective MBA courses
- Two ★3 graduate elective courses (Business or Agricultural, Life and Environmental Sciences)
- REN R 601
- REN R 602 and
- Three other approved ★3 graduate-level Forestry courses
- SM0 641 Business Strategy

#### Note:

Students who decide to transfer out of the joint program into the regular MBA or MF program will have to apply and meet the full degree requirements of that program.

## Length of Program

Students enrolled in the combined program on a full-time basis can complete the program in two calendar years. Students may undertake the combined program on a part-time basis. The duration of the total program must not exceed six consecutive calendar years.

## The MD/MBA Combined Program (Business) [Graduate]

The Faculty of Medicine and Dentistry and the Faculty of Business offer a program of combined study which permits highly qualified students to earn both the MD and MBA degrees in five years.

Each student must apply separately to the Faculty of Medicine and Dentistry (for admission into the MD program) and to the Faculty of Graduate Studies and Research (for admission into the MBA program).

In addition, students must indicate on their online graduate application that they are applying to the combined MD/MBA program.

## ALBERTA

## GRADUATE STUDIES AND RESEARCH

In addition to new entrants, students in the first or second year of the regular MD program are eligible to apply for the combined program.

## **Entrance Requirements**

Acceptance by the Faculty of Graduate Studies and Research (for admission into the MBA program) and by the Faculty of Medicine and Dentistry (for admission into the MD program) separately, are prerequisites for admission into the MD/MBA program. Admission into each Faculty will be determined by the same selection process and criteria as for other students. In addition, each student must be admitted into the combined program; in this case admission will be determined by a selection committee composed of representatives of the Faculty of Medicine and Dentistry and the Faculty of Business. Since this is a special program, particular attention in the selection process will be given to:

- The student's past academic achievement; and
- 2. The student's maturity, interest and a rationale of how such a combined program will enhance the student's career and professional skills.

#### **Program Requirements**

The first two years are taken entirely within the MD program, the third year entirely within the MBA program, the fourth year and fifth year (final year) will be completed entirely in the MD program. The MD portion of the program consists of the normal requirements of the MD program while the Business portion of the program consists of  $\pm$  42.

MBA courses: students who obtain a grade of less than C+ or who fail to complete one of the MBA courses may, upon the recommendation of the Associate Dean (MBA), with the approval of the Faculty of Graduate Studies and Research, retake the course(s) or take an alternate course(s). Students repeating or taking an alternate course(s) must obtain a minimum grade of C+ and must maintain a cumulative grade point average of 2.7 (University of Alberta Calendar, Minimum Faculty Requirements).

MD residency is pass/fail.

Upon the successful completion of the five-year program, candidates will receive both the MD and the MBA degrees.

Inquiries regarding the combined MD/MBA degrees program may be directed to the Undergraduate Medical Education Office in the Faculty of Medicine and Dentistry or the MBA Office in the Faculty of Business.

## Academic Standing

A student is subject to the academic standing regulations and routes of appeal for grades and for academic standing of the Faculty in which the student is registered.

Therefore, during the first, second, fourth and fifth year of the combined program, the student shall refer to the Faculty of Medicine and Dentistry's academic standing regulations and right of appeal procedures.

In the third year of the combined program, a student is subject to the academic standing regulations and routes of appeal for grades and for academic standing of the Faculty of Graduate Studies and Research.

If a student withdraws from one of the degree programs or is required to withdraw because of unsatisfactory academic standing, but wishes to remain in the other degree program, the student may be permitted to continue the program of study in the Faculty in which the student retains good academic standing.

## Length of Program

Students enrolled in the combined program on a full-time basis can complete the program in five calendar years. The duration of the total program must not exceed six consecutive calendar years.

## The MBA/BSc in Pharmacy Combined Degrees Program (Business) [Graduate]

(Note: Effective Fall 2017, applications for the BSc Pharmacy program are no longer being accepted. After that time interested students should apply to the PharmD program).

The Faculty of Pharmacy and Pharmaceutical Sciences and the Faculty of Business offer a program of combined study that permits highly qualified students to earn both the BSc in Pharmacy and the MBA degrees in five years.

Each student must first be admitted to the BSc in Pharmacy. Students that have completed the second year of the regular BSc in Pharmacy program are eligible to apply to the Faculty of Graduate Studies and Research for the Combined Degrees program and must indicate on their online graduate application that they are applying to the combined MBA/BSc in Pharmacy program.

## **Entrance Requirements**

Acceptance by the Faculty of Business (for admission into the MBA program) and by the Faculty of Pharmacy and Pharmaceutical Sciences (for admission into the MBA/BSc in Pharmacy Combined Degrees program. Admission into each Faculty will be determined by the same selection process and criteria as for other students. In addition, each student must be admitted into the Combined Degrees program, admission will be determined by a selection committee composed of representatives of the Faculty of Pharmacy and Pharmaceutical Sciences and the Faculty of Business. Because this is a special program, particular attention in the selection process will be given to:

- 1. The student's past academic achievement; and
- 2. The student's maturity, interest and a rationale of how such a combined program will enhance the student's career and professional skills [University of Alberta Calendar, The Degree of MBA (Business)]

## **Program Requirements**

The first three years are taken entirely within the BSc in Pharmacy program. The fourth year is entirely within the MBA program. The fifth year (final year) is then completed entirely in the BSc in Pharmacy program. The pharmacy portion of the program consists of the normal requirements of the BSc in Pharmacy program. The Business portion of the program consists of ★42.

MBA courses: students who obtain a grade of less than C+ or who fail to complete one of the MBA courses may, upon the recommendation of the Associate Dean (MBA), with the approval of the Faculty of Graduate Studies and Research, retake the course(s) or take an alternate course(s). Students repeating or taking an alternate course(s) must obtain a minimum grade of C+ and must maintain a cumulative grade point average of 2.7 (University of Alberta Calendar, Minimum Faculty Requirements).

Upon the successful completion of the five-year program, (i.e., successful completion of the BSc in Pharmacy and the MBA degrees), candidates will receive both the BSc in Pharmacy and the MBA degrees. The MBA degree will not be conferred prior to the completion of the BSc in Pharmacy degree.

## UNIVERSITY OF ALBERTA

## GRADUATE STUDIES AND RESEARCH

Inquiries regarding the MBA/BSc in Pharmacy Combined Degrees program may be directed to the Assistant Dean for Professional Programs in the Faculty of Pharmacy and Pharmaceutical Sciences, or the Masters Programs Office in the Faculty of Business.

## **Academic Standing**

A student is subject to the academic standing regulations and routes of appeal for grades and for academic standing of the Faculty in which the student is registered.

If a student withdraws from the MBA programs or is required to withdraw because of unsatisfactory academic standing, but wishes to remain in the BSc in Pharmacy degree program, the student may be permitted to continue provided the student retains good academic standing in that program.

## Length of Program

Students enrolled in the combined program on a full-time basis can complete the program in five calendar years. The duration of the total program must not exceed six consecutive calendar years.

## The MBA/MLIS Combined Program (Business) [Graduate]

The School of Library and Information Studies and the Faculty of Business offer a program of combined study which enables students to earn both the MBA and MLIS degrees after three calendar years of full-time study or six years of part-time study. Students in the online offering of the MLIS program are not eligible for the combined MBA/MLIS program.

Each student must complete a Faculty of Graduate Studies and Research application form which will be received by both programs. A letter indicating the intention to apply to the MBA/MLIS program including a statement of the applicant's background and interests should also be enclosed. During, and up to the completion of the first year in the MLIS program, students will have the option to apply to the combined MBA/MLIS program.

## **Entrance Requirements**

Students wishing to apply for the MBA/MLIS combined program need only complete one online application form by selecting "MBA/MLIS" as the program. The application will be received by both programs. Students must satisfy the entrance requirements for both programs. Administrators of the two programs will consult regarding admission to the combined degree. There is limited enrolment and the entrance process is competitive.

## **Program Requirements**

The course requirements are normally as follows:

#### First Year

#### ★24 MLIS as follows:

- Up to ★6 in required Information Technology courses (see SLIS website for current offerings)
- Up to ★9 in LIS electives

#### ★12 LIS required courses

- LIS 501 Foundations of Library and Information Studies
- LIS 502 Organization of Information
- LIS 503 Reference and Information Services
- LIS 505 Introduction to Research in Library and Information Studies

#### Second year

★30 MBA required courses

#### Third year

- ★15 MBA (one required course SMO 641 and four electives)
- ★12 MLIS (LIS electives and up to one Information Technology course)

#### Academic Standing

Respective academic standing provisions for each program apply. Students taking the MBA/MLIS program must meet each program's academic standing requirements. If a student withdraws from one of the degree programs or is required to withdraw because of unsatisfactory academic standing, but wishes to remain in the other degree program, the student may be permitted to continue the program of study in which the student retains good academic standing.

#### Length of Program

A full-time student who is registered for the combined MBA/MLIS program normally will be able to complete the degree requirements in three years. Students may undertake the combined program on a part-time basis. The duration of the total program must not exceed six consecutive calendar years.

## The MBA/MScPT Combined Program (Business) [Graduate]

The Department of Physical Therapy and the Faculty of Business offer a program of combined study which permits highly qualified students to earn both the MSc in Physical Therapy and the MBA degrees after three and a half years of full-time study.

Each student must first be admitted to the MScPT, Department of Physical Therapy. After completing the first 18 months of the MScPT, students are eligible to apply to the combined MBA/MScPT program.

## **Entrance Requirements**

Admission to the MBA will be determined with particular attention given to the student's past academic achievement and the student's maturity, interest and a rationale of how such a combined program will enhance their career and professional skills.

## WINIVERSITY OF ALBERTA

## **GRADUATE STUDIES AND RESEARCH**

The student must provide a letter of intent. The following entrance requirements for the MBA are waived: submission of a GMAT score and a minimum of two years' work experience. The student will be interviewed by both the Faculty of Business and the Department of Physical Therapy

## **Program Requirements**

The first two years are taken entirely within the MScPT program. The third year is entirely within the MBA program. The fourth year (final year) is then completed entirely in the MScPT program. The physical therapy portion of the program consists of the normal requirements of the MScPT program (see Physical Therapy [Graduate]).

The Business portion of the program consists of  $\bigstar$ 42.

Required Business courses (★30):

- BUS 501
- ACCTG 501
- BUEC 503
- BUS 505
- MGTSC 501
- SM0 500
- SM0 652
- ACCTG 523
- SM0 641
- FIN 501
- MARK 502

Electives (★12):

- one (★3) MBA core elective from:
  - O 0M 502
  - O SM0 502
  - O BUEC 542
- three  $(\bigstar 3)$  courses (\*9 total) of MBA or School of Public Health elective.

Prior to completing clinical placements in the final year of study, students must successfully complete a safety screen - objective structured clinical exam (OSCE).

Upon the successful completion of the three and a half year program, candidates will receive both the MScPT and the MBA degrees. The MBA degree will not be conferred prior to the completion of the MScPT degree.

Inquiries regarding the combined MBA/MScPT Combined Degrees program may be directed to the Associate Chair in the Department of Physical Therapy, or the Masters Programs Office in the Faculty of Business.

## Academic Standing

A student is subject to the academic standing regulations for the program in which they are registered. For the MScPT refer to Physical Therapy [Graduate] and for the MBA refer to FGSR's Academic Standing section of the Calendar. Routes of appeal for grades and for academic standing are those of the teaching Faculty.

## WINIVERSITY OF ALBERTA

## GRADUATE STUDIES AND RESEARCH

If a student withdraws from the MBA program or is required to withdraw because of unsatisfactory academic standing in the MBA program, but wishes to remain in the MScPT degree program, the student may be permitted to continue provided the student retains good academic standing in that program

#### Length of Program

Students enrolled in the combined program on a full-time basis can complete the program in three and a half calendar years. The duration of the total program must not exceed six consecutive calendar years.

# The MBA with Specialization in Innovation and Entrepreneurship (Business) [Graduate]

The MBA with specialization in Innovation and Entrepreneurship trains managers who can take new ideas and inventions from their source of discovery to the marketplace. It is designed to give students the expertise to assess and realize commercial potential of the latest technologies, as well as to apply entrepreneurial approaches to commercializing technology and innovation.

#### **Entrance Requirements**

Applicants holding any recognized undergraduate degree will be considered for admission to this program. Admission to the MBA (Innovation and Entrepreneurship) program is based on the applicant's undergraduate grades, three letters of reference, a statement of purpose explaining how this program relates to the applicant's career goals, and the Graduate Management Admission Test score. For candidates interested in this program, a minimum of two years' full-time work experience is desirable. A resume outlining past work experience is required as part of the application materials.

## Program Requirements

The course requirements are as follows:

- ★30 required MBA core courses
- Two ★3 Innovation and Entrepreneurship courses
- Two ★3 Innovation and Entrepreneurship electives (chosen from an approved list)
- SMO 641 Business Strategy
- Five ★3 approved graduate level electives

## Length of Program

Students enrolled in this program on a full-time basis can complete it in two calendar years however, it may be possible to accelerate studies with the completion of courses during Spring/Summer. Alternatively, this course-based MBA program may be taken on a part-time basis; however, it must be completed within six consecutive years from initial registration in the program.



## The MBA with Specialization in International Business (Business) [Graduate]

The MBA with specialization in International Business trains managers to excel in today's global economy. It is designed to give students experience in addressing the challenges and identifying the opportunities of global markets.

## **Entrance Requirements**

Applicants holding any recognized undergraduate degree will be considered for admission to this program. Admission to the MBA (International Business) Program is based on the applicant's undergraduate grades, three letters of reference, a statement of purpose explaining how this program relates to the applicant's career goals, and the Graduate Management Admission Test score. For candidates interested in this program, a minimum of two years' full-time work experience is desirable. A resume outlining past work experience is required as part of the application materials.

## **Program Requirements**

The course requirements are as follows:

- ★30 required MBA core courses
- SMO 641 Business Strategy
- Four ★3 International Business electives (chosen from an approved list)
- Five ★3 approved graduate-level electives

## Length of Program

Students enrolled in this program on a full-time basis can complete it in two calendar years however, it may be possible to accelerate studies with the completion of courses during Spring/Summer. Alternatively, this course-based MBA program may be taken on a part-time basis; however, it must be completed within six consecutive years from initial registration in the program.

# The MBA with Specialization in Natural Resources, Energy and the Environment (Business) [Graduate]

The MBA with specialization in Natural Resources, Energy and the Environment trains managers to develop an analytical expertise specifically focused in the areas of natural resources, energy and the environment. The program is designed for students to develop a broad understanding of the resource and energy industries, from the exploration and project development phases, through extraction and transformation, to transportation, logistics marketing and market issues. This allows students to address and analyze key strategic questions facing today's business leaders and policy makers.

## **Entrance Requirements**

Applicants holding any recognized undergraduate degree will be considered for admission to this program. Admission to the MBA (Natural Resources, Energy and the Environment) program is based on the applicant's undergraduate grades, three letters of reference, a statement of purpose explaining how this

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program relates to the applicant's career goals, and the Graduate Management Admission Test score. For candidates interested in this program, a minimum of two years' full-time work experience is desirable. A resume outlining past work experience is required as part of the application materials.

## **Program Requirements**

The course requirements are as follows:

- ★30 required MBA core courses
- BUEC 663 Natural Resources and Energy Capstone capstone course
- Four ★3 Natural Resources and Energy courses
- Five ★3 approved graduate-level electives

#### Length of Program

Students enrolled in this program on a full-time basis can complete it in two calendar years however, it may be possible to accelerate studies with the completion of courses during Spring/Summer. Alternatively, this course-based MBA program may be taken on a part-time basis; however, it must be completed within six consecutive years from initial registration in the program.

## The MBA with Specialization in Finance (Business) [Graduate]

The MBA with specialization in Finance trains managers to develop an analytical expertise specifically focused in the area of finance. The program is designed for students to develop the skills, knowledge and experience necessary for a career in this field. Graduates will be well positioned for careers as financial managers or investment bankers.

## **Entrance Requirements**

Applicants holding any recognized undergraduate degree will be considered for admission to this program. Admission to the MBA (Finance) program is based on the applicant's undergraduate grades, three letters of reference, a statement of purpose explaining how this program relates to the applicant's career goals, and the Graduate Management Admission Test score. For candidates interested in this program, a minimum of two years' full-time work experience is desired. A resume outlining past work experience is required as part of the application materials.

## Program Requirements

The course requirements are as follows:

- ★30 required MBA core courses
- Five ★3 Finance or Accounting electives (one required Finance course and four chosen from an approved list)
- SM0 641 Business Strategy
- Four ★3 approved graduate-level electives

## Length of Program

Students enrolled in this program on a full-time basis can complete it in two calendar years. Alternatively, this course-based MBA program may be taken on a part-time basis; however, it must be completed within six consecutive years from initial registration in the program.

## The MBA with Specialization in Public Policy and Management (Business) [Graduate]

The MBA with specialization in Public Policy and Management is designed for individuals aspiring to careers in public administrations and not-for-profit organizations. It is designed to give students experience in addressing the challenges and applying analytical skills to deliver effective consensus-building strategies for success in public management and administration.

## **Entrance Requirements**

Applicants holding any recognized undergraduate degree will be considered for admission to this program. Admission to the MBA (Public Policy and Management) Program is based on the applicant's undergraduate grades, three letters of reference, a statement of purpose explaining how this program relates to the applicant's career goals, and the Graduate Management Admission Test score. For candidates interested in this program, a minimum of two years' fulltime work experience is desirable. A resume outlining past work experience is required as part of the application materials.

## **Program Requirements**

The course requirements are as follows:

- ★30 required MBA core courses
- SMO 641 Business Strategy
- One ★3 Strategic Management in the Public Sector course
- Three ★3 Public Policy and Management electives (chosen from an approved list)
- Four ★3 approved graduate-level electives
- One ★3 project covering a public management topic

## Length of Program

Students enrolled in this program on a full-time basis can complete it in two calendar years however, it may be possible to accelerate studies with the completion of courses during Spring/Summer. Alternatively, this course-based MBA program may be taken on a part-time basis; however, it must be completed within six consecutive years from initial registration in the program.

## The MBA with Specialization in Sustainability (Business) [Graduate]

The MBA with Specialization in Sustainability prepares future leaders to develop business strategies and operations in a world where businesses are being challenged to assume responsibilities that extend beyond meeting shareholder's financial expectations. The specialization is also designed to meet the growing demand for business leadership in non-profit and non-governmental organizations. Graduates will also be well positioned to work in organizations with sustainability departments as well as have the ability to work in not-for-profit organizations.

## **Entrance Requirements**

Applicants holding any recognized undergraduate degree will be considered for admission to this program. Admission to the MBA (Sustainability) program is based on the applicant's undergraduate grades, three letters of reference, a statement of purpose explaining how this program relates to the applicant's career goals, and the Graduate Management Admission Test score. For candidates interested in this program, a minimum of two years' full-time work experience is desired.

## **Program Requirements**

The course requirements are as follows:

- ★27 required MBA core courses
- Two ★3 Sustainability required courses
- Three ★3 graduate-level electives (chosen from an approved list)
- SM0 641 Business Strategy
- Five ★3 approved graduate-level electives

#### Length of Program

Students enrolled in this program on a full-time basis can complete it in two calendar years. Alternatively, this course-based MBA program may be taken on a part-time basis; however, it must be completed within six consecutive years from initial registration in the program.

## The Degree of Master of Financial Management (Business) [Graduate]

The Master of Financial Management (MFM) prepares professional accountants or other finance professionals who want to become financial managers and aspire to the roles of Controller, Treasurer, and Chief Financial Officer.

## **Entrance Requirements**

Admission to the program is based on the applicant's undergraduate grades, three letters of reference, a statement of purpose explaining how the MFM relates to the applicant's career goals, the applicant's Graduate Management Admission Test score, and a personal interview. Applicants should have relevant business or professional experience and a relevant undergraduate degree.

## <u>Program Requirements</u>

The course requirements are as follows:

- ★9 required MFM core courses
- FIN 680 (★6 capstone project)
- Eight ★3 MFM electives chosen from an approved list

## Length of Program

Students enrolled in the MFM program can complete the requirements in two years. The duration of the total program must not exceed six consecutive calendar years.

## The FastTrack MBA for Business Graduates (Business) [Graduate]

The FastTrack MBA Program for Business Graduates educates managers to enhance their strategic thinking and team leadership skills. The program is designed for students who have completed an undergraduate degree in business or management and who wish to further develop their strategic and critical thinking skills. Students have the option to enhance their knowledge in a particular area or complete a specialization. Graduates will be well positioned to make a career change or meet the requirements for a more senior position.

## **Entrance Requirements**

Applicants holding a recognized undergraduate degree in business or management will be considered for admission to this program. Admission to the FastTrack MBA is selective; requiring an overall grade point average of 3.2 or higher in the last two years (or 60 credits) of the business or management undergraduate program. Students who are deficient (defined as less than a B+ in their undergraduate degree) in one or more of the following core business classes: financial accounting, organizational behaviour, introductory marketing, introductory finance, business statistics are required to take the equivalent MBA core course. Admission to the FastTrack MBA Program for Business Graduates is based on the applicant's undergraduate grades, three letters of reference, a statement of purpose explaining how this program relates to the applicant's career goals, and the Graduate Management Admission Test score. For BCom graduates of the University of Alberta, the GMAT requirement will be waived. Students also require a minimum of three years of full-time work experience after their undergraduate degree. Admission for those whose degree was completed more than ten years ago are considered on a case-by-case basis.

## Program Requirements

The course requirements are as follows:

- ★12 required MBA courses
- SMO 641 Business Strategy
- Seven ★3 approved graduate-level electives

## Length of Program

Students enrolled in this program on a full-time basis can complete it in one calendar year. Alternatively, this course-based FastTrack MBA program may be taken on a part-time basis; however, it must be completed with six consecutive years from initial registration in the program.

## Executive MBA (Business) [Graduate]

The Faculty of Business at the University of Alberta and the Haskayne School of Business at the University of Calgary offer a combined Executive MBA program which permits individuals with at least seven years of work experience to earn the MBA through a 20 month weekend program.

## **Entrance Requirements**

The minimum admission requirements in terms of undergraduate GPA and English language proficiency are those of the Faculty of Graduate Studies and Research. In some cases, students without an undergraduate degree, but who have 15 years of significant work experience are admissible. Applicants should have at least seven years of work experience to be admitted. Additionally, all applicants who do not have an undergraduate degree from a recognized institution or have an undergraduate degree with less than a 3.0 GPA or equivalent are required to write the Graduate Management Admission Test (GMAT). Finally a letter of support from the applicant's employer and two letters of reference are desirable.

## **Program Requirements**

The EMBA program is designed for individuals who have been in the workforce for seven years or more, and who are aspiring to top management positions. The course requirements are as follows:

- Four ★3 week-long intensive courses (including an international study tour)
- Twelve ★3 required MBA courses
- Two graduate elective courses
- One ★6 year-long project in Year 2

## Length of Program

Students enrolled in the EMBA can complete the program in 20 months.

## The Degree of PhD in Business [Graduate]

Information is available from the program's website: www.ualberta.ca/business/programs/phd

The PhD in Business is a full time thesis-based program.

Students must declare a Specialization and complete the Specialization and Elective courses and program requirements as outlined below.

## The Degree of PhD in Business with a Specialization in Accounting [Graduate]

Students specializing in Accounting will follow a Financial Economics discipline or Behavioral and Organizational discipline.

## <u>Program Requirements</u>

Normally, all students should complete  $\pm 36$  during the first two years of study.

#### Required courses $(\bigstar 6)$ for all Accounting disciplines:

ACCTG 701 - The Methodological Foundations of Accounting Research

ACCTG 708 - Introduction to Financial Economics Based Research in Accounting

#### Financial Economics Discipline:

#### Required courses $(\bigstar 6)$ :

- ACCTG 706 Behavioral Research in Accounting OR
- ACCTG 707

AND

- ACCTG 732 **OR**
- ACCTG 733

#### Research methods courses ( $\star$ 15):

Normally three graduate-level statistics or econometrics courses and two graduate-level economics courses; students with a strong background in these subjects may have modified requirements.

#### Cognate discipline courses ( $\star$ 9):

Normally comprised of two doctoral seminars in finance and one other course with the approval of the supervisor.

#### Behavioral and Organizational Discipline:

#### Required courses $(\bigstar 6)$ :

ACCTG 711 - Seminar on Judgement and Decision Making Research in Accounting
 AND

#### for Behavioral Concentration:

ACCTG 706 - Behavioral Research in Accounting
 OR

#### for Organizational Concentration:

ACCTG 707

#### Research methods courses ( $\star$ 12):

Normally four methodology courses covering statistics, experimental design, or qualitative research methodology; students with a strong background in these subjects may have modified requirements.

#### Cognate discipline courses ( $\star$ 12):

Normally comprised of four courses in psychology, sociology, strategic management & organization, political science, anthropology, history, philosophy, or economics.

#### **Thesis**

Registration in 900-level THES

Students must present and defend a thesis embodying the results of their research according to FGSR regulations.

#### Comprehensive and Candidacy Exams

All students are required to complete comprehensive and candidacy exams. Comprehensive examinations must be successfully completed within the first 24 months; students are eligible to write the comprehensive exam for

their specialization after completing the course requirements. Departments within the Faculty of Business are responsible for administering the comprehensive examinations for students in their specializations. [See Regulations of FGSR>Doctoral Degrees>Program Requirements]

## Length of Program

The program is full-time; candidates are expected to complete the required coursework and comprehensive exams in the first two years, normally followed by at least two years to complete the PhD thesis.

The maximum time to completion as set by the Faculty of Graduate Studies and Research is six years.

## The Degree of PhD in Business with a Specialization in Finance [Graduate]

Students specializing in Finance may focus their research on corporate finance, corporate control, asset pricing, portfolio theory, derivatives, market microstructure, behavioral finance, financial institutions, international finance, or valuation.

## <u>Program Requirements</u>

Normally, all students should complete  $\star$ 36 during the first two years of study.

#### Required courses ( $\star$ 12):

- FIN 701 Advanced Seminar in Finance I
- FIN 702 Advanced Seminar in Finance II
- FIN 703 Advanced Seminar in Finance III
- FIN 705 Research Seminar in Finance

#### Elective courses $(\bigstar 6)$

At least two graduate-level courses in finance, management science, or economics with the approval of the supervisor.

## Cognate discipline courses ( $\star$ 18)

Finance students must complete courses in **two** additional cognate areas chosen from the following: statistics/econometrics, economics, accounting, or other supporting courses with the approval of the supervisor.

#### Statistics/Econometrics ( $\bigstar$ 9):

#### Any three of:

- MGTSC 705 Multivariate Data Analysis I (Recommended)
- MGTSC 707 Applied Business Analysis of Time Series and Panel Data
- ECON 508
- ECON 599 Applied Econometrics
- STAT 580 Stochastic Processes
- STAT 679

Other courses containing equivalent or higher level material may be substituted, with the approval of the supervisor.

#### Economics $(\bigstar 9)$ :

- ECON 503 Microeconomic Theory I
- ECON 505 Microeconomic Theory II
- ECON 581 Macroeconomic Theory I

#### Accounting $(\bigstar 9)$ :

- ACCTG 731
- ACCTG 732
- ACCTG 733

Students can substitute other graduate courses with the approval of the supervisor.

#### Thesis

Registration in 900-level THES

Students must present and defend a thesis embodying the results of their research according to FGSR regulations.

#### Comprehensive and Candidacy Exams

All students are required to complete comprehensive and candidacy exams. Comprehensive examinations must be successfully completed within the first 24 months; students are eligible to write the comprehensive exam for their specialization after completing the course requirements. Departments within the Faculty of Business are responsible for administering the comprehensive examinations for students in their specializations. [See Regulations of FGSR>Doctoral Degrees>Program Requirements]

## Length of Program

The program is full-time; candidates are expected to complete the required coursework and comprehensive exams in the first two years, normally followed by at least two years to complete the PhD thesis.

The maximum time to completion as set by the Faculty of Graduate Studies and Research is six years.

## The Degree of PhD in Business with a Specialization in Marketing [Graduate]

## **Program Requirements**

Normally, all students should complete  $\pm 36$  during the first two years of study.

#### Required courses ( $\star$ 15):

- MARK 710 Research Methodology in Marketing
- MARK 720 Consumer Behaviour
- MARK 725 Human Judgment And Decision Making
- MARK 740 Marketing Models
- MARK 750 Marketing Theory

#### Research methods courses $(\bigstar 9)$ :

- BUS 715 Experimental Methods for Behavioural Science AND
- two other courses with the approval of the supervisor.

## Elective courses ( $\bigstar$ 12):

Four courses related to a cognate discipline, usually in behavioral science, judgement and decision making, psychology, microeconomics, or statistics, with the approval of the supervisor.

#### **Thesis**

Registration in 900-level THES

Students must present and defend a thesis embodying the results of their research according to FGSR regulations.

#### Comprehensive and Candidacy Exams

All students are required to complete comprehensive and candidacy exams. Comprehensive examinations must be successfully completed within the first 24 months; students are eligible to write the comprehensive exam for their specialization after completing the course requirements. Departments within the Faculty of Business are responsible for administering the comprehensive examinations for students in their specializations. [See Regulations of FGSR>Doctoral Degrees>Program Requirements]

## Length of Program

The program is full-time; candidates are expected to complete the required coursework and comprehensive exams in the first two years, normally followed by at least two years to complete the PhD thesis.

The maximum time to completion as set by the Faculty of Graduate Studies and Research is six years.

# The Degree of PhD in Business with a Specialization in Operations & Information Systems [Graduate]

Students specializing in Operations & Information Systems (OIS) will focus on either Operations Management (OM) or Management Information Systems (MIS).

## Program Requirements

Normally, all students should complete  $\bigstar 33$  during the first two years of study.

#### Required courses ( $\star$ 12):

Four of the following:

- OM 701 Introduction to Operations Management Research
- OM 702 Advanced Research Topics in Operations Management
- OM 710 Individual Research
- MIS 701 Introduction to Management Information Systems Research
- MIS 702
- MIS 710 Individual Research
- MGTSC 705 Multivariate Data Analysis I
- MGTSC 706
- MGTSC 707 Applied Business Analysis of Time Series and Panel Data

#### Research Methods courses ( $\star$ 12):

At least four courses applicable to the student's program of study. These may include courses from the list above if not used to satisfy the specialization requirement.

#### Elective courses $(\bigstar 9)$ :

At least three additional courses in cognate disciplines with the approval of the supervisor.

#### **Thesis**

Registration in 900-level THES

Students must present and defend a thesis embodying the results of their research according to FGSR regulations.

#### Comprehensive and Candidacy Exams

All students are required to complete comprehensive and candidacy exams. Comprehensive examinations must be successfully completed within the first 24 months; students are eligible to write the comprehensive exam for their specialization after completing the course requirements. Departments within the Faculty of Business are responsible for administering the comprehensive examinations for students in their specializations. [See Regulations of FGSR>Doctoral Degrees>Program Requirements]

## Length of Program

The program is full-time; candidates are expected to complete the required coursework and comprehensive exams in the first two years, normally followed by at least two years to complete the PhD thesis.

The maximum time to completion as set by the Faculty of Graduate Studies and Research is six years.

# The Degree of PhD in Business with a Specialization in Strategic Management & Organization [Graduate]

Students may focus on a wide range of foundational as well as domain-specific topics, including entrepreneurship and innovation, family business, human resources management, industrial relations, organizational behavior, organizational theory, strategic management.

## <u>Program Requirements</u>

Normally, all students should complete  $\star$ 36 during the first two years of study.

## Required courses ( $\star$ 12):

SMO 705 - Seminar in Contemporary Issues
 AND

#### any three of the following:

- SM0 701 Seminar in Organization Theory
- SMO 702 Seminar in Human Behavior in Organization
- SM0 703 Seminar in Strategic Management
- SMO 704 Individual Research
- SM0 707 Seminar in Special Organization Topics
- SM0 708
- SM0 709 Seminar in Human Resource Management
- SM0 710 Seminar in Family Business
- SMO 711 Seminar in Entrepreneurship

#### Research Methods courses $(\pm 12)$ :

At least four additional courses, including one qualitative and one quantitative, with the approval of the supervisor.

#### Elective courses $(\pm 12)$ :

Four additional courses in a cognate discipline as approved by the supervisor. These may include the courses listed above in excess of the four required courses.

#### **Thesis**

Registration in 900-level THES

Students must present and defend a thesis embodying the results of their research according to FGSR regulations.

#### Comprehensive and Candidacy Exams

All students are required to complete comprehensive and candidacy exams. Comprehensive examinations must be successfully completed within the first 24 months; students are eligible to write the comprehensive exam for

their specialization after completing the course requirements. Departments within the Faculty of Business are responsible for administering the comprehensive examinations for students in their specializations. [See Regulations of FGSR>Doctoral Degrees>Program Requirements]

## Length of Program

The program is full-time; candidates are expected to complete the required coursework and comprehensive exams in the first two years, normally followed by at least two years to complete the PhD thesis.

The maximum time to completion as set by the Faculty of Graduate Studies and Research is six years.

## The MBA-PhD Joint Program (not offered in 2015-2016) (Business) [Graduate]

## Post-Master's Certificate in Innovation and Entrepreneurship (Business) [Graduate]

The Post-Master's Certificate in Innovation and Entrepreneurship is a free-standing certificate program targeted primarily to doctoral students and post-doctoral fellows (PDFs), and would be of particular interest to students in the Faculties of Science, Engineering, Medicine and Dentistry, Pharmacy and Pharmaceutical Sciences, Nursing, Rehabilitation Medicine, and Agricultural, Life and Environmental Sciences. The certificate program would provide individuals with the competencies to manage technology innovation and commercialization processes as well as to generate business plans and ideas. The certificate program focuses on innovation management, from idea generation through feasibility studies all the way to market launch. The program focusses on knowledge and skill development in the areas of identifying opportunities, facilitating innovation and development, managing intellectual property, understanding innovation systems and processes, and building new organizations and markets. The certificate consists of a total of 12 credits, two required courses and two elective courses chosen from a set list. Students completing the certificate program have the option to apply the certificate credits toward completion of an MBA degree.

Doctoral students and post-doctoral fellows at the University of Alberta may apply to pursue the Post-Master's Certificate in Innovation and Entrepreneurship.

Admission decisions will be made by the MBA Program Office on the basis of the student's letter of intent and letter of support from their academicadvisor, in the case of doctoral students, or the supervising faculty member in the case of the postdoctoral fellow.

## Certificate Requirements

Students are required to complete the following requirements:

- ★6 required courses
- Two ★3 elective courses from a set list.

Students will be required to achieve a cumulative GPA of 2.7 and upon completion of the above certificate requirements, will receive the Post-Master's Certificate in Innovation and Entrepreneurship.

## Length of Program

Students enrolled in the Post-Master's Certificate in Innovation and Entrepreneurship will typically complete the requirements over two years. Students must complete all certificate requirements within four years.



## Post-Master's Certificate in Business Fundamentals (Business) [Graduate]

The Post-Master's Certificate in Business Fundamentals is a free-standing certificate program targeted to doctoral students at the University of Alberta and would be of potential interest to those students for whom knowledge of business foundations would supplement their thesis research, for those working or supervising others in a lab, as well as doctoral students writing grant proposals. The certificate program would provide students with knowledge that could bridge the gap between highly specialized training and career opportunities that require business knowledge. Graduates of the certificate program have the opportunity to apply the certificate courses toward completion of an MBA degree. The certificate consists of a total of 12 credits, three required courses and one elective course chosen from a set list.

Doctoral students and post-doctoral fellows at the University of Alberta may apply to pursue the Post- Master's Certificate in Business Fundamentals.

Admission decisions will be made by the MBA Program Office on the basis of the student's letter of intent and letter of support from their academic advisor.

## Certificate Requirements

Students are required to complete the following requirements:

- ★9 required courses
- One ★3 elective course from a set list.

Students will be required to achieve a cumulative GPA of 2.7 and upon completion of the above certificate requirements, will receive the Post-Master's Certificate in Business Fundamentals.

## Length of Program

Students enrolled in the Post-Master's Certificate in Business Fundamentals will typically complete the requirements over two years. Students must complete all certificate requirements within four years.

## Master of Accounting (Business) [Graduate]

The Master of Accounting (MAcc) prepares students with the required competencies of the CPA (Chartered Professional Accountant) designation.

## **Entrance Requirements**

Admission to the program is based on the applicant's undergraduate grades, accounting courses completed, three letters of reference, a statement of purpose explaining how the MAcc relates to the applicant's career goals, the applicant's Graduate Management Admission Test score, and a personal interview. The GMAT will be waived for graduates of the University of Alberta BCom and MBA programs who have completed the necessary prerequisite accounting courses. Applicants should have relevant business or professional experience and a relevant undergraduate degree.

## Program Requirements

Students will be required to achieve a cumulative GPA of 2.7 to meet graduation requirements with no course grade being below a C+.

The course requirements are as follows:

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- ★27 MACC courses
- ACCTG 688 CPA Capstone 1
- ACCTG 689 CPA Capstone 2

## Length of Program

Students enrolled in the MAcc program can complete the requirements over two summers (May to August), allowing students to work and gain professional experience during the remaining part of the year. Students must complete all degree requirements within six years.

## Cell Biology [Graduate]

Department of Cell Biology 5-14 Medical Sciences Building University of Alberta Edmonton, Alberta T6G 2H7 E-mail: cellbiofdualberta.ca www.ualberta.ca/cellbiology

#### **General Information**

The Department of Cell Biology, Faculty of Medicine and Dentistry, offers graduate programs leading to the MSc and PhD degrees in cell biology. The Department provides a world-class training environment in a range of areas including organelle biogenesis and disease, neurobiology, virology, cancer apoptosis and signal transduction, proteomics, molecular evolution, RNA biology, chaperones and pathogen-host interactions. Through an independent research program, complemented by seminars and formal coursework, students are trained to identify important problems, critically analyze scientific information and effectively communicate their results.

The Department of Cell Biology is endowed with state of the art equipment needed to perform experimental work in modern cell biology. Research funding is primarily from agencies such as the Canadian Institutes of Health Research, the Natural Sciences and Engineering Research Council of Canada and the Canada Foundation for Innovation.

Detailed information on the graduate program can be found on the Department of Cell Biology website.

Address all inquiries to the Student Program Advisor, Department of Cell Biology.

## **Entrance Requirements**

Graduate programs are normally open to graduates of general and health-related science programs. Applicants with degrees in other fields will be considered.

The Department's minimum admission requirements are an undergraduate degree with an admission GPA of at least 3.3 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\bigstar$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:

- 100 with 20 in each subtest (internet-based) in TOEFL or equivalent;
- 7.0 overall with 6.0 in each subtest in IELTS;

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- 70 overall with 70 in each subtest in CAEL;
- 68 in Pearson Test of English (PTE); or
- 91 in MELAB.

Examination scores must be less than two years old; applicants with scores more than two years old will normally be required to re-take the test.

Students who do not show competency in spoken and/or written English in their first year as determined by their thesis supervisor will be required to take a remedial course by the Graduate Supervisory Committee.

Applicants are also required to submit three letters of recommendation, a Curriculum Vitae, a Statement of Interest, and an Interest Indicator form available on the Department website.

The deadline for submitting applications for admission is June 1 for September admission and October 1 for January admission.

## **Academic Standing Requirement**

Throughout their program, students are required to maintain a minimum cumulative gpa of 3.3 with no individual grade less than B.

#### Financial Assistance

Financial assistance in the form of graduate assistantships supported by the supervisor's research funds is available for students who are admitted to the program. The Department of Cell Biology will provide assistance in applying for internal or external competitive awards. Further information regarding financial assistance will be supplied upon request.

## **Graduate Program Requirements**

- The Degree of MSc (Cell Biology) [Graduate]
- The Degree of PhD (Cell Biology) [Graduate]

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading Cell Biology (CELL).

## The Degree of MSc (Cell Biology) [Graduate]

## <u>Program Requirements</u>

Students are required to complete a minimum of  $\bigstar 5$  in graded graduate-level courses, and a thesis.

#### Coursework

Students are required to enroll in CELL 671 in their first full academic year.

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- At least one graded course must be selected from the 500- and 600-level CELL courses, to be chosen in consultation with the student's Graduate Supervisory Committee.
- Addition or substitution of courses outside the CELL courses will require approval by the Cell Biology Graduate Program Committee.
- It is expected that students attend all Departmental seminars.

#### Thesis

Registration in 900-level THES.

MSc students must prepare and successfully defend a thesis acceptable to their Master's Thesis Examinination Committee, presenting the results of original research conducted. Students must submit a thesis for preapproval by their supervisory committee prior to submission to the examination committee

#### **Ethics Requirement**

All graduate students are required to take at least eight hours of ethics training. There are two required components which total 6 hours:

- EPR (Introduction to Ethics and Personal Responsibility in the Lab) for 1 hour (Offered through the Department of Biochemistry each September)
- ESI (Ethics and Scientific Integrity Day) for 5 hours (Offered twice a year by the Faculty of Medicine)

A minimum of two additional hours from these three optional components must be completed:

- GET (Graduate Ethics Training) for 5 hours (Offered on-line through FGSR)
- Care and Use of Animals in Research, Teaching and Testing for 1.5 hours
- Animal Care Certification and Biohazard Approvals for 1 hour

Students are expected to complete ethics training within the first year of graduate studies under normal circumstances.

#### Residence Requirement

The minimum period of residence is two four-month terms of full-time attendance at the University of Alberta.

## Length of Program

The time required to complete the MSc will vary according to the previous training of the applicant. Typically, students are expected to complete their MSc studies in two years.

The maximum time to complete the thesis-based MSc program as set by the Faculty of Graduate Studies and Research is four years.

## The Degree of PhD (Cell Biology) [Graduate]

## **Program Requirements**

Students are required to complete a minimum of  $\star 9$  in graded graduate courses and a thesis.

#### Coursework

- Students are required to enroll in CELL 671 in their first full academic year.
- Students are required to enroll in CELL 672.
- A minimum of two graded courses must be selected from the 500- and 600-level CELL courses, to be chosen in consultation with the student's Graduate Supervisory Committee.
- Registration in CELL 545 is recommended.
- Addition or substitution of courses outside the CELL courses will require approval by the Cell Biology Graduate Program Committee
- It is expected that students attend all Departmental seminars.

#### Thesis

Registration in 900-level THES.

PhD students must prepare and successfully defend a thesis acceptable to their Doctoral Thesis Examination Committee, presenting the results of original research conducted by the student. Students must submit a thesis for preapproval by the supervisory committee prior to submission to the examination committee

#### Candidacy Exam

Students in the PhD program must pass a candidacy exam before 24 months after direct entry into the PhD program or 36 months for students changing program category from the MSc.

## Ethics Requirement

All graduate students are required to take at least eight hours of ethics training. There are two required components which total 6 hours:

- EPR (Introduction to Ethics and Personal Responsibility in the Lab) for 1 hour (Offered through the Department of Biochemistry each September)
- ESI (Ethics and Scientific Integrity Day) for 5 hours (Offered twice a year by the Faculty of Medicine)

A minimum of two additional hours from these three optional components must be completed:

- GET (Graduate Ethics Training) for 5 hours (Offered on-line through FGSR)
- Care and Use of Animals in Research, Teaching and Testing for 1.5 hours
- Animal Care Certification and Biohazard Approvals for 1 hour

Students are expected to complete ethics training within the first year of graduate studies under normal circumstances.

#### Residence Requirement

The minimum period of residence is two academic years of full-time attendance at the University of Alberta.

## Length of Program

The time required to complete the PhD program will vary according to the previous training of the applicant and the nature of the research undertaken.

Typically, graduate students that change program category from the MSc to the PhD program are expected to complete their studies in five years while those entering the PhD program directly are expected to complete their studies in four years.

The maximum time to complete the PhD program as set by the Faculty of Graduate Studies and Research is six years.

## Chemical and Materials Engineering [Graduate]

Department of Chemical and Materials Engineering
12th Floor - Donadeo Innovation Centre for Engineering (ICE)
University of Alberta
Edmonton, Alberta T6G 1H9
E-mail: cmeinfo@ualberta.ca
www.cme.engineering.ualberta.ca

#### **General Information**

The Department of Chemical and Materials Engineering offers facilities for advanced training and research leading to the Master of Engineering, Master of Science and Doctor of Philosophy degrees in Chemical Engineering and in Materials Engineering. Degrees are granted in Chemical Engineering, Materials Engineering, Process Control and Welding Engineering. Welding Engineering is not available at the doctoral level. The MEng degree is intended primarily for part-time students who are working in industry, but can also be taken by full-time students.

General fields for research in chemical engineering include fluid mechanics and rheology; reaction kinetics and catalysis; mass transfer and separation processes; heat transfer; thermodynamics, hydrocarbon P-V-T and phase equilibrium studies; polymer reactor engineering; computer process control; dynamic simulation; biotechnology, mathematical modelling and environmental engineering. Many research programs are oriented toward better utilization of natural resources in the province, e.g., upgrading of Athabasca bitumen and heavy oil feedstocks; processing of natural gas.

Active research areas in materials engineering include mineral processing; coal preparation; modelling and simulation; intelligent processing of materials and solidification processing; hydrometallurgy; pyrometallurgy; high temperature electrochemistry; corrosion; physical and mechanical metallurgy; process metallurgy; welding metallurgy; powder metallurgy; ancient materials; ceramic materials; and electronic materials. Active research areas in chemical process control include dynamic modeling, state and parameter estimation, model predictive control, fault monitoring and diagnosis and process optimization.

Many research projects are industrially applied, and supported by industry. In some cases research can be carried out at the supporting company. Details of current research projects are available from the Department office.

## **Entrance Requirements**

The Department's minimum admission requirements are an undergraduate degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\bigstar$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

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## GRADUATE STUDIES AND RESEARCH

Students applying to a PhD program directly from a BSc must have an average of at least 3.5 on a four-point scale in the last  $\bigstar 60$  or two years of undergraduate or graduate work at the University of Alberta, or an equivalent qualification from a recognized institution.

For applicants with international qualifications, if the previous degree was not obtained from Canada, USA, UK, Australia or New Zealand, proof of English Language Proficiency is still required.

Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:

- a minimum TOEFL score of 92 (internet-based) with at least 20 in each section or equivalent
- an overall band score of 7.0 on IELTS with at least 6.0 on each band
- a minimum score of 90 on MELAB
- a minimum overall score of 65 on the CAEL with at least 60 on each subtest
- a minimum score of 62 on the PTE Academic.

Applicants are also required to submit a CV, a one page Personal Statement, and should arrange for three references to be submitted.

The Graduate Record Examination (GRE) is optional.

The Department will accept qualified applicants with degrees in other fields of engineering. Graduates with non-engineering backgrounds may be admitted under special arrangements which might involve the completion of certain undergraduate engineering courses.

Applicants wishing to pursue an MEng degree must have an undergraduate degree in Engineering.

Students with a Masters' degree in Chemical or Materials Engineering (or a related discipline) are only eligible for admission into the PhD program, and students with a doctoral degree in Chemical or Materials Engineering (or a related discipline) are ineligible for admission into the graduate program. The determination of related disciplines (on a case-by-case basis) is made by the Associate Chair (Graduate).

For Fall (September) admission, the application deadlines are April 1 for all international students, and August 15 for Canadian and Permanent Resident students.

For Winter (January) admission, the application deadlines are October 1 for all international students, and December 1 for Canadian and Permanent Resident students.

## Financial Assistance

Graduate assistantships are available for qualified students on a part-time or full-time basis, with remuneration according to the student's background and hours of service. Scholarships and fellowships are available for research in chemical engineering, materials engineering, and process control. All MSc and PhD students are guaranteed a minimum level of financial support subject to acceptable performance.

#### **Graduate Program Requirements**

- The Degree of MSc (Chemical and Materials Engineering) [Graduate]
- The Degree of MEng (Chemical and Materials Engineering) [Graduate]
- The MBA/MEng Joint Program (Chemical and Materials Engineering) [Graduate]
- The Degree of PhD (Chemical and Materials Engineering) [Graduate]

## **Graduate Courses**

Graduate courses can be found in Course Listings, under the following subject headings:

Chemical Engineering (CH E)
Materials Engineering (MATE)
Chemical and Materials Engineering (CME)

## The Degree of MSc (Chemical and Materials Engineering) [Graduate]

The MSc is a research-based program requiring the completion of a thesis.

The Department offers MSc degrees with specializations in Chemical Engineering, Process Control, Materials Engineering, and Welding Engineering.

## **Program Requirements**

Students must successfully complete five courses ( $\bigstar$ 12.5) and a thesis

#### Coursework $(\pm 12.5)$

- Four ★3 courses which must be approved by the Associate Chair (Graduate).
  - At least two must be 600-level or higher courses in the Department of Chemical and Materials Engineering. The following courses are considered to be equivalent to 600-level CME courses:
    - ECE 540
    - ECE 560
    - ECE 561
    - ECE 760
    - ECE 662
    - ECE 664
    - ECE 665
    - ENG M 646
    - MEC E 615
  - The remaining **two** courses must be at the 500-level or higher in the Faculty of Engineering, or be at the 400-level or higher in a Science department. Science courses at the 400-level must be approved by the Associate Chair (Graduate). The following courses are considered to be equivalent to 500-level Engineering courses:
    - ECE 450
    - ECE 457
  - Students specializing in Materials Engineering or Welding Engineering must take MAT E 640 (★3)- Advanced Materials
     Thermodynamics as one of their two 600-level courses
  - O Reading or independent study courses will not count towards the total course requirements.
- ENGG 600 (★0.5)- Engineering Ethics and Integrity

#### **Thesis**

Registration in 900-level THES.
 Students are required to complete a thesis which embodies the results of independent research. All MSc students are required to deliver one public presentation on their research.

#### **Seminars**

Students are required to attend a minimum of six seminars of the *D.B. Robinson Distinguished Seminar Series* per academic year throughout the duration of their program. Students starting their program in January must attend at least three of these seminars in their first term. Students who miss the attendance requirement for the D.B. Robinson series will be assigned additional work.

#### **Ethics Requirement**

Engineering students meet their ethics requirement through ENGG 600.

#### Professional Development Requirement

Engineering students must meet their Professional Development requirement through the completion of two virtual courses available through e-class.

# Residence Requirement

The minimum period of residence is two four-month terms of full-time attendance at the University of Alberta.

# Length of Program

The maximum time to complete the thesis-based MSc program as set by the Faculty of Graduate Studies and Research is four years.

# The Degree of MEng (Chemical and Materials Engineering) [Graduate]

The MEng is a course-based program. The Department offers MEng degrees with specializations in Chemical Engineering, Process Control, Materials Engineering, and Welding Engineering.

# **Program Requirements**

Students must complete ten courses ( $\bigstar$ 27.5), including a  $\bigstar$ 3 project course.

#### Coursework (★24.5)

- Eight ★3 graduate-level courses. The courses are of the same type and calibre as those taken by the MSc and PhD candidates, and must be approved by the Associate Chair (Graduate).
  - At least four courses must be taken from the Department of Chemical and Materials Engineering
  - At least three of the CME courses must be at the 600-level or higher. The following courses are considered to be equivalent to 600-level CME courses:
    - ECE 540
    - ECE 560
    - ECE 561
    - ECE 760
    - ECE 662
    - ECE 664
    - ECE 665
    - ENG M 646
    - MEC E 615
  - The balance of the courses must be at the 500-level or higher in the Faculty of Engineering.
- ENGG 600 (★0.5)- Engineering Ethics and Integrity

#### **Project Course**

• CME 900 (★3) - Directed Research. The project is intended to apply knowledge learned during a students' program to a technical challenge (industrial/research) or a critical review of literature. The topic will be developed by the student in consultation with the project supervisor.

#### **Ethics Requirement**

Engineering students meet their ethics requirement through ENGG 600.

#### Professional Development Requirement

Engineering students are required to meet their Professional Development requirement through the completion of two virtual courses available through eclass.

# Length of Program

The maximum time to complete the course-based MEng program as set by the Faculty of Graduate Studies and Research is six years.

# The MBA/MEng Joint Program (Chemical and Materials Engineering) [Graduate]

The Faculty of Business and the Faculty of Engineering offer a program of joint study which enables students to earn both the MBA and MEng degrees after two calendar years of full-time study. Only students with an undergraduate degree in engineering are admissible to this program. For application information, entrance requirements and other details, refer to The MBA/MEng Combined Program of the University Calendar.



# The Degree of PhD (Chemical and Materials Engineering) [Graduate]

The Department offers PhD degrees with specializations in Chemical Engineering, Process Control, and Materials Engineering.

## **Program Requirements**

Students must successfully complete eight courses ( $\bigstar$ 20.5) and a thesis.

#### Coursework (★20.5)

- Six ★3 courses which must be approved by the Associate Chair (Graduate).
  - At least three courses must be 600-level or higher courses in the Department of Chemical and Materials Engineering. The following courses are considered to be equivalent to 600-level CME courses:
    - ECE 540
    - ECE 560
    - ECE 561
    - ECE 760
    - ECE 662
    - ECE 664
    - ECE 665
    - ENG M 646
    - MEC E 615
  - The remaining **three** courses must be at the 500-level or higher in the Faculty of Engineering, or be at the 400-level or higher in a Science department. Science courses at the 400-level must be approved by the Associate Chair (Graduate). The following courses are considered to be equivalent to 500-level Engineering courses:
    - ECE 450
    - ECE 457
  - Students specializing in Materials Engineering must take MAT E 640 Advanced Materials Thermodynamics as one of their three
     600-level courses
  - Reading courses will not count towards the total course requirements.
  - Students may be eligible for a Department course exemption if they have previously completed a recognized graduate degree program at an accredited university
- ENGG 600 (★0.5)- Engineering Ethics and Integrity
- CME 600 (★2) Introduction to Research Methods. This course must be completed in the first year in the doctoral program.

#### **Thesis**

• Registration in 900-level THES. Students are required to complete a thesis which embodies the results of independent research. All PhD students are required to deliver one public presentation on their research.

# ALBERTA

# **GRADUATE STUDIES AND RESEARCH**

### Candidacy Exam

The Candidacy exam must be held within 16 months of the initial registration in the program for full-time students. The research proposal must be submitted within 13 months of the initial registration in the program.

#### Seminar

Students are required to attend a minimum of six seminars of the *D.B. Robinson Distinguished Seminar Series* per academic year throughout the duration of their program. Students starting their program in January must attend at least three of these seminars in their first term. Students who miss the attendance requirement for the D.B. Robinson series will be assigned additional work.

#### **Ethics Requirement**

Engineering students meet their ethics requirement through ENGG 600.

#### Professional Development Requirement

Engineering students are required to meet their Professional Development requirement through the completion of two virtual courses available through eclass.

# Residence Requirement

The minimum period of residence is two academic years of full-time attendance at the University of Alberta.

# <u>Academic Standing Requirement</u>

Any graduate student who has gone directly into a PhD program after their BSc program is required to maintain a first-class standing (cumulative gpa of 3.5 out of 4.0).

# Length of Program

The maximum time to complete the PhD program as set by the Faculty of Graduate Studies and Research is six years.

# Chemistry [Graduate]

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University of Alberta
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# UNIVERSITY OF ALBERTA

# GRADUATE STUDIES AND RESEARCH

#### **General Information**

The Department of Chemistry offers programs leading to the degrees of Master of Science and Doctor of Philosophy, both requiring course work and thesis research. In addition to the four traditional areas of analytical, inorganic, organic and physical chemistry, the Department also offers special PhD programs in chemical biology and chemical physics.

The Department provides an outstanding research environment. More than 220 graduate students, plus postdoctoral fellows and research associates, are engaged in various research programs. The Department is among the best equipped and best funded in the nation and has a faculty renowned for their excellence in teaching and research.

The active research interests of the staff include the following:

Analytical: Separation science, including gas chromatography, two-dimensional gas chromatography, liquid chromatography and capillary electrophoresis; chemometrics; scanning probe microscopies such as atomic force, chemical force, and tunneling methods for the characterization of surfaces, biocompatible materials, protein adsorption, nano-wires, nano-sensors, and nano-arrays; microfluidic systems for Lab on a chip applications; mass spectrometry for biochemical analysis, Proteomics and metabolomics, utilizing MALDI and electrospray methods; molecular biology applied to developing fluorescent protein-based biosensors for live cell microscopy of biochemical processes; optical and vibrational biomolecular spectroscopic methods and instrumentation development involving laser spectroscopy methods; electrochemical methods and surface modification techniques; surface plasmon resonance spectroscopy of confined materials; thin films and nanoparticles for biomolecule sensing.

Inorganic: Organometallic chemistry of transition metals and f-elements; synthesis and reactions of bimetallic and metallocyclic compounds; metal-metal cooperativity effects; carbon-hydrogen bond activation; asymmetric catalysis; polymer-bound catalysts; rapid catalyst screening; chiral surfaces and electrodes; hydrogen, alkane and methanol fuel cells; inorganic materials, structures, bonding, electrical and magnetic properties; intermetallics and alloys; zintl phases; synthesis of rare-earth and transition-metal pnictides; template-directed synthesis; materials characterization; inorganic/polymer nanocomposites; synthesis of nanoparticles; molecular electronic devices; synthesis and characterization of nanostructured optoelectronic materials; synthesis of metal-based electroluminescent materials; light-emitting diodes; main group chemistry; inorganic polymers; hydrogen storage; ultra-hard ceramic coatings; Lewis acidic macrocycles; sensing technologies; inorganic multiple bonds; ligand design.

Organic: Structural and synthetic studies on natural products; degradation of natural products; heterocyclic chemistry; mono- and disaccharides; glycobiology, bioorganic chemistry, fluorescent probes, protein engineering; organometallic chemistry; reactive intermediates (ylides, carbenes, nitrenes); organic photochemistry; acetylenes; allenes; free radicals; synthesis and conformational studies of oligosaccharides with an emphasis on the application of NMR and molecular modelling; biomedically significant protein-oligosaccharide interactions; structure-activity correlations of antibiotics; development of new synthetic methodology and the synthesis of complex natural products with important biological properties; asymmetric catalysis; the invention of new reagents; mechanism and stereochemistry of enzymatic reactions; conjugated molecules; nanostructures; self-assembly and molecular recognition; organic, electronic and photonic materials; sensor arrays; combinatorial chemistry; bioconjugate chemistry and drug delivery; chemical biology; solid-phase organic synthesis; organoboron chemistry; design synthesis and characterization of unnatural biopolymers.

Physical: Mass spectrometry; chemistry of biologically relevant molecules in the gas phase; NMR spectroscopy; application of modern multinuclear NMR techniques to study molecular structure and dynamics of solid materials; biophysical chemistry involving NMR studies of peptide structure; DNA photo-damage; laser Raman spectroscopy, ultrafast molecular dynamics; nonlinear optical spectroscopy of the solid/liquid interface, structure/function studies of interfacial molecular recognition, green catalysis, and sensors; cavity ring down spectroscopy, chirality and chiral recognition; rotational and vibrational cluster spectroscopy; helium nanodroplet spectroscopy; computational and theoretical chemistry: study of the quantum dynamics; of systems of interest in physical chemistry; radiation-matter interactions; photodissociation dynamics; laser control; study of molecular structure and properties of molecules in excited states; mixed quantum-classical dynamics of condensed phase systems; theory and simulation of activated rate processes; vibrational energy relaxation; modeling of multidimensional spectra; development of basis sets; pseudopotential methods; electron correlation and relativistic effects; computational design and modeling of anti-cancer drugs.

Further information may be obtained by writing the Chair of the Department, or from our website at www.chem.ualberta.ca

#### **Entrance Requirements**

The Department's minimum admission requirements are a four-year undergraduate degree with a grade point average of 3.0 in the last two years of undergraduate (or graduate) work from the University of Alberta, or an equivalent qualification from a recognized institution. Candidates should normally be graduates in chemistry, however the Department will accept qualified applicants with degrees in related fields (cf., biochemistry or other bioscience programs from candidates who wish to pursue the chemical biology PhD program, and mathematics and/or physics background compensating for deficiencies in chemistry from those who wish to enter the chemical physics PhD program.)

English language proficiency requirements are a minimum TOEFL score of 550 (paper-based) or 88 (internet-based) or equivalent, where applicable (see English Language Requirement). To qualify as a Teaching Assistant, candidates must have a TOEFL score of at least 570 (paper-based) or 88 (internet-based) or equivalent.

#### Financial Assistance

Financial assistance in the form of scholarships and graduate assistantships is normally available for all graduate students who maintain a satisfactory performance. For full details, see our website at www.chem.ualberta.ca (Graduate Program, Financial Support).

## **Graduate Program Requirements**

- The Degree of MSc
- The Degree of PhD

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading Chemistry (CHEM).

# The Degree of MSc (Chemistry) [Graduate]

# **Program Requirements**

A minimum of  $\bigstar$ 9 in graduate chemistry courses must be passed. In addition, a research project must be carried out, the results of which are to be presented in thesis form, followed by an oral examination.

All students admitted for the Fall 2011 Term or later must register in CHEM 502 every Fall and Winter Term in which they are enrolled.

Students must obtain a GPA of 2.7 or greater in their first and subsequent years in order to remain in the graduate program.

The minimum period of residence is two four-month terms of full-time attendance at the University of Alberta.

# Length of Program

The time required to complete the MSc degree will vary according to the previous training of the candidate and the nature of the research project; however a minimum of two years is normally required. Candidates must complete their degree program within four years of the time they first register.



# The Degree of PhD (Chemistry) [Graduate]

## Program Requirements

A minimum of  $\bigstar$ 12, in graduate courses must be passed. In some circumstances, advance credit for graduate courses in chemistry taken elsewhere may be recommended by the Department to the Faculty of Graduate Studies and Research, up to a maximum of  $\bigstar$ 6.

All students admitted for the Fall 2011 Term or later must register in CHEM 502 every Fall and Winter Term in which they are enrolled.

In order to continue in the PhD program, a student must achieve a GPA of 2.7 or greater in the first year, and must maintain a cumulative GPA of 3.0 or greater in the second and subsequent years.

Every student must present a seminar on a topic other than the students' research program.

All PhD students must pass an oral candidacy examination in subjects relevant to their general field of research. Finally, the student will be required to present the results of the student's research in thesis form and orally to an examining committee, and as a seminar to the Department as a whole.

The minimum period of residence is two academic years of full-time attendance at the University of Alberta.

#### Note:

(Special chemical biology and chemical physics programs are also available, which allow increased emphasis on biology, and physics and mathematics, respectively.)

# Length of Program

The time required to complete the PhD degree will vary according to the previous training of the candidate and the nature of the research project; however, four years of study and research is normally required. Students with an MSc degree may be able to complete the PhD program within three years. Candidates must complete their degree program within six years of the time they first register.

# Civil and Environmental Engineering [Graduate]

Department of Civil and Environmental Engineering School of Mining and Petroleum Engineering 7-203 Donadeo Innovation Centre for Engineering University of Alberta 9211 - 116 Street NW Edmonton, Alberta T6H 1H9

E-mail: civeinfo@ualberta.ca www.civil.engineering.ualberta.ca

#### **General Information**

#### Degree Programs

The Department of Civil and Environmental Engineering, incorporating the School of Mining and Petroleum Engineering, offers programs of study leading to the advanced degrees of Master of Science, Master of Engineering and Doctor of Philosophy. The degree programs in the Department are organized along the traditional disciplines found in civil engineering including construction engineering and management, environmental engineering and science, geotechnical or geoenvironmental engineering, structural engineering, transportation engineering and water resources engineering. In addition, candidates with strong interests in the resource extraction industries can obtain advanced degrees in mining and petroleum engineering. The Department offers a wide range of course options permitting the flexibility to arrange programs for candidates who obtained their undergraduate degree in fields other than civil engineering including students with four year science degrees. In addition to discipline specific degree programs, the Department offers an interdisciplinary degree program in Civil and Environmental Engineering that provides the opportunities for interdisciplinary study in more than one research areas.

#### Research

#### Civil and Environmental Engineering

The Department has a major research orientation. Active research areas in the Department include the following:

#### Civil:

Construction engineering and management with a focus on productivity improvement, computing applications including artificial intelligence, simulation modelling and information management, optimization of aggregate and concrete manufacturing, and construction planning and control; geotechnical engineering and environmental geotechniques including the study of soil mechanics, rock mechanics, foundation engineering, engineering geology, permafrost, storage, disposal, and containment of industrial wastes and pollutants and contaminated or disturbed earthy material and groundwater; structural engineering with a strong focus in the structural behaviour and design of concrete, masonry, steel and timber members and frames in addition to structural analysis and solid mechanics; transportation engineering with a focus on urban transportation planning and evaluation, sustainable transportation, traffic engineering and road safety; and water resources engineering including the study of hydraulics, hydrology, river behavior, fluid mechanics, wave dynamics and climate change, interdisciplinary research with more than one focus such as in mining and petroleum engineering, in nano-material and environmental engineering, in biomechanics and structural engineering, and in transportation pavement material and geotechnical engineering, etc.

#### Environmental:

Environmental engineering and science with a focus on processes in air, soil, and water; system risk assessment and public health engineering; solid waste management; environmental hydraulics; applied microbiology and parasitology; applied chemistry; mathematical modelling of environmental systems; neural network technology; industrial waste management; and disposal and fate of pollutants in the environment.

#### School of Mining and Petroleum Engineering

The School's graduate degree program is operated in conjunction with the Department of Civil and Environmental Engineering reflecting the interdisciplinary nature of advanced research in the resource industries. Areas of research include the following:

#### Mining:

Mining engineering including mineral economics, geomechanics, geostatistics, simulation of mining systems; mine planning and design; surface and underground mining equipment and methods; and mine property evaluation.

#### Petroleum:

Petroleum engineering including multiphase flow through porous media; immiscible, miscible and micellar flooding; heavy oil recovery using thermal energy; interfacial phenomena; pressure build-up and drawdown analysis; and mathematical simulation of petroleum recovery systems.

## **Entrance Requirements**

The Department's minimum admission requirements are a four-year undergraduate degree with an average of 3.0 in the last two years of undergraduate work (or graduate work) at the University of Alberta, or an equivalent qualification from a recognized institution and a TOEFL score of 550 (paper-based) or 88 (internet-based with at least 20 per section) or an equivalent approved English language examination where applicable (see English Language Requirement).

#### Financial Assistance

Financial assistance is available through the Department to students in the form of research assistantships, teaching assistantships, tuition scholarships and a variety of awards administered by the University and affiliated institutions. Details may be found at www.gradstudies.ualberta.ca

# **Graduate Program Requirements**

- The Degree of MEng
- The MBA/MEng Joint Program
- The Degree of MSc
- The Degree of PhD

# **Degree Specializations**

The Department of Civil and Environmental Engineering encompasses a broad field of engineering and has eight main engineering disciplines: construction, environmental, geotechnical, mining, petroleum, structural, transportation, and water resources. The Department offers the following degree specializations in all of the degree programs. Each has a distinctive course offering designed to provide the student with advanced training in the area. In addition, the department offers graduate degrees in civil engineering without a specialization for interdisciplinary research within civil engineering.

### Construction Engineering and Management:

The focus is on the main principles and techniques of planning, control, execution and engineering of construction projects. The degree emphasizes construction management principles, computing applications in construction and the fundamentals of construction engineering.

# ALBERTA

# GRADUATE STUDIES AND RESEARCH

#### **Environmental Engineering:**

The degree focuses on the fundamental chemical, physical, and biological processes that can be adapted to water, soil, and air systems. The emphasis is on public health and environmental protection technology with electives in environmental management and impact assessment. Topic areas include water and waste treatment; solid and hazardous waste treatment; industrial waste treatment; water quality modelling; and municipal collection and distribution systems.

#### **Environmental Science:**

Students who have four-year science degrees and who wish to study applied environmental science may pursue an Environmental Science degree in civil engineering. This degree permits the study of applied environmental science in areas such as environmental health, chemistry, microbiology, zoology, or geography.

#### Geotechnical Engineering:

The degree focuses on the study of soil mechanics, rock mechanics, foundation engineering, engineering geology and permafrost with emphasis on the behavior of natural materials and field problems. Full use is made of modern design tools such as advanced techniques in laboratory and field testing and numerical methods of analysis.

#### Geoenvironmental Engineering:

The geoenvironment is that portion of our environment consisting of natural and man-made earth materials on and below the ground surface. Geoenvironmental engineering focuses on the management and control strategies of the geoenvironment from the standpoint of storage, disposal, and containment of industrial wastes and pollutants and contaminated or disturbed earthy material and groundwater.

#### Mining Engineering:

The mining industry is a major economic engine in Canada and elsewhere. Mining engineering degrees offered by the Department include studies in mineral economics, geomechanics, geostatistics, simulation of mining systems; mine planning and design; surface and underground mining equipment and methods; and mine property evaluation.

### Petroleum Engineering:

The petroleum industry is comprised of exploration, production and refining activities related to hydrocarbons. Of great importance is reservoir engineering where efficient recovery of hydrocarbons is a major objective. Important topics include multiphase flow through porous media; immiscible, miscible and micellar flooding; heavy oil recovery using thermal energy; interfacial phenomena; pressure build up and drawdown analysis; and mathematical simulation of petroleum recovery systems.

#### Structural Engineering:

This degree focuses on the analysis and design of buildings, bridges, and other structures. Emphasis is on structural systems of reinforced concrete, structural steel, and engineered masonry, but innovative and emerging technologies in areas related to timber, prestressed concrete, composite materials, and biomechanics are also covered.

#### Transportation Engineering:

Graduate degrees concentrate on the main principles and techniques involved in the planning, evaluation, design and control of transportation systems. Research topics include urban transportation systems, land use-transportation interactions and the environmental impacts of transportation systems.

#### Water Resources Engineering:

Graduate programs concentrate on the physical aspects of our environment as they relate to water supply, river problems, fish habitat, flood risk, pollutant dispersion and climate change. The program encompasses a wide variety of research topics including surface water hydrology; environmental fluid mechanics; computational hydraulics; river engineering; river and lake ice engineering; cold regions hydraulics and hydrology; urban hydraulics; design of hydraulic structures; air-sea interactions; surface wave mechanics; and water resources planning and management.

#### **Graduate Courses**

Undergraduate and Graduate courses can be found in Civil and Environmental Courses, or Mining and Petroleum Courses.

# The Degree of MEng (Civil and Environmental Engineering) [Graduate]

#### Program Requirements

The Master of Engineering is a course-based degree program that requires a minimum of  $\bigstar$ 24 (eight single-term graduate courses or equivalent), of which  $\bigstar$ 15 (five single-term courses or equivalent) should be in the candidate's major field of interest, ENGG 600 plus a project that is equivalent to  $\bigstar$ 3. In some areas of specialization, an additional  $\bigstar$ 6 (two single-term courses or equivalent) more than the minimum are required. The Department will require more  $\bigstar$ 3 courses in cases where the undergraduate degree does not provide a superior background for the chosen area of specialization. There is no second language requirement other than English for the degree of MEng.

# Length of Program

Candidates may complete the Master of Engineering program in a minimum of nine months. The maximum time permitted for completion of the program is four years from the date of first registration.

# The MBA/MEng Joint Program (Civil and Environmental Engineering) [Graduate]

The Faculty of Business and the Faculty of Engineering offer a program of joint study which enables students to earn both the MBA and MEng degrees after two calendar years of full-time study. Only students with an undergraduate degree in engineering are admissible to this program. For application information, entrance requirements and other details, refer to The MBA/MEng Combined Program of the University Calendar.

#### **Program Requirements**

The MBA/MEng Joint program requires 20 first-year  $\bigstar$ 1.5 MBA courses, ORG A 641, three second-year  $\bigstar$ 3 elective MBA courses, and seven  $\bigstar$ 3 graduate engineering courses, as approved by the Department, plus ENGG 600. In addition, one engineering project, equivalent to two  $\bigstar$ 3 courses and having a significant business related component, will be required. The project will be co-supervised by a professor from the Faculty of Business and a professor from the Department of Civil and Environmental Engineering.

# Length of Program

Students will normally take the 20 first-year MBA courses in their first two semesters. The program can be completed in two calendar years if students are enrolled on a full-time basis. The duration of the total program must not exceed six consecutive calendar years.

# The Degree of MSc (Civil and Environmental Engineering) [Graduate]

#### **Program Requirements**

The Master of Science program requires a minimum of  $\bigstar$  18 (six single-term graduate courses or equivalent), of which  $\bigstar$  12 (four single-term courses or equivalent) should be in the candidate's major fields of interest, ENGG 600, plus a research thesis. In some areas of specialization, an additional  $\bigstar$  6 (two single-term courses or equivalent) more than the minimum are required. The Department will require more  $\bigstar$  3 courses in cases where the undergraduate degree does not provide a superior background for the chosen area of specialization or in cases where the course preparation needs to be augmented to enhance the execution of the research topic.

There is no second language requirement other than English for the degree of MSc.

# Length of Program

A candidate may complete a Master of Science program in 15 to 18 months. However, students often require 19 to 23 months depending on the thesis topic. The maximum time permitted for completion of the program is four years from the date of first registration.

# The Degree of PhD (Civil and Environmental Engineering) [Graduate]

# Program Requirements

The PhD degree is a research degree. Courses in a doctoral program are assigned by the supervisor and supervisory committee, in consultation with the student. They are designed to enhance the depth and breadth of understanding in the field of study. The course requirements are determined on a case-by-case basis depending on the student's background. Students are required to have completed ENGG 600. Students in the doctoral program are expected to maintain a course average of 3.0 or higher before proceeding to their candidacy examination.

All doctoral candidates must prepare and defend a thesis of high calibre on an approved topic.

There is no second language requirement other than English for the degree of PhD.

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The minimum period of residence is two academic terms of full-time attendance at the University of Alberta. The two terms need not be consecutive.

#### Length of Program

The time required to complete the PhD will vary according to the previous training of the applicant and the nature of the research undertaken. However, a minimum of three years is normally needed. The maximum time permitted for completion of the program is six years from the date of first registration.

# Communication Sciences and Disorders [Graduate]

Department of Communication Sciences and Disorders 2-70 Corbett Hall University of Alberta Edmonton, Alberta T6G 2G4 E-mail: csd@rehabmed.ualberta.ca www.csd.ualberta.ca

#### **General Information**

The Department of Communication Sciences and Disorders offers graduate work leading to the Master of Science degree in Speech-Language Pathology (MScSLP).

The MSc program is designed to develop competencies in the prevention, evaluation, treatment, and management of articulation, language, fluency, voice, and resonance disorders as well as in the fundamental practices of audiology. Developed for students who hold an undergraduate degree in a variety of fields other than speech-language pathology, this entry-level program offers a course-based master's and an optional thesis-based track and is designed to provide students with the academic and clinical education required for certification by provincial and national professional associations.

The thesis-based MSc in Speech-Language Pathology program is designed to provide speech-language clinicians with the research skills needed to study the etiology, prevention, diagnosis, and management of speech, language, and hearing disorders. Students will undertake thesis research to enhance their abilities to take leadership roles in academic, clinical, and laboratory settings.

The Department maintains laboratory, instrumentation, and clinical facilities for a wide range of research interests (e.g., speech science, motor speech disorders, voice, language development and disorders, craniofacial anomalies, hearing disorders, and clinical supervision).

More detailed information on the program may be obtained at www.csd.ualberta.ca

#### Practicum Intervention Policy

The Dean, or Supervisor acting on behalf of the Dean, may immediately deny assignment of a student to, withdraw a student from, or vary terms, conditions, or site of practicum/ clinical placement if the Dean or Supervisor has reasonable grounds to believe that this is necessary in order to protect the Public Interest. Refer to Practicum Intervention Policy for additional information.

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#### Professional Ethics/Code of Student Behaviour

Students in the Department of Communication Sciences and Disorders are required to adhere to the professional code of ethics of their professional/licensing bodies. Refer to the Code of Student Behaviour. Amendments to the Code of Student Behaviour occur throughout the year. The official version of the Code of Student Behaviour, as amended from time to time, is housed on the University Governance website at www.governance.ualberta.ca.

#### Criminal Records Check

Students should be aware that under the Protection for Persons in Care Act, they may be required to satisfy a criminal-records check before being allowed to serve a period of internship, practicum placement or work experience. Refer to Requirement for Police Information Checks.

#### University Infectious Diseases Regulation

See University Infectious Diseases Regulation.

### **Entrance Requirements**

The Department's minimum admission requirements are an undergraduate degree with an admission GPA of at least 3.3 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\star$ 60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework. However, the minimum grade point average of accepted applicants is usually substantially higher than 3.3.

**English Language Proficiency** 

The Test of English as a Foreign Language (TOEFL) scores required for admission are as follows:

Internet Test (iBT) (Maximum 120)

CSD Minimum requirements:

- Overall score: 115
- Speaking: 28
- Writing: 26
- Listening: 24
- Reading: 22

Computer Test (CBT) (Maximum 300)

CSD Minimum Requirement:

- Overall score: 250
- Essay Writing: 5
- Test of Spoken English: 50

Paper Test (PBT) (Maximum 677)

CSD Minimum Requirement:

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Overall score: 600

• Test of Written English score: 5

• Test of Spoken English score: 50

Applicants must submit three letters of recommendation, results of the Graduate Records Examination (GRE), results of an online situational judgement test and a statement of career interests. No minimum cutoff is used to evaluate GRE scores, since the scores are used in conjunction with other indicators of student potential. Personal interviews may be used if deemed necessary in making final selections.

The deadline for submitting applications is February 1. For more information see www.csd.ualberta.ca

Applicants must have completed preparatory courses in areas fundamental to the program, as listed below.

#### **Pre-requisite Courses**

Application to the MSc SLP program requires the completion of eight prerequisite courses. These courses are selected to provide speech-language pathology applicants with the background needed to succeed in the MSc SLP program. The following courses and associated knowledge / skills are prerequisites to the MSc SLP program. To see a detailed list of prerequisite courses that can be used for credit at various universities, please refer to the Department Website.

- Statistics: Introduction to statistical methods
- Child Development or Developmental Psychology
- Cognitive psychology
- Neuroanatomy or Neuropsychology
- Introductory Linguistics
- Articulatory Phonetics
- Child Language Development, Child Language Acquisition or First Language Acquisition
- Indigenous Canadian History:

All students admitted to the MSc SLP program are required to complete a course focused on Indigenous history in Canada. This is considered 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 first term of registration. This requirement may be fulfilled through the certificate version of the University of Alberta Indigenous Canada MOOC. [https://www.ualberta.ca/admissionsprograms/online-courses/indigenous-canada]

# **Academic Standing**

The Department of Communication Sciences and Disorders (CSD) supports and adheres to the Academic Standing policies of the Faculty of Graduate Studies and Research. These policies are outlined in the Calendar under Academic Standing.

In addition to FGSR policies, the CSD Department has set additional requirements, as follows:

#### **Academic Probation Policy**

A recommendation for Academic Probation will be made to FGSR in the following circumstances:

- First failure of an MSc SLP academic or clinical course
- Recommendation of a "Borderline Pass" in a clinical course
- Cumulate GPA below 3.0

Students enrolled in the thesis-based track in the MSc SLP program will be governed by the Academic Probation Policy of the CSD Department. In addition, these students will be required to maintain a cumulative GPC of 3.3. If a student's cumulative GPA is below 3.3, the student may be required to change to the course-based track.

#### Financial Assistance

A limited number of teaching and research assistantships may be available within the Department. Successful candidates selected for the program are provided applications for department teaching and research assistantships. Students should review www.gradstudies.ualberta.ca for current information on available awards and other possible sources of funding.

# **Graduate Program Requirements**

- The Degree of MSc in Speech-Language Pathology (SLP)
- The MSc-SLP/PhD Combined Program
- The Post-baccalaureate Certificate in Francophone Practice for Speech-Language Pathologists

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the headings Rehabilitation Medicine (REHAB) and Communication Sciences and Disorders (CSD).

# The Degree of MSc in Speech-Language Pathology (SLP) (Communication Sciences and Disorders) [Graduate]

# Program Requirements

Requirements for the course-based MSc-SLP include successful completion of a minimum of  $\bigstar 81$  in courses, which includes  $\bigstar 27.5$  in clinical practica. During clinical practica, students must accrue a minimum of 350 supervised clinical hours (300 direct contact). Students are also required to complete a research project equivalent to  $\bigstar 3$  (CSD 900).

The prerequisite courses and program requirements ensure that students meet standards required for membership/certification in provincial and national professional associations. Further information about prerequisite courses and the required program of study may be obtained from the Department of Communication Sciences and Disorders website www.csd.ualberta.ca.

Requirements for the thesis-based MSc-SLP include all of the academic and clinical requirements outlined above for the course-based track. However, instead of the research project (CSD 900), thesis-based students complete a thesis and an additional one-credit practical course in methods of data analysis.

Additional coursework in research design, statistics, or specialized content may be recommended by the supervisor and thesis committee.

The period of residency is three four-month terms (fall, winter, fall) and one spring/summer term of full-time attendance at the University of Alberta.

#### **Required Courses:**

- CSD 501 Clinical Research Methods
- CSD 502 Anatomy and Physiology of the Speech Mechanism
- CSD 505 Speech Science
- CSD 507 Phonological Disorders

- CSD 509 Motor Speech Disorders
- CSD 511 Child Language Development and Assessment
- CSD 515 Hearing Science/Audiology
- CSD 516 Diagnosis and Appraisal of Communication Disorders
- CSD 518 Remediation of Child Language Disorders
- CSD 520 Adult Language Disorders I
- CSD 521 Dysphagia
- CSD 523 Augmentative/Alternative Communication Systems
- CSD 524 Introduction to Clinical Practicum I
- CSD 525 Introduction to Clinical Practicum II
- CSD 526 Voice and Resonance Disorders
- CSD 527 Language and Literacy
- CSD 528 Fluency Disorders
- CSD 529 Adult Language Disorders II
- CSD 532 Advanced Clinical Practicum
- CSD 533 Advanced Clinical Practicum
- CSD 534 Aural (Re)habilitation
- CSD 540 Advanced Clinical Practicum
- CSD 541 Advanced Clinical Practicum
- INT D 410

#### Course-based only:

• CSD 900 - Directed Research Project

#### Thesis-based only:

- THES
- an additional one-credit practical course in methods of data analysis

# Length of Program

A minimum of two calendar years will normally be required to complete the program. Students in the thesis-based track will most likely require at least one additional term to complete the program. The time required to complete the program may be varied for individual candidates but cannot exceed the statutory limits of the Faculty of Graduate Studies and Research as set out in Time Limit for Completion of Graduate Programs.

# The MSc-SLP/PhD Combined Program (Communication Sciences and Disorders) [Graduate]

The Department of Communication Sciences and Disorders and the Faculty of Rehabilitation Medicine offer a program of combined study which permits highly qualified students to earn both the MSc in Speech-Language Pathology and the PhD in Rehabilitation Sciences after five years of full-time study.

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Each student must apply first to the MScSLP program, following the procedures in General Information. In addition, students must indicate on their online graduate application that they are applying to the combined MSc-SLP/PhD-RS program.

Following admission, students may apply to the MScSLP/PhD combined program. Applications may be made any time after admission to the program and must be made by November 15 in the first term of the program.

Applications to the combined program will be reviewed by the Communication Sciences and Disorders Admissions Committee. Approved applications will be forwarded to the Rehabilitation Science PhD Program Committee for review. Admission will be recommended only for those students judged to have the ability and motivation to handle the significant demands of the combined program.

#### **Entrance Requirements**

Applicants to the combined MScSLP/PhD program must meet the entrance requirements of both the MSc-SLP program (see General Information) and the PhD in Rehabilitation Science program (see General Information). They must have completed a four-year honors baccalaureate degree or a master's degree in a related field from a recognized academic institution. They must have completed the required preparatory courses for the MScSLP program and show evidence of research potential as demonstrated by scholarly work. In addition, they must meet the GPA, GRE, and English language proficiency requirements of each program and submit letters of recommendation.

#### **Program Requirements**

Students in the combined program will complete all of the requirements for the MScSLP and PhD programs, including coursework, clinical practica, candidacy, and research. The Program requirements for the MScSLP can be found in The Degree of MSc in Speech-Language Pathology (SLP), and those for the PhD in Rehabilitation Science in The Degree of PhD. The PhD thesis will fulfill the research requirement for the MScSLP. The sequence of coursework and other requirements will be determined by the candidate's PhD supervisory committee in consultation with the Graduate Program Coordinator and Academic Coordinator of Clinical Education in the Department of Communication Sciences and Disorders.

# Length of Program

A minimum of five calendar years will normally be required to complete the combined MScSLP/PhD program. The time required to complete the program may be varied for individual candidates but cannot exceed the statutory limits of the Faculty of Graduate Studies and Research as set out in Time Limit for Completion of Graduate Programs.

# The Post-baccalaureate Certificate in Francophone Practice for Speech-Language Pathologists (Communication Sciences and Disorders) [Graduate]

The Certificate, comprised of three graduate-level courses, is a collaborative effort between the Faculty of Rehabilitation Medicine and the Campus Saint-Jean. The Certificate provides SLPs with an opportunity to acquire information about normal and disordered speech and language, and become familiar with assessment and intervention methods and materials for child and adult Francophone populations. See The Post-Baccalaureate Certificate in Francophone Practice for Speech-Language Pathologists for a complete description including entrance and program requirements. Courses are listed in Course Listings, Course Listings, under the heading Rehabilitation Medicine (REHAB).



# Communications and Technology [Graduate]

Faculty of Extension
University of Alberta
Enterprise Square
10230 Jasper Avenue
Edmonton, Alberta T5J 4P6
E-mail: mact@ualberta.ca
www.mact.ca

#### **General Information**

The multidisciplinary Master of Arts in Communications and Technology (MACT) offers a theoretical, historical, and practical examination of communications. The degree is designed for individuals who seek to provide reflective and informed leadership in the management and use of information and communications technologies in their organizations and fields. These fields include education and training, information technology, marketing, mass media, new media production, program design and development, public affairs, and writing and publishing. Coursework covers small-group and organizational communication; the theory, history, and practice of information and communications technologies; and the research skills associated with analyzing and evaluating these technologies, particularly as they are managed and used in the workplace. The MACT program may be completed through either a course-based or thesis-based route.

# **Graduate Program Requirements**

The Degree of MA in Communications and Technology (MACT)

# The Degree of MA in Communications and Technology (MACT) [Graduate]

# **Entrance Requirements**

The normal admission requirements are as follows: a four-year degree from a recognized university; a GPA of at least 3.0 (or equivalent); at least three years of relevant professional experience; three letters of reference; and a letter of interest. The letter of interest should state the applicant's academic or professional area of specialization, specify how completion of the program would support the applicant's professional practice, and identify a provisional topic for the final applied research project. Where applicable a satisfactory score on an approved English language examination as described below is required. TOEFL - minimum score of 600 (paper-based) or a total score of 100 with a score of at least 20 on each of the individual skill areas (Internet-based); MELAB - minimum score of 85; IELTS (Academic) - minimum overall band score of 7.0 with at least 5.5 on each band; CAEL - overall minimum score of 60 with at least 60 on each subtest; PTE (Academic) - overall minimum score of 68. Up to 25 students, including up to four thesis-based students, are admitted each year to begin their studies in May. The MACT program may be completed through either a coursebased or thesis-based route.

# <u>Program Requirements</u>

Applicants from outside of the Alberta capital region, including international applicants, may register in the MACT program without changing their place of residence, except for the required residency of the Spring Institute and for thesis-based students, a combined online and face-to-face residency in Year 1. The course-based route requires the completion of seven core courses, three electives, and a final applied research project. The thesis-based route requires the

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completion of five core courses, up to two electives, and the thesis. For both routes, four of the core courses are completed during two Spring Institutes, held each May at the University of Alberta, with other core courses offered online. Students may complete approved elective courses offered by the University of Alberta or another recognized university.

#### Length of Program

Core courses are scheduled to permit completion of the degree through either the course-based or thesis-based route within two academic years.

# Community Engagement [Graduate]

Faculty of Extension
University of Alberta
Enterprise Square
10230 Jasper Avenue
Edmonton, Alberta T6J 4P6
E-mail mace@ualberta.ca

#### **General Information**

The Community Engagement Graduate Program in the Faculty of Extension offers an in-depth theoretical examination of the conceptual and philosophical underpinnings of community engagement, along with critical analysis of related evidence-based research, and the opportunity to gain practical experience in the application of this growing field. The Master of Arts in Community Engagement (MACE) degree is an interdisciplinary graduate program designed for those seeking to provide reflective and informed leadership in community engagement and sustainability applied to industry, postsecondary education, government, and not-for-profit settings. The MACE program is a thesis-based degree comprised of coursework in theory and analysis of community engagement, collaboration, partnership development, cultural awareness, research methodology, project management, and policy development. An opportunity for practical experience is available to all students through the community service-learning component within the MACE program.

# **Entrance Requirements**

The minimum admission requirements are those set out in the minimum acceptable standards in the Faculty of Graduate Studies and Research. These include a baccalaureate degree or its academic equivalent in a relevant field from an academic institution recognized by the University of Alberta, with a grade point average of at least 3.0 on the 4-point scale over the last ★60 credits; preference will be given to those with community-based experience; and if required (see Regulations of the Faculty of Graduate Studies and Research) a minimum overall score on an approved English language examination as described below. PTE Academic score of at least 59; a minimum acceptable TOEFL score of 580 (paper-based) or a total score of 92 with a score of at least 20 on each of the individual skill areas (internet-based); or a minimum overall band score of 7.0, with at least 6 on each test band, on the IELTS. Applicants should arrange for their English language test results to be sent directly to the Faculty of Extension.

Applicants are required to provide

- 1. A current curriculum vitae
- 2. Three letters of reference
- 3. At least one year of relevant experience is preferred

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4. A letter of not more than 800 words that outlines the anticipated research topic(s) or areas of thesis research. The applicant should identify appropriate faculty members from the Faculty of Extension as potential supervisors.

# The Degree of MA in Community Engagement Program Requirements

Students must complete the following:

### Required Courses (★15)

- MACE 560 Community Engagement Practicum
- One additional research methods course
- MACE 501 The Practice of Community Engaged Scholarship
- MACE 502 Theoretical Foundations of the Scholarship of Engagement
- MACE 503 Methods of Community Based Research

#### **Flectives**

Two graduate-level courses  $(\bigstar 6)$  approved by the student's supervisor.

#### **Thesis**

Successfully complete and defend a thesis on a research topic in the area defined in consultation with the student's supervisory committee. The scope and quality of the thesis should be appropriate to form the basis of a refereed journal publication. Students are required to present the results of their thesis at a student seminar prior to their defence.

#### Length of Program

Students may undertake the MA on a part-time or full-time basis. The maximum time permitted for completion of the program is four years (part or full-time) from the date of registration.

#### **Graduate Courses**

Graduate course can be found in Course Listings, under the subject heading Community Engagement (MACE).



# Community-Based Research and Evaluation (CBRE) [Graduate]

Community Engagement Studies
Faculty of Extension
University of Alberta
Enterprise Square
10230 Jasper Avenue
Edmonton, Alberta T5J 4P6
E-mail: cbrecert@ualberta.ca
www.extension.ualberta.ca/study/community-engagement-studies/

#### **General Information**

Community Engagement Studies offers an embedded certificate program leading to a Graduate Certificate in Community-Based Research and Evaluation (CBRE). The certificate is designed to increase the capacity of graduate students to participate in and lead community-based research and evaluation projects. Students will gain conceptual, methodological, and experiential competencies in CBRE that can be integrated within a student's specific program of graduate studies.

For more information, visit our website at www.extension.ualberta.ca/study/community-engagement-studies/, or e-mail cbrecert@ualberta.ca.

# **Graduate Program Requirements**

The Graduate Certificate in Community-Based Research and Evaluation

# **Graduate Courses**

Graduate courses can be found in Course Listings.

# The Graduate Certificate in Community-Based Research and Evaluation [Graduate]

# **Entrance Requirements**

This is an embedded certificate program. All applicants must be currently registered in the Faculty of Graduate Studies and Research in either a master's or doctoral degree program.

Students may apply at any time after admission to a graduate program, but are advised to apply early to accommodate course selection. Application information may be obtained from Community Engagement Studies, Faculty of Extension, 2-356 Enterprise Square. For more information, visit our website at www.extension.ualberta.ca/study/community-engagement-studies/, or e-mail cbrecert@ualberta.ca.

# Program Requirements

Requirements for the graduate certificate in CBRE consist of the satisfactory completion of INT D 500 (★3), one ★3 graduate-level course in program planning and evaluation, one ★3 graduate-level course in quantitative research methods, one ★3 graduate-level course in qualitative research methods and a supervised CBRE experience. A graduate-level course in mixed methods (qualitative and quantitative) may be substituted for either the quantitative or qualitative methods course requirement. The courses other than INT D 500 must be selected from a list of approved options available from Community Engagement Studies, Faculty of Extension, 2-410 Enterprise Square. For more information, visit our website at www.extension.ualberta.ca/study/communityengagement-studies/, or e-mail observert@ualberta.ca.

#### Length of Program

All program requirements must be completed during the student's graduate degree program.

# Comparative Literature Program [Graduate]

Department of Modern Languages and Cultural Studies
200 Arts Building
University of Alberta
Edmonton, Alberta T6G 2E5
E-mail: mlcs.grad@ualberta.ca
www.ualberta.ca/modern-languages-and-cultural-studies

Admission to this program has been suspended as of July 1, 2016. For students interested in the area of Comparative Literature, see Transnational and Comparative Literatures in the Department of Modern Languages and Cultural Studies.

#### **General Information**

The Comparative Literature Program is an interdisciplinary program in the Department of Modern Languages and Cultural Studies and offers programs leading to the degrees of Master of Arts and Doctor of Philosophy in Comparative Literature. The Comparative Literature Program offers an area of specialization in Spanish and Latin American Studies in conjunction with the Department of Modern Languages and Cultural Studies. Entrance requirements, financial assistance and application procedures are through the Comparative Literature Program, Modern Languages and Cultural Studies.

# **Entrance Requirements**

Normally, minimum admission requirements for an MA in Comparative Literature are an undergraduate degree with an average of at least 3.0 in the last two years of undergraduate work at the University of Alberta, or an equivalent qualification from a recognized institution. Minimum requirements for a PhD are an MA with an average of at least 3.0 in the last two terms of graduate work. Exceptionally qualified students holding a BA degree can bypass the MA and be admitted directly into a doctoral degree program. In addition to these minimal requirements, a TOEFL score of 580 (paper-based) or 95 (Internet-based with at least 20 per section) where applicable is required. (see English Language Requirement).

Graduate students in Comparative Literature are required to have one language, other than English, at the MA level and two languages, other than English, at the PhD level. Details regarding language requirements may be obtained by contacting the Graduate Coordinator.

#### Financial Assistance

Comparative Literature annually provides a number of scholarships or graduate research and teaching assistantships. Scholarships and assistantships will not be offered to any student until the student has been formally admitted to the graduate program. Graduate students are also eligible for various University Fellowships and Bursaries depending on eligibility. For details see www.gradstudies.ualberta.ca.

# **Graduate Program Requirements**

- The Degree of MA in Comparative Literature
- The Degree of PhD in Comparative Literature

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading Comparative Literature (C LIT).

# The Degree of MA in Comparative Literature (Comparative Literature Program) [Graduate]

# Program Requirements

Students admitted to this program are expected to have a minimum of  $\star$ 30 in Comparative Literature, or equivalent courses approved by the Graduate Coordinator, beyond the 100 level in their undergraduate studies.

Students who satisfy this requirement and who wish to complete a thesis-based master's degree will be required to take C LIT 501, C LIT 502, C LIT 511 and C LIT 560. An additional  $\star$ 6 at the graduate level will be determined on an individual basis in conjunction with the Graduate Coordinator in the first year of their studies, and write and defend a thesis in their second year of the program.

Students who satisfy this requirement and who wish to complete a course-based master's degree will be required to take C LIT 501, C LIT 502, C LIT 511 and C LIT 560 and a capping exercise (usually done in the last term of study). An additional  $\bigstar$ 12 at the graduate level will be determined on an individual basis in conjunction with the Graduate Coordinator.

Students admitted with less than the  $\bigstar$ 30 course prerequisite will be required to take up to  $\bigstar$ 27 (thesis-based MA) or  $\bigstar$ 36 (course-based MA). The exact number of extra courses will be determined individually by the graduate committee.

The minimum period of residence for the thesis-based MA is two four-month terms of full-time attendance at the University of Alberta. There is no residence requirement for the course-based MA.

# Length of Program

A student's previous background and experience will determine the length of time required to complete an MA.

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A candidate for the thesis-based MA, entering from a four-year specialized program and continuing work in the same field, is normally required to complete the equivalent of one calendar year of course work. The normal time of completion for the thesis-based program, including thesis, is two years. The maximum time allowed to complete the thesis-based program is four years. Other candidates are normally required to complete the equivalent of three terms of course work.

A candidate for the course-based MA is normally required to complete the equivalent of two calendar years of course work. The normal time of completion for the course-based program, including the capping exercise, is two years. The maximum time allowed to complete the course-based program is six years.

# The Degree of PhD in Comparative Literature (Comparative Literature Program) [Graduate]

#### **Program Requirements**

Students admitted to this program with an MA in Comparative Literature from the University of Alberta, or the equivalent, will be required to take C LIT 501, C LIT 502, C LIT 511, C LIT 512, C LIT 560, and an additional \*\*\frac{1}{2}3\$ at the graduate level to be determined, on an individual basis, with the approval of the Graduate Coordinator in their first year of studies. In the Fall term of their second year, students will complete two Field Papers related to their thesis topic. Normally during their second year but no later than April of their second year, students will complete the FGSR Candidacy Examination, and then write and defend a thesis in the area of Comparative Literature by the end of their fourth year. Students admitted with less than the background requirement will be required to take up to six additional graduate courses in Comparative Literature, with the exact number to be determined individually by the graduate committee.

#### Length of Program

The time necessary to complete the requirements for the PhD depends upon the student's background and progress. For students admitted to the program with an MA in Comparative Literature, the normal completion time is four years. The maximum time allowed for the completion of a PhD program is six years.

The minimum period of residence is two academic years of full-time attendance at the University of Alberta.

# Computing Science [Graduate]

Department of Computing Science 221 Athabasca Hall University of Alberta Edmonton, Alberta T&G 2E8 E-mail: gradinfo@cs.ualberta.ca

#### **General Information**

The Computing Science Department offers programs leading to the degrees of Master of Science and Doctor of Philosophy in major areas of study, including Advanced Man-Machine Interfaces, Algorithmics, Artificial Intelligence, Bioinformatics, Communication Networks, Computer Games, Computer Graphics, Computer Vision and Multimedia Communications, Database Systems, Machine Learning, Reinforcement Learning, Robotics, Software Engineering, Software Systems and Statistical Machine Learning.

The offered MSc programs are: a standard MSc in Computing Science, an MSc in Computing Science with specialization in Statistical Machine Learning and an MSc in Computing Science is offered as a thesis-based program, as well as course-based program; the

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MSc in Computing Science with specialization in Statistical Machine Learning is offered as a thesis-based program; the MSc in Computing Science with specialization in Multimedia is offered as a course-based program.

The offered PhD programs are: a standard PhD in Computing Science and a program leading to a PhD in Computing Science with specialization in Statistical Machine Learning.

Further information may be obtained from the Graduate Program Administrator, Department of Computing Science.

## **Entrance Requirements**

#### For all programs EXCEPT the MSc (course-based) with a specialization in Multimedia:

Applicants for the MSc degree in Computing Science should have a four-year undergraduate degree or the equivalent from a recognized university, with adequate background in computing science and mathematics.

There is no direct admission to the MSc with a specialization in Statistical Machine Learning. Applicants wishing to pursue this program should apply to the thesis-based MSc; they may apply to transfer to the SML program after one or two terms of study provided a supervisor is found.

Applicants for the PhD in Computing Science must have an MSc degree in Computing Science or a related field.

Exceptionally qualified applicants having the equivalent of a First-Class Honors BSc degree may be admitted directly to the PhD program.

MSc candidates who perform especially well in their first session (eight months) of studies, may apply to change program category into the PhD program after two terms of study.

All applicants must have an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent standing from a recognized institution. The admission GPA will be calculated on the last  $\star$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:

- a minimum TOEFL score of 100 with a minimum score of 20 on each of the individual skill areas (internet-based), or equivalent
- a minimum score of 90 on the MELAB.
- a minimum of 6.0 on each band on the IELTS with an overall minimum score of 7.0,
- a minimum overall score of 70 on the CAEL with at least 60 on each subtest
- a minimum overall score of 68 on the PTE.

In addition, the Department of Computing Science reserves the right to require a demonstration of English language proficiency.

Applicants must also submit three letters of reference and a CV.

Applicants to a thesis-based MSc are required to select a research area and name up to three professors as potential supervisors.

Applicants to a PhD are required to submit a statement of purpose, the abstract of their MSc thesis, and the names of up to three professors as potential supervisors. PhD students will only be admitted if a professor agrees to be their supervisor.

A Graduate Record Examination (GRE) is optional but highly recommended for non-Canadian applicants, as well as Canadian applicants with a degree from a non-Canadian university. The GRE is also recommended for students with backgrounds unrelated to Computing Science. The examinations should be written early enough so that scores will be available by the application deadline.

# UNIVERSITY OF ALBERTA

# GRADUATE STUDIES AND RESEARCH

#### For the MSc (course-based) with a specialization in Multimedia:

Applicants for the MSc degree with a specialization in Multimedia should have a four-year undergraduate degree in Computing Science, Computer Engineering, or in a related field in Science or Engineering with some coding and implementation experience. Applicants must have an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent standing from a recognized institution. The admission GPA will be calculated on the last ★60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Where applicable, applicants must meet the minimum English Language Requirement.

Applicants are also required to submit a CV, multimedia-related professional certificates/diplomas, and a multimedia project history (if not included in the CV).

Industrial experience may be considered as a factor when considering admission of students close to these boundaries. It should be noted that these are minimum requirements only.

Applications to the MSc in Multimedia program will be assessed by the MSc in Multimedia admission.

#### **Application Deadlines**

For all programs EXCEPT the MSc (course-based) with a specialization in Multimedia, the early application deadline is December 15. Assessment of applications will begin on this date as well as consideration for funding and scholarships. Applications will continue to be accepted until January 15.

For the MSc (course-based) with a specialization in Multimedia the application deadline is April 30.

Canadian students who hold major scholarships may contact the Department at any time, even if it is after the deadline.

#### Financial Assistance

The department provides financial support for students in thesis-based programs according to the guidelines given in the Department of Computing Science Financial Support Policy (https://www.ualberta.ca/computingscience/

graduate-studies/financial-support-and-awards). In order to be considered for assistance, students must maintain satisfactory academic and teaching performance.

# **Graduate Program Requirements**

- The Degree of MSc
- The Degree of MSc in Computing Science with a specialization in Statistical Machine Learning
- The Degree of MSc in Computing Science with Specialization in Multimedia
- The Degree of PhD
- The Degree of PhD in Computing Science with Specialization in Statistical Machine Learning

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading Computing Science (CMPUT).

Multimedia courses can be found in Course Listings, under the subject heading Multimedia (MM).



# The Degree of MSc (Computing Science) [Graduate]

# **Program Requirements**

Two routes to the MSc degree are available, a thesis-based route and a course-based route.

#### Course-based Route:

Students are required to complete  $\pm$ 30 in graduate-level courses, including a  $\pm$ 6 capstone course.

#### Coursework (★24)

Courses are to be chosen in consultation with an advisor and approved by the Associate Chair (Graduate).

- Seven ★3 graduate-level (500 or 600 level) courses
- CMPUT 603 Teaching and Research Methods

#### Capstone course $(\bigstar 6)$

CMPUT 701 - Essay in Computing Science I

#### Thesis-based Route:

Students are required to complete  $\pm 15$  in coursework and a thesis.

#### Coursework (★15)

Courses are to be chosen in consultation with an advisor/supervisor and approved by the Associate Chair (Graduate)

- Four ★3 graduate-level (500 or 600 level) computing science courses. This may include one ★3 Special Topics course (CMPUT 605)
- CMPUT 603 Teaching and Research Methods

#### Thesis

Registration in 900-level THES. Students must complete and successfully defend a thesis. The thesis topic is to be approved by the supervisor.

#### Seminar

Thesis-based Master's students are required to present a technical seminar based on their research, prior to their final defense.

#### Residence Requirement

The minimum period of residence for the thesis-based MSc is two four-month terms of full-time attendance at the University of Alberta. There is no full-time residence requirement for a course-based MSc.

#### Length of Program

Master's students are expected to complete their program in less than two years.

The maximum time to complete the course-based MSc program as set by the Faculty of Graduate Studies and Research is six years.

The maximum time to complete the thesis-based MSc program as set by the Faculty of Graduate Studies and Research is four years.

# The Degree of MSc in Computing Science with a Specialization in Statistical Machine Learning (Computing Science) [Graduate]

Statistical Machine Learning emphasizes the theoretical aspects of the design and analysis of machine learning algorithms using tools of statistics and computer science.

Students can alternately apply to the Department of Mathematical and Statistical Sciences to participate in this program.

# **Program Requirements:**

Students are required to complete ★18 in coursework and a thesis.

#### Coursework (★18)

Courses are to be chosen in consultation with an advisor and approved by the Associate Chair (Graduate). Courses must include:

- Five ★3 graduate-level courses approved for this specialization
  - At least one ★3 course must be through the Department of Mathematical and Statistical Sciences
  - At least one ★3 course must be through the Department of Computing Science
  - O Normally two of the five courses must be at the 600-level.
- CMPUT 603 (★3)- Teaching and Research Methods

#### Thesis

 Registration in 900-level THES. The thesis must be in an area associated with Statistical Machine Learning. The thesis topic is to be approved by the supervisor.

# Residence Requirement

The minimum period of residence for the MSc in Statistical Machine Learning is two four-month terms of full-time attendance at the University of Alberta.

## Length of Program

Master's students are expected to complete their program in less than two years.

The maximum time to complete the thesis-based MSc program as set by the Faculty of Graduate Studies and Research is four years.

# The Degree of MSc in Computing Science with a Specialization in Multimedia (Computing Science) [Graduate]

#### **General Information**

The MSc in Computing Science with a specialization in Multimedia program offers a theoretical and practical understanding of multimedia processing, encoding, communications, rendering and visualization, as well as multimedia synchronization, retargeting and data quality assessment. The degree is designed for individuals seeking to develop their knowledge of multimedia and the skills to participate in further studies with industries operating in this area. Program work consists of core courses plus an internship or coop placement covering various aspects of multimedia.

# Program Requirements

This is a course-based program consisting of coursework and an internship.

Students are required to complete  $\bigstar 36$  in graduate-level coursework, including:

- Six ★3 Multimedia (MM) courses
- MM 807 (★9)- Multimedia Project I AND
   MM 808 (★9)- Multimedia Project II.

Courses are scheduled regularly, and may be conducted in an intensive evening / weekend format. Elective reading courses are scheduled according to instructor availability.

# Academic Standing Requirement

To remain in the program, students are required to maintain a minimum cumulative GPA of at least 3.0 with no grade less than B-.

# Length of Program

There is no full time residency requirement. Students are expected to complete this program in two years.

The maximum time to complete the course-based MSc program as set by the Faculty of Graduate Studies and Research is six years.



# The Degree of PhD (Computing Science) [Graduate]

# **Program Requirements**

Students are required to complete  $\bigstar$ 12 in coursework and a thesis.

#### Coursework (★12)

Courses are to be chosen in consultation with an advisor/supervisor and approved by the Associate Chair (Graduate)

- Three ★3 graduate-level courses. This may include one ★3 Special Topics course (CMPUT 605)
- CMPUT 603 (★3)- Teaching and Research Methods

#### **Thesis**

 Registration required in 900-level THES. The major part of the student's program will consist of original research that will culminate in a doctoral dissertation.

#### Candidacy Exam

Students are required to write a candidacy document and take a candidacy oral examination. Students must demonstrate that they have adequate knowledge of the discipline and subject matter relevant to the thesis topic and the ability to pursue and complete original research at an advanced level.

#### Seminar

PhD students are required to present three publicly-announced Departmental seminars.

# <u>Academic Standing Requirement</u>

PhD students are required to maintain a minimum GPA of 3.3 in three graduate courses (excluding CMPUT 603) with no grade lower than B-.

# Residence Requirement

The minimum period of residence is two academic years of full-time attendance at the University of Alberta.

# Length of Program

Students are encourage to finish their PhD program within 5 years.

The maximum time to complete the PhD program as set by the Faculty of Graduate Studies and Research is six years.



# The Degree of PhD in Computing Science with Specialization in Statistical Machine Learning (Computing Science) [Graduate]

Statistical Machine Learning emphasizes the theoretical aspects of the design and analysis of machine learning algorithms using tools of statistics and computer science.

Students can alternately apply to the Department of Mathematical and Statistical Sciences to participate in this program.

# **Program Requirements**

Students are required to complete  $\star$ 15 in coursework and a thesis.

### Coursework (★15)

Courses are to be chosen in consultation with the supervisor and approved by the Associate Chair (Graduate). Courses must include:

- Four  $\bigstar 3$  graduate level courses approved for this specialization
  - Two ★3 courses must be through the Department of Mathematical and Statistical Sciences
  - Two ★3 courses must be through the Department of Computing Science
- CMPUT 603 (★3)- Teaching and Research Methods

#### Thesis

 Registration in 900-level THES. The thesis must be in an area associated with Statistical Machine Learning. The thesis topic is to be approved by the supervisor.

#### Candidacy Exam

Students are required to write a candidacy document and take a candidacy oral examination. Students must demonstrate that they have adequate knowledge of the discipline and subject matter relevant to the thesis topic and the ability to pursue and complete original research at an advanced level.

#### Academic Standing Requirement

PhD students are required to maintain a minimum GPA of 3.3 in three graduate courses (excluding CMPUT 603) with no grade lower than B-.

# Residence Requirement

The minimum period of residence is two academic years of full-time attendance at the University of Alberta.

# Length of Program

Students are encouraged to finish their PhD program within 5 years.

The maximum time to complete the PhD program as set by the Faculty of Graduate Studies and Research is six years.

# **Dentistry** [Graduate]

Department of Dentistry
5th Floor, Edmonton Clinic Health Academy
University of Alberta
Edmonton, Alberta T6G 1C9
E-mail: dentistry.gradstudies@ualberta.ca
www.dent.ualberta.ca

#### **General Information**

The Department of Dentistry offers the MSc and PhD in Medical Sciences degrees (see Medical Sciences) for post-DDS applicants or for those proceeding from a BSc or equivalent degree. Research may be carried out in a variety of dentistry-related disciplines for which faculty members in the department have active research programs. Inquiries should be directed to the Graduate Programs Administrator, Department of Dentistry (www.dent.ualberta.ca).

The Department offers the MSc in Medical Sciences program in the following areas of specialty: Dental Hygiene, Dentistry, Oral Biology, Oral Medicine, Orthodontics, and Periodontology. The PhD programs are offered in Dentistry, Oral Biology, Orthodontics and Periodontology.

Application for admission should be directed to the University of Alberta's Online Graduate Application.

# **Entrance Requirements**

The Department's minimum admission requirements are listed below by program.

# Financial Assistance

For all students except those in the MSc in Medical Sciences – Oral Medicine, funding from fellowships and studentships may be available on a competitive basis, but candidates should be prepared financially for the program. Supervisors may support students from operating grants and limited financial assistance may also be available from the Department. Other sources of funding may be sought as described in the Graduate Financial Aid and Awards sections of the University Calendar, from provincial bursaries, from professional associations and private foundations, etc.

Students in the MSc in Medical Sciences - Oral Medicine may receive financial assistance for a 36-month period. Funding from other sources may be available on a competitive basis.

#### **Graduate Program Requirements**

The program of study and professional development requirements are determined by the department in consultation with the supervisor and the supervisory committee.

- The Degree of MSc in Medical Sciences Dental Hygiene
- The Degree of MSc in Medical Sciences Dentistry
- The Degree of MSc in Medical Sciences Oral Biology
- The Degree of MSc in Medical Sciences Oral Medicine
- The Degree of MSc in Medical Sciences Orthodontics
- The Degree of MSc in Medical Sciences Periodontology
- The Degree of PhD in Medical Sciences Dentistry
- The Degree of PhD in Medical Sciences Oral Biology
- The Degree of PhD in Medical Sciences Orthodontics
- The Degree of PhD in Medical Sciences Periodontology

#### **Graduate Courses**

Dentistry related graduate courses can be found in Course Listings, under the subject headings Dentistry (DENT), Dental Hygiene (D HYG) and Oral Biology (OBIOL).

# The Degree of MSc in Medical Sciences - Dental Hygiene [Graduate]

The Department of Dentistry offers the degree of MSc in Medical Sciences - Dental Hygiene as a research-based program. This is not a clinical training program.

# **Entrance Requirements**

The Department's minimum admission requirements are an undergraduate degree with an admission GPA of at least 3.0 on a four-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last ★60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework. The undergraduate degree does not have to be in Dental Hygiene.

Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:

- TOEFL (internet-based) minimum score 95 with at least 20 per section or equivalent;
- MELAB minimum score of 91;
- CAEL minimum score of 70 with at least 70 on each subtest;
- or an IELTS (Academic) minimum score of 7.5 with at least 6 on each band.

Applicants are also required to submit the following:

- a current curriculum vitae
- a statement of intent
- three letters of recommendation (two must be professional)

- Applicants must identify a willing faculty supervisor
- Applicants must identify a potential thesis topic
- Applicants must identify potential research funding in their application.

Admission is dependent upon the approval of the Department of Dentistry Graduate Studies Committee and the Medical Sciences Graduate Program Committee.

For the MSc in Medical Sciences – Dental Hygiene applications are always open. Applications received by March 1 will receive preference for Fall Term (September) admission. Applications received by June 1 will receive preference for Winter Term (January) admission.

#### **Program Requirements**

Students are required to complete a minimum of  $\bigstar 9$  in graded coursework, consisting of  $\bigstar 6$  in required courses and  $\bigstar 3$  in elective courses. The program of study is determined by the supervisor.

Student progress will be monitored through an oral and written assessment and an interview with the Graduate Program Director in the Spring term.

#### Required courses $(\bigstar 6)$

- DENT 542 Research Methodology OR an equivalent research methods course
- DENT 543 Introduction to Research Methods and Data Management
- DENT 601 Seminars in Oral Health Sciences **OR** an equivalent seminar course.

#### Elective courses $(\bigstar 3)$

ullet Students must complete  $\star 3$  in graduate-level courses chosen in consultation with their supervisor.

#### **Thesis**

• Registration in 900-level THES. Students are required to complete and defend a thesis.

#### **Seminars**

Students have an attendance requirement for the Discover Dental Sciences seminars and to participate in the Graduate Student Research Day.

### Length of Program

The time required to complete the MSc will vary according to the previous training of the applicant and the nature of the research undertaken; however, a maximum of three years is considered normal. The maximum time permitted to complete the program as set by the Faculty of Graduate Studies and Research is four years.



# The Degree of MSc in Medical Sciences - Dentistry [Graduate]

The Department of Dentistry offers the degree of MSc in Medical Sciences - Dentistry as a research-based program.

### **Entrance Requirements**

The Department's minimum admission requirements are an undergraduate degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\star$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:

- TOEFL (internet-based) minimum score 95 with at least 20 per section or equivalent;
- MELAB minimum score of 91;
- CAEL minimum score of 70 with at least 70 on each subtest;
- or an IELTS (Academic) minimum score of 7.5 with at least 6 on each band.

Applicants are also required to submit the following:

- a current curriculum vitae
- a statement of intent
- three letters of recommendation (two must be professional)
- Applicants must identify a willing faculty supervisor
- Applicants must identify a potential thesis topic
- Applicants must identify potential research funding in their application.

Admission is dependent upon the approval of the Department of Dentistry Graduate Studies Committee and the Medical Sciences Graduate Program Committee

For the MSc in Medical Sciences – Dentistry applications are always open. Applications received by March 1 will receive preference for Fall Term (September) admission. Applications received by June 1 will receive preference for Winter Term (January) admission.

# Program Requirements

Students are required to complete a minimum of  $\bigstar 9$  in coursework, consisting of  $\bigstar 6$  in required courses and  $\bigstar 3$  in elective courses. The program of study is determined by the program director and supervisor (where appropriate).

Student progress will be monitored through an oral and written assessment and an interview with the Graduate Program Coordinator in the Spring term.

#### Required courses $(\bigstar 6)$

- DENT 542 Research Methodology
- DENT 543 Introduction to Research Methods and Data Management
- DENT 601 Seminars in Oral Health Sciences

#### Elective courses $(\bigstar 3)$

Students must complete ★3 in graduate-level courses chosen in consultation with the program director and their supervisor.

#### **Thesis**

Registration in 900-level THES. Students are required to complete and defend a thesis.

#### Seminars

Students have an attendance requirement for the Discover Dental Sciences seminars and to participate in the Graduate Student Research Day.

### Length of Program

The time required to complete the MSc will vary according to the previous training of the applicant and the nature of the research undertaken; however, a maximum of three years is considered normal.

The maximum time permitted to complete the program as set by the Faculty of Graduate Studies and Research is four years.

# The Degree of MSc in Medical Sciences - Oral Biology [Graduate]

The Department of Dentistry offers the degree of MSc in Medical Sciences – Oral Biology as a research-based program.

# **Entrance Requirements**

The Department's minimum admission requirements are an undergraduate degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\star$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:

- TOEFL (internet-based) minimum score 95 with at least 20 per section or equivalent;
- MELAB minimum score of 91;
- CAEL minimum score of 70 with at least 70 on each subtest;
- or an IELTS (Academic) minimum score of 7.5 with at least 6 on each band.

Applicants are also required to submit the following:

- a current curriculum vitae
- a statement of intent
- three letters of recommendation (two must be professional)
- Applicants must identify a willing faculty supervisor

- Applicants must identify a potential thesis topic
- Applicants must identify potential research funding in their application.

Admission is dependent upon the approval of the Department of Dentistry Graduate Studies Committee and the Medical Sciences Graduate Program Committee.

For the MSc in Medical Sciences –Oral Biology applications are always open. Applications received by March 1 will receive preference for Fall Term (September) admission. Applications received by June 1 will receive preference for Winter Term (January) admission.

### **Program Requirements**

Students are required to complete a minimum of  $\bigstar 9$  in coursework, consisting of  $\bigstar 6$  in required courses and  $\bigstar 3$  in elective courses. The program of study is determined by the program director and supervisor (where appropriate).

Student progress will be monitored through an oral and written assessment and an interview with the Graduate Program Coordinator in the Spring term.

### Required courses (★6)

- DENT 542 Research Methodology
- DENT 543 Introduction to Research Methods and Data Management
- DENT 601 Seminars in Oral Health Sciences

#### Elective courses $(\bigstar 3)$

Students must complete ★3 in graduate-level courses chosen in consultation with the program director and their supervisor.

#### **Thesis**

Registration in 900-level THES. Students are required to complete and defend a thesis.

#### **Seminars**

Students have an attendance requirement for the Discover Dental Sciences seminars and to participate in the Graduate Student Research Day.

### Length of Program

The time required to complete the MSc will vary according to the previous training of the applicant and the nature of the research undertaken; however, a maximum of three years is considered normal.

The maximum time permitted to complete the program as set by the Faculty of Graduate Studies and Research is four years.

# The Degree of MSc in Medical Sciences - Oral Medicine [Graduate]

The Department of Dentistry offers a thesis-based MSc degree in Medical Sciences for dental graduates which focuses on Oral Medicine. The program offers clinical training leading to eligibility to sit the oral medicine specialty credentialing examination of the Royal College of Dentists of Canada. The program commences in September.

Clinical expertise is supplemented by off-service rotations in a variety of medical disciplines. (See Medical Sciences.)

### **Entrance Requirements**

The Department's minimum admission requirements are a Doctor of Dental Surgery (DDS) or equivalent with an average of 3.0 on a four-point scale in the last 
★ 60 or two years of undergraduate or graduate work at the University of Alberta, or an equivalent qualification from a recognized institution.

Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:

- TOEFL (internet-based) minimum score 95 with at least 20 per section or equivalent;
- MELAB minimum score of 91;
- CAEL minimum score of 70 with at least 70 on each subtest;
- or an IELTS (Academic) minimum score of 7.5 with at least 6 on each band.

Applicants are also required to provide the following:

- a current curriculum vitae
- a statement of intent
- three letters of recommendation (two must be professional)
- an official letter from their dental school noting their class ranking upon graduation from dentistry.
- Completion of at least one year of experience as a licensed dentist prior to the start of the program is preferred.
- Applicants must have a license to practice Dentistry in Alberta, or must have passed the NDEB examination of Canada.
- Applicants who are not licensed but in a Canada/USA accredited GPR program are required to obtain a letter from the Program Director stating
  they are in good standing with no professional conduct issues.
- A personal interview is required for short-listed applicants. These applicants will be advised of the arranged interview date by e-mail.

Admission is dependent upon the approval of the Division of Oral Medicine Admissions Committee, the Department of Dentistry Graduate Studies Committee and the Medical Sciences Graduate Program Committee.

For applicants that are not licensed by Alberta Dental Association and College (ADA&C), a condition of admission is for candidates to obtain registration on the Education and Research Register from the ADA&C by August 1 prior to starting the program in the fall term.

Applicants who already possess a full license from the ADA&C do not need to obtain additional licensure.

For the MSc in Oral Medicine the application deadline is September 1 for the following September admission.

# <u>Program Requirements</u>

Students are required to complete a minimum of ★50 in required coursework. The program also consists of seminars, a clinical component and a thesis. Student progress will be monitored through an annual written and/or oral assessment in the Spring Term.

# ALBERTA

# **GRADUATE STUDIES AND RESEARCH**

The program of study is determined by the department in consultation with the supervisor and the supervisory committee.

### Required courses (★50)

#### First Year (★27)

- DENT 502 Oral Pathology
- DENT 503 Oral Medicine I
- DENT 504 Oral Medicine Clinics I
- DENT 542 Research Methodology
- DENT 562 TMD/Orofacial Pain
- DENT 563 Temporomandibular Disorders Orofacial Pain Clinics
- DENT 565 Evidence Based Dentistry
- DENT 566 Systematic Reviews in Dentistry

#### Second Year $(\bigstar 16)$

- DENT 604 Oral Medicine Seminars II
- DENT 605 Oral Medicine Clinics II
- DENT 606 Pharmacotherapeutics in Oral Medicine
- DENT 607 Advanced Oral Radiology
- DENT 663 Temporomandibular Disorders/Orofacial Pain Clinics

#### Third Year $(\bigstar 7)$

- DENT 704 Oral Medicine Seminars III
- DENT 705 Oral Medicine Clinics III
- DENT 763 Temporomandibular Disorders/Orofacial Pain Clinics III

#### **Thesis**

• Registration in 900-level THES. Students are required to complete and defend a thesis.

#### Seminars

Students must attend the Discover Dental Sciences seminars and participate in the Graduate Student Research Day.

# Requirements for Clinical courses

These requirements must be met prior to starting the clinical courses. If there is an associated fee, students are responsible for the costs incurred.

# GRADUATE STUDIES AND RESEARCH

- Medical Testing and Immunization Requirements: To ensure, insofar as possible, both student and patient safety, the Faculty of Medicine and
  Dentistry requires that all students must have their immunization status reviewed and updated as necessary by a qualified healthcare professional
  upon acceptance into a health sciences program. (University Infectious Diseases Regulation)
- Police Information Checks and Protection for Persons in Care: Applicants should be aware that a clear Police Information Check (PIC) is required
  as a condition of admission and that any criminal charges pending must be declared. (Requirement for Police Information Checks); (Protection for
  Persons in Care)
- Professional Standards for Students in the Faculty of Medicine and Dentistry: (Professional and Ethical Standards)
- The Department of Dentistry Technical Standards Policy: defines the necessary knowledge, skills, professional behaviors, and attitudes expected
  of students. (Technical Standards)

### Length of Program

The time required to complete the program is three years.

The maximum time permitted to complete the program as set by the Faculty of Graduate Studies and Research is four years.

# The Degree of MSc in Medical Sciences - Orthodontics [Graduate]

The Department of Dentistry offers a thesis-based MSc degree in Medical Sciences - Orthodontics. Through a combination of didactic and clinical courses, the program is structured to prepare the dental graduate for an orthodontic practice and/or a related clinical academic appointment. The clinical requirements involve the successful completion of a selected number of teaching cases. (See Medical Sciences).

# Entrance Requirements

The Department's minimum admission requirements are a Doctor of Dental Surgery (DDS) or equivalent with an admission GPA of at least 3.4 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last 
★ 60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:

- TOEFL (internet-based) minimum score 95 with at least 20 per section or equivalent;
- MELAB minimum score of 91:
- CAEL minimum score of 70 with at least 70 on each subtest;
- or an IELTS (Academic) minimum score of 7.5 with at least 6 on each band.

All applicants are also required to provide the following:

- a current curriculum vitae
- a statement of intent
- three letters of recommendation (two must be professional)
- An official letter from their dental school noting their class ranking upon graduation from dentistry.
- Completion of at least one year of experience as a licensed dentist immediately prior to the start of the program is required.
- Applicants must have a license to practice Dentistry in Alberta, or must have passed the NDEB examination of Canada.

# GRADUATE STUDIES AND RESEARCH

- Applicants who are not licensed but in a Canada/USA accredited GPR program are required to obtain a letter from the Program Director stating
  they are in good standing with no professional conduct issues.
- A personal interview is required for short-listed applicants. These applicants will be advised of the arranged interview date by e-mail.

Admission is dependent upon the approval of the Division of Orthodontics Selection Committee, the Department of Dentistry's Graduate Studies Committee and the Medical Sciences Graduate Program Committee.

For applicants that are not licensed by Alberta Dental Association and College (ADA&C), a condition of admission is for candidates to obtain registration on the Education and Research Register from the ADA&C by August 1 prior to starting the program in the fall term. Applicants who already possess a full license from the ADA&C do not need to obtain additional licensure.

For the MSc in Orthodontics the application deadline is September 1 for the following September admission.

### **Program Requirements**

Students are required to complete a minimum of ★71 in required coursework. The program also consists of seminars, a clinical component and a thesis. Student progress will be monitored through an annual written and/or oral external assessment. Feedback from this assessment serves to identify areas that require additional attention by the student. The assessment will permit the development of specific clinical and/or didactic improvement objectives before the next annual assessment.

The program of study is determined by the department in consultation with the supervisor and supervisory committee.

### Required courses ( $\star$ 71)

#### First Year (★33)

- DENT 530 Orthodontic Techniques and Biomechanics
- DENT 532 Growth and Development
- DENT 540 Orthodontic Seminars
- DENT 541 Orthodontic Clinics
- DENT 562 TMD/Orofacial Pain
- DENT 565 Evidence Based Dentistry
- DENT 566 Systematic Reviews in Dentistry
- DENT 607 Advanced Oral Radiology
- \* OBIOL 500 Oral Biology I
- \* OBIOL 501 Oral Biology II

#### Second Year $(\pm 22)$

- DENT 551 Introduction to Applied Statistics
- DENT 552 Applied Multivariate Statistical Analysis
- DENT 640 Orthodontic Seminars

<sup>\*</sup> OBIOL 500 and 501 are required to be taken in either year one or year two.

DENT 641 - Orthodontic Clinics

#### Third Year $(\bigstar 16)$

- DENT 740 Orthodontic Seminars
- DENT 741 Orthodontic Clinics

#### Thesis

Registration in 900-level THES. Students are required to complete and defend a thesis.

#### **Seminars**

Students have an attendance requirement for the Discover Dental Sciences seminars and to participate in the Graduate Student Research Day.

### Requirements for Clinical courses

These requirements must be met prior to starting the clinical courses. If there is an associated fee, students are responsible for the costs incurred.

- Medical Testing and Immunization Requirements: To ensure, insofar as possible, both student and patient safety, the Faculty of Medicine and
  Dentistry requires that all students must have their immunization status reviewed and updated as necessary by a qualified healthcare professional
  upon acceptance into a health sciences program. (University Infectious Diseases Regulation)
- Police Information Checks and Protection for Persons in Care: Applicants should be aware that a clear Police Information Check (PIC) is required
  as a condition of admission and that any criminal charges pending must be declared. (Requirement for Police Information Checks); (Protection for
  Persons in Care)
- Professional Standards for Students in the Faculty of Medicine and Dentistry: (Professional and Ethical Standards)
- The Department of Dentistry Technical Standards Policy: defines the necessary knowledge, skills, professional behaviors, and attitudes expected of students. (Technical Standards)

## Length of Program

The minimum time required to complete the MSc is three years.

The maximum time permitted to complete the program as set by the Faculty of Graduate Studies and Research is four years.

# The Degree of MSc in Medical Sciences - Periodontology [Graduate]

The Department of Dentistry offers a thesis-based MSc degree in Medical Sciences - Periodontology. Through a combination of didactic and clinical courses, the program is structured to prepare the dental graduate for Periodontology practice and/or an educational academic appointment. This is a thesis-based program. In addition the clinical requirements involve successful completion of selected teaching cases. (See Medical Sciences).

### **Entrance Requirements**

The Department's minimum admission requirements are a Doctor of Dental Surgery (DDS) or equivalent with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last 
★ 60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:

- TOEFL (internet-based) minimum score 95 with at least 20 per section or equivalent;
- MELAB minimum score of 91:
- CAEL minimum score of 70 with at least 70 on each subtest;
- or an IELTS (Academic) minimum score of 7.5 with at least 6 on each band.

All applicants are also required to submit the following:

- a current curriculum vitae
- a statement of intent
- three letters of recommendation (two must be professional)
- An official letter from their dental school noting their class ranking upon graduation from dentistry.
- Completion of at least one year of experience as a licensed dentist immediately prior to the start of the program is *preferred*.
- Applicants must have a license to practice Dentistry in Alberta, or must have passed the NDEB examination of Canada.
- Applicants who are not licensed but in a Canada/USA accredited GPR program are required to obtain a letter from the Program Director stating
  they are in good standing with no professional conduct issues.
- A personal interview is required for short-listed applicants. These applicants will be advised of the arranged interview date by e-mail.

Admission is dependent upon the approval of the Division of Periodontology Selection Committee, the Department of Dentistry's Graduate Studies Committee and the Medical Sciences Graduate Program Committee.

For applicants that are not licensed by Alberta Dental Association and College (ADA&C), a condition of admission is for candidates to obtain registration on the Education and Research Register from the ADA&C by August 1 prior to starting the program in the fall term. Applicants who already possess a full license from the ADA&C do not need to obtain additional licensure.

For the MSc in Periodontology the application deadline is September 1 for the following September admission.

# Program Requirements

Students are required to complete a minimum of ★66 in required coursework. The program also consists of a clinical component, seminars, and a thesis. Student progress will be monitored through an annual written and/or oral external assessment. Feedback from this assessment serves to identify areas that require additional attention by the student. The assessment will permit the development of specific clinical and/or didactic improvement objectives before the next annual assessment.

The program of study is determined by the department in consultation with the supervisor and supervisory committee.

# Required courses (★66)

#### First Year (★29)

- DENT 562 TMD/Orofacial Pain
- DENT 565 Evidence Based Dentistry
- DENT 566 Systematic Reviews in Dentistry
- DENT 570 Periodontology Fundamentals I
- DENT 571 Implantology Fundamentals I
- DENT 572 Periodontology Seminars I
- DENT 573 Periodontology Clinics I
- OBIOL 500 Oral Biology I
- OBIOL 501 Oral Biology II

#### Second Year (★24)

- DENT 551 Introduction to Applied Statistics
- DENT 670
- DENT 671
- DENT 672 Periodontology Seminars II
- DENT 673 Periodontology Clinics II
- DENT 674

#### Third Year $(\bigstar 13)$

- DENT 770
- DENT 771
- DENT 772 Periodontology Seminars III
- DENT 773 Periodontology Clinics III

#### Thesis

• Registration in 900-level THES. Students are required to complete and defend a thesis.

#### **Seminars**

Students have an attendance requirement for the Discover Dental Sciences seminars and to participate in the Graduate Student Research Day.

#### Requirements for Clinical courses

These requirements must be met prior to starting the clinical courses. If there is an associated fee, students are responsible for the costs incurred.

# ALBERTA

# GRADUATE STUDIES AND RESEARCH

- Medical Testing and Immunization Requirements: To ensure, insofar as possible, both student and patient safety, the Faculty of Medicine and
  Dentistry requires that all students must have their immunization status reviewed and updated as necessary by a qualified healthcare professional
  upon acceptance into a health sciences program. (University Infectious Diseases Regulation)
- Police Information Checks and Protection for Persons in Care: Applicants should be aware that a clear Police Information Check (PIC) is required
  as a condition of admission and that any criminal charges pending must be declared. (Requirement for Police Information Checks); (Protection for
  Persons in Care)
- Professional Standards for Students in the Faculty of Medicine and Dentistry: (Professional and Ethical Standards)
- The Department of Dentistry Technical Standards Policy: defines the necessary knowledge, skills, professional behaviors, and attitudes expected
  of students. (Technical Standards)

### Length of Program

The minimum time required to complete the MSc is three years.

The maximum time permitted to complete the program as set by the Faculty of Graduate Studies and Research is four years.

# The Degree of PhD in Medical Sciences - Dentistry [Graduate]

The Department of Dentistry offers the degree of PhD in Medical Sciences - Dentistry.

### **Entrance Requirements**

The Department's minimum admission requirements are a master's degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\bigstar$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Applicants without a master's degree may be considered for admission provided they can demonstrate adequate prior relevant education and experiences as determined by the Department of Dentistry.

Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:

- TOEFL (internet-based) minimum score 95 with at least 20 per section or equivalent;
- MELAB minimum score of 91:
- CAEL minimum score of 70 with at least 70 on each subtest;
- or an IELTS (Academic) minimum score of 7.5 with at least 6 on each band.

All applicants are also required to submit the following:

- a current curriculum vitae
- a statement of intent
- three letters of recommendation (two must be professional)
- Applicants must identify a willing faculty supervisor
- Applicants must identify a potential thesis topic
- Applicants must identify potential funding in their application.

# ALBERTA

# GRADUATE STUDIES AND RESEARCH

Admission is dependent upon the approval of the Department of Dentistry Graduate Studies Committee and the Medical Sciences Graduate Program Committee.

For the MSc in Medical Sciences – Dental Hygiene, the MSc and PhD in Medical Sciences – Dentistry, and the MSc and PhD in Medical Sciences – Oral Biology, applications are always open. Applications received by March 1 will receive preference for Fall Term (September) admission. Applications received by June 1 will receive preference for Winter Term (January) admission.

### **Program Requirements**

Students are required to complete a minimum of  $\bigstar$ 12 in coursework, consisting of  $\bigstar$ 6 in required courses and  $\bigstar$ 6 in elective courses. The program also consists of seminars and a thesis. The program of study is determined by the Graduate Program Director in consultation with the supervisor and supervisory committee.

Student progress will be monitored through an oral and written assessment and an interview with the Graduate Program Coordinator in the Spring term.

### Required courses $(\bigstar 6)$

- DENT 542 Research Methodology
- DENT 543 Introduction to Research Methods and Data Management
- DENT 601 Seminars in Oral Health Sciences

### Elective courses $(\bigstar 6)$

• Students must complete ★6 in graduate-level courses chosen in consultation with the program director and their supervisor.

#### **Thesis**

• Registration in 900-level THES. Students are required to complete and defend a thesis.

#### Candidacy exam

Students are required to take a written and oral candidacy examination. Students must demonstrate that they possess an adequate knowledge of the discipline and of the subject matter relevant to their thesis topic, and that they have the ability to pursue and complete original research at an advanced level.

#### **Seminars**

Students have an attendance requirement for the Discover Dental Sciences seminars and to participate in the Graduate Student Research Day.

### Length of Program

The time required to complete the PhD will vary according to the previous training of the applicant and the nature of the research undertaken; however, a maximum of five years is considered normal. The maximum time permitted to complete the PhD program as set by the Faculty of Graduate Studies and Research is six years.



# The Degree of PhD in Medical Sciences - Oral Biology [Graduate]

The Department of Dentistry offers the degree of PhD in Medical Sciences - Oral Biology.

# **Entrance Requirements**

The Department's minimum admission requirements are a master's degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last ★60 of graded coursework completed, or on the equivalent of the last two year of full-time graded coursework.

Applicants without a master's degree may be considered for admission provided they can demonstrate adequate prior relevant education and experiences as determined by the Department of Dentistry.

Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:

- TOEFL (internet-based) minimum score 95 with at least 20 per section or equivalent;
- MELAB minimum score of 91;
- CAEL minimum score of 70 with at least 70 on each subtest;
- or an IELTS (Academic) minimum score of 7.5 with at least 6 on each band.

All applicants are also required to submit the following:

- a current curriculum vitae
- a statement of intent
- three letters of recommendation (two must be professional)
- Applicants must identify a willing faculty supervisor
- Applicants must identify a potential thesis topic
- Applicants must identify potential funding in their application.

Admission is dependent upon the approval of the Department of Dentistry Graduate Studies Committee and the Medical Sciences Graduate Program Committee.

For the PhD in Medical Sciences – Oral Biology, applications are always open. Applications received by March 1 will receive preference for Fall Term (September) admission. Applications received by June 1 will receive preference for Winter Term (January) admission.

# Program Requirements

Students are required to complete a minimum of ★12 in coursework, consisting of ★6 in required courses and ★6 in elective courses. The program also consists of seminars and a thesis. The program of study is determined in by the Graduate Program Director in consultation with the supervisor and supervisory committee.

Student progress will be monitored through an oral and written assessment and an interview with the Graduate Program Coordinator in the Spring term.

### Required courses $(\bigstar 6)$

DENT 542 - Research Methodology

- DENT 543 Introduction to Research Methods and Data Management
- DENT 601 Seminars in Oral Health Sciences

### Elective courses $(\bigstar 6)$

Students must complete ★6 in graduate-level courses chosen in consultation with the program director and their supervisor.

#### **Thesis**

Registration in 900-level THES. Students are required to complete and defend a thesis.

#### Candidacy Exam

Students are required to take an oral and written candidacy examination. Students must demonstrate that they possess an adequate knowledge of the discipline and of the subject matter relevant to their thesis topic, and that they have the ability to pursue and complete original research at an advanced level.

#### Seminars

Students have an attendance requirement for the Discover Dental Sciences seminars and to participate in the Graduate Student Research Day.

### Length of Program

The time required to complete the PhD will vary according to the previous training of the applicant and the nature of the research undertaken; however, a maximum of five years is considered normal. The maximum time permitted to complete the PhD program as set by the Faculty of Graduate Studies and Research is six years.

# The Degree of PhD in Medical Sciences - Orthodontics [Graduate]

The Department of Dentistry offers the degree of PhD in Medical Sciences - Orthodontics. It is a full-time research training program with clinical training integrated into it. Through a combination of didactic and clinical courses, the program is structured to prepare the dental graduate for an orthodontic practice and/or a related academic appointment.

### **Entrance Requirements**

The Department's minimum admission requirements are a Doctor of Dental Surgery (DDS) or equivalent **and** a master's degree with an admission GPA of at least 3.4 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\star$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Applicant's without a master's degree may be considered for admission provided they can demonstrate adequate prior relevant education and experiences as determined by both the Department of Dentistry and the Division of Orthodontics.

# GRADUATE STUDIES AND RESEARCH

Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:

- TOEFL (internet-based) minimum score 95 with at least 20 per section or equivalent;
- MELAB minimum score of 91;
- CAEL minimum score of 70 with at least 70 on each subtest:
- or an IELTS (Academic) minimum score of 7.5 with at least 6 on each band.

All applicants are also required to submit the following:

- a current curriculum vitae
- a statement of intent
- three letters of recommendation (two must be professional)
- an official letter from their dental school noting their class ranking upon graduation from dentistry.
- Completion of at least one year of experience as a licensed dentist immediately prior to the start of the program is required.
- Applicants must have a license to practice Dentistry in Alberta, or must have passed the NDEB examination of Canada.
- Applicants who are not licensed but in a Canada/USA accredited GPR program are required to obtain a letter from the Program Director stating
  they are in good standing with no professional conduct issues.
- A personal interview is required for short-listed applicants. These applicants will be advised of the arranged interview date by e-mail.
- Identify a suitable supervisor to provide support.

Admission is dependent upon the approval of the Department of Dentistry's Graduate Studies Committee, the Division of Orthodontics Selection Committee, and the Medical Sciences Graduate Program Committee.

# Program Requirements

Students are required to complete a minimum of  $\bigstar 83$  in required coursework. Additional courses related to the specific area of research may be required. The program also consists of seminars, a clinical component and a thesis.

The clinical requirements involve successful completion of a selected number of teaching cases. Clinical training will not start until defined research milestones are attained and the candidacy examination is successfully passed. Clinical training will start in September immediately after these conditions are met.

Students enrolled in the PhD in Medical Sciences - Orthodontics program will not have the option of transferring to the MSc in Medical Sciences - Orthodontics program.

The program of study and professional development requirements are determined by the Graduate Program Director in consultation with the supervisor and supervisory committee.

### Prior to clinical training $(\star 12)$

#### Required courses (★6)

- DENT 542 Research Methodology
- DENT 543 Introduction to Research Methods and Data Management
- DENT 601 Seminars in Oral Health Sciences

#### Elective courses $(\bigstar 6)$

Students must complete  $\star$ 6 in graduate-level courses chosen in consultation with the program director and their supervisor.

### Required courses in clinical curriculum (★71)

#### First Year (★33)

- DENT 530 Orthodontic Techniques and Biomechanics
- DENT 532 Growth and Development
- DENT 540 Orthodontic Seminars
- DENT 541 Orthodontic Clinics
- DENT 562 TMD/Orofacial Pain
- DENT 565 Evidence Based Dentistry
- DENT 566 Systematic Reviews in Dentistry
- DENT 607 Advanced Oral Radiology
- \* OBIOL 500 Oral Biology I
- \* OBIOL 501 Oral Biology II

#### Second Year ( $\star$ 22)

- DENT 551 Introduction to Applied Statistics
- DENT 552 Applied Multivariate Statistical Analysis
- DENT 640 Orthodontic Seminars
- DENT 641 Orthodontic Clinics

#### Third Year (★16)

- DENT 740 Orthodontic Seminars
- DENT 741 Orthodontic Clinics

#### Thesis

• Registration in 900-level THES. Students are required to complete and defend a thesis.

 $<sup>^{*}</sup>$  OBIOL 500 and 501 are required to be taken in either year one or year two.

### Candidacy exam

Successful completion of the PhD candidacy examination will be required by October 1 prior to the academic year the student starts their clinical training. This will allow the allocation of a clinical training spot for the following September start.

#### **Seminars**

Students have an attendance requirement for the Discover Dental Sciences seminars and to participate in the Graduate Student Research Day.

#### Requirements for Clinical courses

These requirements must be met prior to starting the clinical courses. If there is an associated fee, students are responsible for the costs incurred.

- Students must obtain registration on the Education and Research Register from the ADA&C by August 1 prior to starting the clinical program in the Fall Term. Candidates who already possess a full license from the ADA&C do not need to obtain additional licensure.
- Medical Testing and Immunization Requirements: To ensure, insofar as possible, both student and patient safety, the Faculty of Medicine and
  Dentistry requires that all students must have their immunization status reviewed and updated as necessary by a qualified healthcare professional
  upon acceptance into a health sciences program. (University Infectious Diseases Regulation)
- Police Information Checks and Protection for Persons in Care: Applicants should be aware that a clear Police Information Check (PIC) is required
  as a condition of admission and that any criminal charges pending must be declared. (Requirement for Police Information Checks); (Protection
  for Persons in Care)
- Professional Standards for Students in the Faculty of Medicine and Dentistry: (Professional and Ethical Standards)
- The Department of Dentistry Technical Standards Policy: defines the necessary knowledge, skills, professional behaviors, and attitudes expected of students. (Technical Standards)

### Length of Program

The time required to complete the PhD will vary according to the previous training of the applicant and the nature of the research undertaken; however, a minimum of six years is considered normal.

The maximum time permitted to complete the PhD program as set by the Faculty of Graduate Studies and Research is six years.

# The Degree of PhD in Medical Sciences - Periodontology [Graduate]

The Department of Dentistry offers the degree of PhD in Medical Sciences - Periodontology. It is a full-time research training program with clinical training integrated into it.

### **Entrance Requirements**

The Department's minimum admission requirements are a Doctor of Dental Surgery (DDS) or equivalent **and** a master's degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\star$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

# GRADUATE STUDIES AND RESEARCH

Applicants without a master's degree may be considered for admission provided they can demonstrate adequate prior relevant education and experiences as determined by both the Department of Dentistry and the Division of Periodontology.

Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement ). Any one of the following is acceptable:

- TOEFL (internet-based) minimum score 95 with at least 20 per section or equivalent;
- MELAB minimum score of 91;
- CAEL minimum score of 70 with at least 70 on each subtest;
- or an IELTS (Academic) minimum score of 7.5 with at least 6 on each band.

All applicants are also required to submit the following:

- a current curriculum vitae
- a statement of intent
- three letters of recommendation (two must be professional)
- An official letter from their dental school noting their class ranking upon graduation from dentistry.
- Completion of at least one year of experience as a licensed dentist prior to the start of the program is preferred.
- Applicants must have a license to practice Dentistry in Alberta, or must have passed the NDEB examination of Canada.
- Applicants who are not licensed but in a Canada/USA accredited GPR program are required to obtain a letter from the Program Director stating
  they are in good standing with no professional conduct issues.
- A personal interview is required for short-listed applicants. These applicants will be advised of the arranged interview date by e-mail.
- Identify a suitable supervisor to provide support.

Admission is dependent upon the approval of the Department of Dentistry's Graduate Studies Committee, the Division of Periodontics Selection Committee, and the Medical Sciences Graduate Program Committee (see Medical Sciences).

# Program Requirements

Students are required to complete a minimum of  $\bigstar$ 69 in required coursework, including  $\bigstar$ 12 to be completed during the research component, and  $\bigstar$ 57 to be completed during the clinical component. The program also consists of seminars and a thesis.

The clinical requirements involve successful completion of a selected number of teaching cases. Clinical training will not start until defined research milestones are attained and the candidacy examination is successfully passed. Clinical training will start in September immediately after these conditions are met.

The program of study is determined in consultation with the supervisor and supervisory committee. The research component will be exclusively performed during the first two years.

Students enrolled in the PhD in Medical Sciences - Periodontology will not have the option of transferring to the MSc in Medical Sciences - Periodontology program but may switch to the MSc in Medical Sciences - Dentistry or MSc in Medical Sciences - Oral Biology.

### Prior to clinical training $(\star 12)$

#### Required courses $(\bigstar 8)$

DENT 542 - Research Methodology

# **GRADUATE STUDIES AND RESEARCH**

- DENT 551 Introduction to Applied Statistics
- DENT 565 Evidence Based Dentistry
- DENT 566 Systematic Reviews in Dentistry
- DENT 601 Seminars in Oral Health Sciences

#### Elective courses $(\pm 4)$

• Students must complete ★4 in graduate-level courses chosen in consultation with the program director and their supervisor.

### First Year of Clinical Training ( $\star$ 27)

- DENT 562 TMD/Orofacial Pain
- DENT 570 Periodontology Fundamentals I
- DENT 571 Implantology Fundamentals I
- DENT 572 Periodontology Seminars I
- DENT 573 Periodontology Clinics I
- OBIOL 500 Oral Biology I
- OBIOL 501 Oral Biology II

### Second Year of Clinical Training (★18)

- DENT 601 Seminars in Oral Health Sciences
- DENT 671
- DENT 672 Periodontology Seminars II
- DENT 673 Periodontology Clinics II

# Third Year of Clinical Training ( $\bigstar$ 12)

- DENT 771
- DENT 772 Periodontology Seminars III
- DENT 773 Periodontology Clinics III

#### Thesis

Registration in 900-level THES. Students are required to complete and defend a thesis.

#### Candidacy exam

Successful completion of the PhD candidacy examination will be required by October 1 prior to the academic year the student starts their clinical training. This will allow the allocation of a clinical training spot for the following September start.

#### Seminars

Students have an attendance requirement for the Discover Dental Sciences seminars and to participate in the Graduate Student Research Day.

### Clinical Requirements for Nursing Courses

These requirements must be met prior to starting the clinical courses. If there is an associated fee, students are responsible for the costs incurred.

- Accepted applicants who are not licensed by the Alberta Dental Association and College (ADA&C) at the time of the start of the clinical component
  of the program must obtain registration on the ADA&C Education and Research Register by August 1 prior to the start of the clinical program in
  the Fall Term. Applicants who are in possession of an active full license from the ADA&C do not need to obtain additional licensure.
- Medical Testing and Immunization Requirements: To ensure, insofar as possible, both student and patient safety, the Faculty of Medicine and
  Dentistry requires that all students must have their immunization status reviewed
  and updated as necessary by a qualified healthcare professional upon acceptance into a health sciences program. (University Infectious Diseases
  Regulation)
- Police Information Checks and Protection for Persons in Care: Applicants should be aware that a clear Police Information Check (PIC) is required
  as a condition of admission and that any criminal charges pending must be declared. (Requirement for Police Information Checks); (Protection for
  Persons in Care)
- Professional Standards for Students in the Faculty of Medicine and Dentistry: (Professional and Ethical Standards)
- The Department of Dentistry Technical Standards Policy: defines the necessary knowledge, skills, professional behaviors, and attitudes expected of students. (Technical Standards)

### Length of Program

The time required to complete the PhD will vary according to the previous training of the applicant and the nature of the research undertaken.

The maximum time permitted to complete the program as set by the Faculty of Graduate Studies and Research is six years.

# Digital Humanities [Graduate]

Office of Interdisciplinary Studies
400 Arts and Convocation Hall
Faculty of Arts, University of Alberta
Edmonton, Alberta T6G 2E5
www.ualberta.ca/interdisciplinary-studies/humanities-computing

### **General Information**

The MA in Digital Humanities is an interdisciplinary program in the Office of Interdisciplinary Studies. The Program integrates computational methods and theories with research and teaching in the Liberal Arts. It addresses the demand for Arts graduates, proficient in computing skills, to work either in the realm of humanities, social sciences, and fine arts research and teaching, or in various sectors of the digital economy.

# GRADUATE STUDIES AND RESEARCH

Students survey digital humanities and its underlying technologies as they are employed in disciplines such as history, literature, languages, cultural studies, philosophy, music, and visual arts. The aim is to show how computing enables and transforms research and teaching, and to impart technical knowledge through hands-on experience with creation, delivery, and analysis of electronic text and non-textual data and images.

The Master of Arts in Digital Humanities is offered with or without a specialization. Areas of specialization include:

Anthropology; Art and Design; Drama; East Asian Studies; English and Film Studies; Gender and Social Justice; History and Classics; Library and Information Studies; Linguistics; Modern Languages and Cultural Studies; Music; Philosophy; Political Science; Religious Studies; Sociology.

### **Entrance Requirements**

Applicants must meet the minimum entrance requirements for the Digital Humanities Program and the area of specialization of the participating department. Where applicable, a minimum TOEFL score, determined by the participating department, will be required. Deadline for applications for those applying to participating departments in an area of specialization is December 1; applicants to the Individualized Program must contact the Graduate Programs Assistant at ois@ualberta.ca for the application deadline dates, which vary by department. Applications must be sent to the Graduate Programs Assistant, Digital Humanities Program, c/o Office of Interdisciplinary Studies, Room 1-22 Humanities Centre, Faculty of Arts. Applications are first reviewed by the Graduate Committee in the Digital Humanities Program and, if successful at that stage, forwarded to the participating department for its review process if the applicant requests a specialization in a participating department.

The Digital Humanities program addresses several different computer-based technologies. It does not require previous experience in these, but offers seminars to aid students in gaining the desired range of technical skills.

### Financial Assistance

Participating departments may consider applicants for graduate assistantships. Digital Humanities annually provides a limited number of graduate research assistantships.

Graduate students are also eligible for various University fellowships and bursaries. Consult the Faculty of Graduate Studies website for details.

# **Graduate Program Requirements**

- The Degree of MA
- The Degrees of MA/MLIS

### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading Digital Humanities (HUCO).

# The Degree of MA (Digital Humanities) [Graduate]

# **Program Requirements**

### Thesis-Based Program

The thesis-based MA in Digital Humanities program consists of  $\bigstar$  27 plus a thesis; of these  $\bigstar$  18 are in Digital Humanities, and  $\bigstar$  9 are in courses approved by the students' specialization department (if applicable), or are open for students in the Individualized program.

#### Required courses (★18):

- DH 500 Survey of Digital Humanities
- DH 510 Topics in Digital Theory and Culture

#### Any two of

DH 520 - Topics in Technical Concepts and Approaches

#### Any two of

• DH 530 - Topics in Building in Context

#### Note:

If there is a specialization it is normally expected that a representative of both the Digital Humanities program and the participating department will sit on the thesis supervisory committee.

### Course-Based Program

The course-based MA in Digital Humanities consists of  $\bigstar 30$  of course work plus  $\bigstar 6$  of practicum for a total of  $\bigstar 36$ . Of these  $\bigstar 27$  are in Digital Humanities, and  $\bigstar 9$  are in courses approved by the students' specialization department (if applicable), or are open for students in the Individualized program.

#### Required courses ( $\star$ 27):

• DH 500 - Survey of Digital Humanities

#### Any two of

• DH 510 - Topics in Digital Theory and Culture

#### Any two of

• DH 520 - Topics in Technical Concepts and Approaches

#### Any two of

DH 530 - Topics in Building in Context

#### Any two of

• DH 900 - Digital Humanities Practicum

### Length of the Program

The time required to complete the thesis-based MA may vary according to the previous training of the applicant and the nature of research undertaken; however, the program is designed to be completed within 24 months.

The course-based program is designed to be completed within 24 months.

# The Degrees of MA/MLIS (Digital Humanities) [Graduate]

The Digital Humanities Program and the School of Library and Information Studies offer an inter-faculty combined MA in Digital Humanities/MLIS that students can complete within three years. Students pursuing the joint degrees must take  $\star$ 12 in required Digital Humanities courses (DH 500, DH 510, DH 520, and DH 530) and  $\star$ 6 in Digital Humanities options. They must also take  $\star$ 18 in required Library and Information Studies courses (LIS 501, LIS 502, LIS 503, LIS 504, and LIS 505 and LIS 597) and  $\star$ 9 in LIS options. Students are strongly encouraged to take the required Digital Humanities courses during their first year. Students must also complete a thesis. The student's thesis committee shall normally include faculty members from both programs.

Students wishing to apply for the inter-faculty combined degrees need only to fill out one online application form by selecting "MA/MLIS" as the program. The application will be directed to the Digital Humanities portal and then forwarded to the School of Library and Information Studies if the applicant is accepted into the Digital Humanities program first. Students must satisfy the entrance requirements for both programs. Administrators of the two programs will consult regarding admission to the combined degrees.

# Drama [Graduate]

Department of Drama 3-146 Fine Arts Building University of Alberta Edmonton, Alberta T6G 2C9 E-mail: drama@ualberta.ca www.uofaweb.ualberta.ca/drama/

# ALBERTA

# GRADUATE STUDIES AND RESEARCH

### **General Information**

The Department of Drama offers graduate programs leading to the degree of PhD in Performance Studies, Master of Fine Arts degrees in Theatre Design, Directing, Theatre Voice Pedagogy, and Theatre Practice and Master of Arts in Drama degree.

The Department offers students access to a range of professional facilities during their studies including performance, workshop, rehearsal and classroom space, libraries, graduate student offices, and access to computers and seminar rooms. The Timms Centre for the Arts provides a fully equipped, 289-seat-proscenium theatre, a black box second playing space, theatre collections, props shop, production offices, wardrobe, dressing rooms and a green room. The Fine Arts Building offers students the opportunity to study and work from a media room, corner stage, movement studio, sound studios and design studios.

In addition, the theatre collection in the library is extensive. It offers particular opportunities for work in expressionism; German, French, and Spanish drama; and includes a substantial collection of research materials on Canadian theatre.

The aim of the MFA programs is to train candidates to a level of competency sufficient to enter the profession.

The MA program, essentially research oriented, also offers training in dramaturgy as one of the means by which candidates may be actively involved in the creative pursuits of the Department, and also prepares for further PhD studies.

The PhD in Performance Studies offers students advanced-level scholarship, study and research in Drama and Performance, with a thorough interdisciplinary focus. The program is designed so that students pursue individual performance studies projects that engage creatively with the interrelationships between aesthetic practices and critical reflection.

Inquiries should be addressed to the Graduate Coordinator, Department of Drama.

### **Entrance Requirements**

The Department's minimum admission requirements are an undergraduate degree with an average of 3.0 in the last two years of undergraduate work (or graduate work) at the University of Alberta, or an equivalent qualification from a recognized institution, and a TOEFL score of 550 (paper-based) or 88 (Internet-based) where applicable (see English Language Requirement). Interested applicants should check further application details as they relate to their intended area of specialization on the Department's website (www.uofaweb.ualberta.ca/drama/prospectivegrad.cfm).

#### Financial Assistance

Graduate assistantships are available to qualified students. Graduate students are also eligible to compete for University and provincial scholarships.

# **Graduate Program Requirements**

- The Degree of MFA
- The Degree of MA
- The Degree of PhD in Performance Studies

### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading Drama (DRAMA).

Graduate courses offered by other departments may be taken with the consent of the student's Drama department advisor.

# The Degree of MFA (Drama) [Graduate]

### **Entrance Requirements**

The undergraduate degree (see "General Information: Entrance Requirements", above) must normally be a four-year degree in theatre studies in order for the applicant to be considered eligible for the MFA program. In addition, numerous practical theatre credits are required in the applicant's intended area of specialization along with three letters of recommendation on the applicant's professional promise.

Between the academic and the artistic requirements candidates must: demonstrate a fundamental knowledge of the components of theatre art – acting, design, and directing; have extensive training and experience in the area of their intended specialization; and possess sufficient preparation in dramatic literature, theatre history, and theatre aesthetics.

### **Program Requirements**

Required courses depend on the area of specialization and the undergraduate background of the student; however, the MFA program normally consists of ★33. In addition, an acceptable creative thesis project must be presented in performance.

## Length of Program

Candidates for the program in Directing and in Theatre Practice are normally required to complete two years of study in residence. In certain circumstances advanced standing may be accorded in the candidacy program for previous theatre work accredited by the Department. For the MFA Theatre Design only, the minimum period of residency is one academic year for candidates holding a BFA Theatre Design Degree from the University of Alberta, or equivalent; all other MFA Theatre Design candidates require a minimum period of residency of two academic years. The MFA in Theatre Voice Pedagogy candidates require a minimum period of residency of two academic years.

# The Degree of MA (Drama) [Graduate]

# **Entrance Requirements**

A candidate must hold a bachelor's degree (or its equivalent) from a recognized institution. To be accepted, the candidate must demonstrate to the Department familiarity with the artistic and practical components of theatre art, as well as sufficient preparation in theatre history and criticism. Candidates are required to submit a sample of their expository writing.

# Program Requirements

The Department offers a thesis-based and a course-based MA.

The thesis-based MA program normally consists of some practical training in research skills and  $\star$ 24 at the graduate level. Students are ordinarily required to take DRAMA 601, DRAMA 608, and DRAMA 609 as part of these requirements. Candidates must present an acceptable thesis and defend it orally.

# GRADUATE STUDIES AND RESEARCH

The course-based MA consists of  $\star$ 27 graduate-level courses, including: DRAMA 601 and one of DRAMA 608 or DRAMA 609. With the Department's approval, students may include up to a maximum of  $\star$ 9 in graduate-level courses offered outside the Department as part of their MA coursework. Students are also required to make a public presentation of a major research paper (DRAMA 695).

Both thesis-based and course-based candidates must demonstrate a reading knowledge of one approved language other than English.

### Length of Program

The thesis-based MA requires three academic terms of coursework and one additional term of thesis-related writing and research. The course-based MA requires one academic year. No full-time residency is required for the latter.

# The Degree of PhD in Performance Studies (Drama) [Graduate]

### **Entrance Requirements**

A candidate must hold a Master's degree (or its equivalent) from a recognized institution. To be accepted, the candidate must normally demonstrate to the Department familiarity with the artistic and practical components of theatre art, as well as sufficient preparation in theatre history and criticism; for those with other performance studies-oriented Master's degrees, additional foundation courses in drama may be required. Candidates are required to submit a sample of their expository writing. (Fast tracking through MA will be considered on a case by case basis.)

### Program Requirements

Students are normally expected to complete  $\star$ 18 in graduate courses, which must include DRAMA 608 and DRAMA 609. PhD students may be required to take certain courses other than the above two in order to ensure adequate coverage of the field, or these requirements can be waived if similar subjects have been sufficiently covered during recent MA studies. As part of the  $\star$ 18, students must fulfil a  $\star$ 3 practical requirement in theatre practice. In addition they must demonstrate reading proficiency in a language other than English (normally the language that is most relevant for the proposed research); completion of a language requirement for an MA degree may satisfy the requirement for the PhD, provided proficiency was demonstrated no earlier than two years before the start of the PhD. After completion of course work and submission of a thesis proposal, doctoral candidates must fulfil a departmental examination, followed by an oral candidacy examination. Students must complete a written dissertation, founded on high scholastic achievement, original research, and firm theoretical grounding. It must be defended before an examining committee.

# Length of Program

Students must normally fulfil all program requirements, with the exception of the dissertation, within the first three years of registration. Students must spend their first two years in residence – registered full-time, and physically on campus. The Faculty of Graduate Studies and Research sets a time limit of six years for completion of a PhD.

# Earth and Atmospheric Sciences [Graduate]

Department of Earth and Atmospheric Sciences 1-26 Earth Sciences Building University of Alberta Edmonton, Alberta T6G 2E3 E-mail: EAS.Inquiries@ualberta.ca www.ualberta.ca/EAS

#### **General Information**

The Department offers the following graduate degree programs:

- Master of Science (MSc) in Earth and Atmospheric Sciences
- Doctor of Philosophy (PhD) in Earth and Atmospheric Sciences
- Master of Science (MSc) in Integrated Petroleum Geosciences (in conjunction with the Department of Physics)
- Master of Arts (MA) in Earth and Atmospheric Sciences with specialization in Human Geography
- Doctor of Philosophy (PhD) in Earth and Atmospheric Sciences with specialization in Human Geography
- Doctor of Philosophy (PhD) in Earth and Atmospheric Sciences with specialization in Urban and Regional Planning
- Master of Science in Urban and Regional Planning

Active research fields, which are listed on the Department's website (www.ualberta.ca/eas), include aqueous and sedimentary geochemistry; Arctic environments; atmosphere and ocean modelling; basin analysis; biogeography; carbonate sedimentology; clastic sedimentology; climatology; community engagement; community, health and environment; community planning; diamond geology; economic geology; environmental values, attitudes and behaviors; environmental chemistry; environmental geology; experimental petrology; fluvial and glacial geomorphology; geochemistry; geochronology; geographic information systems; geomicrobiology; geotectonics; glaciology, glacier hydrology and glacier chemistry; global change; hot-springs; human-environment interactions; human dimensions of environmental hazards; hydrogeology; ichnology; igneous, sedimentary and metamorphic petrology; invertebrate and vertebrate paleontology; isotope geology; land-use planning; marine icing; meso-scale meteorology; metalliferous mineral deposits; microclimatology; micrometeorology; micropaleontology; mineralogy; paleoecology of siliceous microfossils; periglacial geomorphology; petroleum geology; physical oceanography, paleoceanography and numerical model development; planetary geology; Precambrian palaeoenvironments; qualitative research methods; Quaternary palaeoenvironments; regional planning; remote sensing; resilience; sedimentology; stratigraphy; structural geology; transportation planning; urban design; urban planning; tectonics; volcanology; winter city planning and design.

For thesis based programs the Department will approve only thesis topics which lie within the research expertise of one or more of its Faculty members.

The Department of Earth and Atmospheric Sciences has a planning studio, digital imaging and printing facilities, research laboratories, instructional facilities, and technical support for numerous graduate students.

### **Entrance Requirements**

The Department's minimum admission requirements are a relevant undergraduate degree with an average of 3.0 in the last two years of undergraduate work (or graduate work) at the University of Alberta, or an equivalent qualification from a recognized institution, and a TOEFL score of 550 (paper-based) or 88 (Internet-based), where applicable (see English Language Requirement).

Note that the Master of Science in Urban and Regional Planning has additional requirements see The Degrees of MSc in Urban and Regional Planning (2 year) or The Degrees of MSc in Urban and Regional Planning (Accelerated 1 year).

### Financial Assistance

In addition to scholarships administered by the University, a number of graduate assistantships and discipline specific scholarships are awarded by the Department.

# **Graduate Program Requirements**

- The Degrees of MSc in Urban and Regional Planning (2 year)
- The Degrees of MSc in Urban and Regional Planning (Accelerated 1 year)
- The Degrees of MA and MSc
- The Degrees of MSc in Integrated Petroleum Geosciences
- The Degree of PhD

### **Graduate Courses**

Graduate course descriptions can be found in Course Listings, under the following subject headings:

Earth and Atmospheric Sciences (EAS) Human Geography and Planning (HGP) Integrated Petroleum Geosciences (IPG) Paleontology (PALEO)

# The Degrees of MSc in Urban and Regional Planning (2 year)

This course-based program requires the completion of  $\star$  42 in graduate level course work, including  $\star$  36 of required, core courses and  $\star$ 6 of optional graduate-level course work in PLAN courses. The core courses include a research project that is to be undertaken in the last semester of the program as a capstone course. Students must maintain standards acceptable to the Faculty of Graduate Studies and Research to remain in the program.

# **Entrance Requirements for 2 year stream:**

Four year bachelor's degree [minimum 3.00 GPA (B) in last two years of study]; may be in a field other than planning. Applicants are required to submit a letter of Interest, two letters of academic recommendation, resume/CV, transcripts, a TOEFL score of 550 (paperbased) or 88 (Internet-based), where applicable

### **Required Courses**

- PLAN 500 Planning for Resilient Cities and Regions
- PLAN 501 Planning for Northern Regions and Resource Communities
- PLAN 503 Master's Project Proposal
- PLAN 505 Master's Major Project
- PLAN 510 Physical Planning and Design Fundamentals
- PLAN 511 Professional Practice and Ethics
- PLAN 512 Advanced Finance for Planners

- PLAN 516 Planning Law
- PLAN 517 Advanced Planning Theory
- PLAN 595 Advanced Planning Studio
- PLAN 598 Advanced Research Methods and Analysis
- 2 additional ★3 PLAN courses

### Length of Program

The course-based MSc program in Urban and Regional Planning (Regular) is designed for completion within two calendar years beyond a completed undergraduate degree. The program must normally be completed within three years from admission.

# The Degrees of MSc in Urban and Regional Planning (Accelerated 1 year)

This course-based program requires the completion of  $\star$  30 in graduate-level course work, including  $\star$  24 of required, core courses and  $\star$  6 of optional graduate-level course work in PLAN courses. The core courses include a research project that is to be completed as a capstone course. Students must maintain standards acceptable to the Faculty of Graduate Studies and Research to remain in the program.

### Entrance Requirements for 1 Year Accelerated Stream

Applicants must have Bachelor's degree in planning [minimum 3.00 GPA (B)]; must have at least two calendar years of planning experience. Applicants with significant experience and degrees other than planning will be reviewed on a case by case basis. Statement of Interest, two letters of academic recommendation, resume/CV, transcripts, a TOEFL score of 550 (paper-based) or 88 (Internet-based), where applicable

# Required Courses (Accelerated 1 year)

- PLAN 500 Planning for Resilient Cities and Regions
- PLAN 501 Planning for Northern Regions and Resource Communities
- PLAN 503 Master's Project Proposal
- PLAN 505 Master's Major Project
- PLAN 517 Advanced Planning Theory
- PLAN 595 Advanced Planning Studio
- PLAN 598 Advanced Research Methods and Analysis
- 2 additional ★3 PLAN courses

# Length of Program

The course-based MSc program in Urban and Regional Planning (Regular) is designed for completion within one calendar year (three semesters). The program must normally be completed within three years from admission.



# The Degrees of MA and MSc (Earth and Atmospheric Sciences) [Graduate]

### Program Requirements

Requirements for the MA and MSc degrees include satisfactory completion of a thesis and at least  $\star 9$  of course work at the University of Alberta, with not more than  $\star 6$  from the same instructor. More course work will be necessary if there is a significant change in discipline area from the undergraduate program. Normally not more than  $\star 3$  of the required course work may be at the 400-level within the Department and only one  $\star 3$  research or reading (directed studies) course may be counted towards the requirement, except with permission of the Department.

There is no language requirement for the degrees of MA and MSc.

# Length of Program

An MA or MSc program should normally be completed in two academic years of work beyond an undergraduate degree.

# The Degrees of MSc in Integrated Petroleum Geosciences (Earth and Atmospheric Sciences) [Graduate]

This course-based program requires the completion of  $\bigstar$  36 in graduatelevel course work, including  $\bigstar$  24 of required, core courses and  $\bigstar$  12 of optional graduate-level course work. The core courses include a  $\bigstar$  6 research project that is to be completed once the course work has been completed. The core courses are in Integrated Petroleum Geosciences (IPG) whereas the optional courses are selected from prescribed Earth and Atmospheric Science (EAS) courses and Geophysics (GEOPH) courses. Students must maintain standards acceptable to the Faculty of Graduate Studies and Research to remain in the program.

# <u>Length of Program</u>

The course-based MSc program in Integrated Petroleum Geosciences is designed for completion within one calendar year beyond a completed undergraduate degree in Earth Science. The program must normally be completed within three years from admission.

# The Degree of PhD (Earth and Atmospheric Sciences) [Graduate]

# Program Requirements

The essential requirement for the degree of PhD is the planning, execution, and reporting of high quality research. A candidacy examination is taken normally within 20 months after admission to the program, to ensure that a student has the necessary knowledge, background, and ability to complete a PhD thesis. At least  $\bigstar$  18 of course work beyond the undergraduate degree is required. At least  $\bigstar$  9 of the required course work must be taken at the University of Alberta. Not more than  $\bigstar$  6 of the University of Alberta courses may be taken from the same instructor, except with permission of the Department. Normally, not more than  $\bigstar$  3 of course work may be at the 400-level within the Department and only one ( $\bigstar$  3) research or reading (directed studies) course may be counted towards the requirement.

A reading knowledge of foreign languages is not a formal requirement, although it may be required if appropriate to the particular program.

# ALBERTA

# GRADUATE STUDIES AND RESEARCH

The minimum period of residence is one academic year of full-time attendance at the University of Alberta.

### Length of Program

The time required to complete the PhD will vary according to the previous training of the applicant and the nature of the research undertaken; a minimum of three years of study and research is normally required. A PhD program should normally be completed in four academic years of work beyond a master's degree or five academic years beyond an undergraduate degree if no master's degree has been completed.

## East Asian Studies [Graduate]

Department of East Asian Studies 3-31 Pembina Hall University of Alberta Edmonton, Alberta T6G 2H8 E-mail: eastasia.grad@ualberta.ca

### **General Information**

The Department of East Asian Studies offers programs leading to the Master of Arts degree in East Asian Studies

For further information, see the Department website, www.eastasianstudies.ualberta.ca.

### **Entrance Requirements**

The Department's minimum admission requirements are an undergraduate degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\bigstar$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

An undergraduate background related to the proposed area of graduate study is preferred.

Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:

- a minimum TOEFL score of 88 with a score of at least 20 on each of the individual skill areas (internet-based test) or equivalent;
- an IELTS score of 6.5, with a minimum score of 5.5 on each band.

Applicants must have four years of university-level study (or the equivalent) in the language(s) in which they will be carrying out research.

All applicants are required to submit the following supporting documentation

- Curriculum vitae;
- Three reference letters submitted directly to the online application system;
- Research proposal;
- Writing sample (5-15 pages, in English) this should be an academic paper on a subject closely related to the proposed field of graduate study

See Admission and Application on the Department of East Asian Studies website for further details.

# GRADUATE STUDIES AND RESEARCH

The Department is prepared to accept a limited number of students who are otherwise well-qualified and show language aptitude (demonstrated to the satisfaction of the Department) but who have less than the required level of proficiency in English or the language in which they will be conducting research. Such students may be eligible for admission as Qualifying Graduate Students. Applicants requiring proficiency in the language in which they will be conducting research may also be eligible for the Qualifying Year Abroad program.

The application deadline for September admission is January 15.

#### Qualifying Year Abroad program

In this program, students travel to Asia for a full year of intensive language study at one of our partner universities — Peking University (Beijing, China), Sophia University (Tokyo, Japan), and Chungnam University (Daejeon, South Korea). Upon successful completion of a full year of language study, there will be a change of program category to the MA degree. For those interested in the qualifying year abroad program, a separate application must be made to the University of Alberta's Education Abroad Program office, in addition to the regular application for graduate admission. Note the Education Abroad Program deadline for exchange programs is January 18; regular graduate application for admission is January 15. For further information on the Qualifying Year Abroad program see the Department of East Asian Studies website at https://www.ualberta.ca/east-asian-studies/graduateprogram/qualifying-year-abroad

#### Financial Assistance

The Department annually appoints a number of graduate research and teaching assistantships. Graduate students may also be eligible for various University fellowships and bursaries. For details consult www.eastasianstudies/en/GraduatePrograms

Further information regarding funding may be obtained from the Associate Chair – Graduate Studies, Department of East Asian Studies.

# **Graduate Program Requirements**

The Degree of MA

# The Degree of MA (East Asian Studies) [Graduate]

# **Program Requirements**

Students are required to complete a minimum of  $\star$ 18 in coursework and a thesis.

#### Core Courses $(\bigstar 6)$

These courses are taken in the first year.

- EASIA 598 Topics in East Asian Research
- EASIA 575 East Asian Language Pedagogy

#### Elective courses (★12)

- The exact number of courses and their areas shall be determined on an individual basis, in consultation with the supervisor and approved by the Associate Chair – Graduate Studies.
- Up to ★6 in graduate courses from other departments or units may be counted as part of the degree program.
- The coursework selected must make a demonstrable contribution to strengthening the degree, and typically consists of methodology courses in linguistics, literary and cultural theory, historiography, etc.

#### Thesis

Registration in 900-level THES
 MA theses in the Department of East Asian Studies should represent original, substantial research in primary sources in the target language, whether Chinese, Japanese, Korean or a combination of these.

### Residence Requirement

The residency requirement is full-time enrolment for two four-month terms.

### Length of Program

The time required to complete the MA programs will vary with the individual candidate. It is assumed a candidate will normally complete the program requirements in two years.

The maximum time to complete the thesis-based MA program as set by the Faculty of Graduate Studies and Research is four years.

# **Economics** [Graduate]

Department of Economics 8-14 Tory Building University of Alberta Edmonton, Alberta T6G 2H4 E-mail: econgrad@ualberta.ca

#### **General Information**

The Department of Economics offers a course-based Master of Arts program, a course-based Master of Arts program with a specialization in Economics and Finance and a thesis-based PhD program.

Areas of study in Economics include but are not limited to Applied Econometrics, Economic Development, Environmental and Resource Economics, Financial Economics, Industrial Organization, International Economics, Labor Economics, Macroeconomics, Monetary Economics, and Public Economics. The Department does not guarantee that each of these fields will be offered in any given year.

# **GRADUATE STUDIES AND RESEARCH**

Graduate program guidelines for each offered program are available from the Department.

### **Entrance Requirements**

For the MA program, the Department's minimum admission requirements are an undergraduate degree in Economics with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\star$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

For the MA with a specialization in Economics and Finance, the Department's minimum admission requirements are an undergraduate degree in Economics with an admission GPA of at least 3.5 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\bigstar$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

For the PhD program, the Department's minimum admission requirements are an MA in Economics with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\pm$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework. In addition, applicants must have a minimum grade point average of 3.2 on all MA coursework.

All applicants must have completed coursework in calculus and linear algebra, as well as advanced coursework in microeconomics, macroeconomics, and econometrics.

Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:

- A TOEFL score of 92 (Internet-based) where applicable with a minimum of 20 in each band, or equivalent.
- A minimum overall band score of 7.0 on IELTS, with at least 6.5 in each band.

Applicants whose most recent degree is from a non-Canadian university are required to write the Graduate Record Examinations (verbal, quantitative, and analytical sections) administered by the Educational Testing Service (Princeton, NJ). The examinations should be written early enough for scores to be available at the same time as the applicant's other supporting documents. No minimum cutoff score is specified, because GRE results are used only in conjunction with other indicators of potential academic success.

Applicants are also required to submit a Curriculum Vitae and three reference letters (minimum 2 academic). In addition, PhD applicants must provide a statement of research interest. Applicants are not required to have a supervisor before applying to the programs.

For information regarding tuition and fees, please refer to Tuition & Cost of Living Estimates.

Inquiries regarding details of programs offered within the Department should be directed to the Graduate Program Office.

Applications are open annually from September 1 through January 31 for admission in the Fall term. We offer one intake per year.

### Financial Assistance

The department automatically considers all applicants for Teaching Assistantships at the time applications are reviewed. Funding offers are made to our top ranked applicants and are made separately from offers of admission. Financial need is not a factor in selecting who will be offered funding.

Funding is contingent upon students maintaining a first class standing (3.5 GPA) and satisfactorily performing their required duties. In addition, continued funding for PhD students beyond year 2 requires regular attendance at departmental seminars, an annual presentation of research in a brown bag seminar and a satisfactory annual report outlining progress in the program. Funding in year 4 of the PhD program is contingent on completion of the PhD candidacy exam.

Details of scholarships and other sources of financial assistance are included at www.gradstudies.ualberta.ca

# **Graduate Program Requirements**

- The Degree of MA (Economics) [Graduate]
- The Degree of MA with a specialization in Economics and Finance (Economics) [Graduate]
- The Degree of PhD (Economics) [Graduate]
- The Degree of PhD with a specialization in Environmental and Natural Resource Economics (Economics) [Graduate]

### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading Economics (ECON).

# The Degree of MA (Economics) [Graduate]

The MA in Economics is a course-based program consisting of at least  $\pm 27$  in coursework including a  $\pm 3$  independent research project.

### **Program Requirements**

### Required courses ( $\bigstar$ 12):

- ECON 503 Microeconomic Theory I
- ECON 581 Macroeconomic Theory I
- ECON 598 Econometric Theory and Applications
- ECON 599 Applied Econometrics

#### Elective courses $(\pm 12)$ :

four ★3 graduate-level elective Economics courses

#### Research Project $(\bigstar 3)$ :

ECON 999 (an independent research project).

# Residence Requirement

The course-based MA in Economics has no minimum residence period and can be completed on a purely part-time basis.

# Length of Program

The time required to complete either of the MA program will vary according to the previous training of the applicant. Under normal circumstances, the MA in Economics can be completed on a full-time basis in 10 months.

The maximum time to complete the course-based MA program as set by the Faculty of Graduate Studies and Research is six years.

# The Degree of MA with a specialization in Economics and Finance (Economics) [Graduate]

The MA in Economics and Finance, offered collaboratively with the Department of Finance and Statistical Analysis of the Faculty of Business is a course-based program requiring  $\bigstar$  42 in coursework including a  $\bigstar$  3 independent research project.

## **Program Requirements**

### Required courses ( $\star$ 15):

- ECON 503 Microeconomic Theory I
- ECON 581 Macroeconomic Theory I
- ECON 598 Econometric Theory and Applications
- ECON 599 Applied Econometrics
- FIN 501 Managerial Finance

#### Elective courses ( $\bigstar$ 24):

- one ★3 graduate-level ACCTG course
- four ★3 graduate-level ECON courses
- three ★3 graduate-level FIN courses

# Research Project ( $\bigstar$ 3):

ECON 999 (an independent research project).
 ECON 999 is taken in the spring term after all other required coursework has been successfully completed.

# Residence Requirement

The course-based MA in Economics and MA in Economics and Finance has no minimum residence period and can be completed on a purely part-time basis.

# Length of Program

The time required to complete MA with a specialization in Economics and Finance will vary according to the previous training of the applicant.

The MA in Economics and Finance requires a minimum of 22 months of full-time study to complete.

The maximum time to complete the course-based MA program as set by the Faculty of Graduate Studies and Research is six years.

# The Degree of PhD (Economics) [Graduate]

### **Program Requirements**

The PhD program consists of at least  $\pm 36$  in coursework and a thesis.

### Required courses ( $\star$ 21):

- ECON 503 Microeconomic Theory I
- ECON 505 Microeconomic Theory II
- ECON 581 Macroeconomic Theory I
- ECON 582 Macroeconomic Theory II
- ECON 591 Graduate Research Workshop I
- ECON 598 Econometric Theory and Applications
- ECON 599 Applied Econometrics

### Elective courses ( $\bigstar$ 15):

• five ★3 graduate-level Economics courses including at least two in each of two fields of interest.

#### Thesis:

Registration in 900-level THES.

#### Comprehensive Exams

Students are required to successfully write macroeconomic and microeconomic comprehensive exams following completion of the first year of the program. Unsuccessful students will be recommended to withdraw from the program or change to the MA program.

#### Candidacy Exam

Students are required to complete their ethics and professional development requirements prior to their candidacy exam. The candidacy exam must be completed by the end the third year. In preparation for the candidacy exam the student will prepare a paper answering a set of questions related to the thesis topic and methodology. The candidacy exam includes a presentation of a student's research and questions from the examination committee.

#### Residence Requirement

The minimum period of residence is three academic years of full-time attendance at the University of Alberta.

#### Length of Program

The time required to complete the PhD will vary according to the individual candidate; however, a minimum of four years is normally required.

The maximum time to complete the PhD program as set by the Faculty of Graduate Studies and Research is six years.

# The Degree of PhD with a specialization in Environmental and Natural Resource Economics (Economics) [Graduate]

Contingent on course offerings, students may choose to specialize in Environmental and Natural Resource Economics where this specialization is offered collaboratively by the Department of Economics and the Department of Resource Economics and Environmental Sociology.

Contact the department for further information on required course availability.

# <u>Program Requirements</u>

The PhD with a specialization in Environmental and Natural Resource Economics consists of at least ★36 in coursework and a thesis.

#### Required courses ( $\bigstar$ 30):

- ECON 503 Microeconomic Theory I
- ECON 505 Microeconomic Theory II
- ECON 566 Environmental Economics
- ECON 567 The Economics of Exhaustible Resources
- ECON 581 Macroeconomic Theory I
- ECON 582 Macroeconomic Theory II
- ECON 591 Graduate Research Workshop I
- ECON 598 Econometric Theory and Applications
- ECON 599 Applied Econometrics
- One ★3 graduate-level course in Agriculture and Resource Economics (AREC) approved by the department

#### Elective courses $(\bigstar 6)$ :

Two ★3 graduate-level courses

#### Thesis:

Registration in 900-level THES.

#### Comprehensive Exams

Students are required to successfully write macroeconomic and microeconomic comprehensive exams following completion of the first year of the program. Unsuccessful students will be recommended to withdraw from the program or change to the MA program.

#### Candidacy Exam

Students are required to complete their ethics and professional development requirements prior to their candidacy exam. The candidacy exam must be completed by the end the third year. In preparation for the candidacy exam the student will prepare a paper answering a set of questions related to the thesis topic and methodology. The candidacy exam includes a presentation of a student's research and questions from the examination committee.

## Residence Requirement

The minimum period of residence is three academic years of full-time attendance at the University of Alberta.

# Length of Program

The time required to complete the PhD will vary according to the individual candidate; however, a minimum of four years is normally required.

The maximum time to complete the PhD program as set by the Faculty of Graduate Studies and Research is six years.

# **Educational Policy Studies [Graduate]**

Department of Educational Policy Studies
7-104 Education Centre North
University of Alberta
Edmonton, Alberta T6G 2G5
E-mail: epscoord@ualberta.ca
www.ualberta.ca/educational-policy-studies

# UNIVERSITY OF ALBERTA

# GRADUATE STUDIES AND RESEARCH

#### **General Information**

The Department of Educational Policy Studies offers master's and doctoral programs in the following specialized areas of study: Adult, Community and Higher Education; Educational Administration and Leadership; Indigenous Peoples Education; and Social Justice and International Studies in Education as well as a graduate certificate in Teaching and Learning in Higher Education.

The Department of Educational Policy Studies strives to develop critical and creative scholars who have a substantive understanding of the important systemic and contextual factors that bear upon Canadian and international education.

Graduate study in the above specializations is supported by a diverse group of full-time faculty, whose active research and publications (listed on the website at www.ualberta.ca/educational-policy-studies) are in the following general areas: aboriginal and indigenous perspectives in education; administration, leadership, and governance; careers and work; cultural, sociological, philosophical, historical, and political analysis of education; educational discourses and systems of thought; educational policy; educational reform; equity, diversity, and inclusivity in education; adult teaching and learning, professional development, and program evaluation; international and global education; and postsecondary education.

## **Entrance Requirements**

For the MEd degree, the Department's minimum admission requirements are an undergraduate degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\star$ 60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

For the EdD and PhD degrees, the Department's minimum admission requirements are a master's degree with an admission GPA of at least 3.5 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\star$ 60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework. In special circumstances a student with a GPA between 3.0 and 3.5 may be considered for admission.

The Educational Administration and Leadership specialization for both the master's and the doctoral programs requires applicants to have a minimum of two years of teaching experience or equivalent.

As part of the admissions process, students considered for admission to the Indigenous Peoples Education Doctoral specialization are required to participate in an interview. The interview community will consist of the following: at least two Indigenous Peoples Education specialization faculty members; a graduate student currently studying in the Indigenous Peoples Education specialization; and an Elder.

The Social Justice and International Studies specialization for both the master's and the doctoral programs requires applicants to have advanced skills in independent research, essay writing, logical argumentation, and narrative analysis. Applicants must have a strong background in the social foundations of education and/or one or more of the following humanities and social sciences: philosophy, history, sociology, anthropology, political science, and cultural and communication studies. Applicants must also have substantial work experience in the educational sector (e.g., public or private schooling, adult education, NGOs, social movements, corporate or government communications).

Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:

- a minimum TOEFL score of 93 (Internet-based) with a minimum of 24 on the speaking and writing bands of the test, or equivalent. (FGSR's minimum for the reading and listening bands of the TOEFL test is 20.)
- a minimum score of 70 on the CAEL exam
- a minimum score of 88 on the MELAB,
- a minimum of 6.5 on each band on the IELTS with an overall minimum score of 6.5.

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• a minimum score of 63 on the Pearson Test of English (PTE).

For applicants with international qualifications, where either their country or their international university are recognized as using English as the official language of instruction, proof of English Language Proficiency is still required. No exemptions to this requirement will be granted by the department.

Applicants must submit three letters of reference, a CV/resume, a statement of intent, and (if applicable) a distinguished life experience essay. For doctoral programs, confirmation of a potential research supervisor is required.

Applicants to Adult, Community and Higher Education specializations, Indigenous Peoples Education specializations and Social Justice and International Studies specializations are required to submit a writing sample.

The completion of the Master of Education does not make the degree-holder eligible for teacher certification.

Application deadlines for all programs in Educational Policy Studies are as follows:

Master of Education programs Oct 1 and March 1

Doctoral programs January 15

## Financial Assistance

The Department offers graduate teaching assistantships and research assistantships to some students based upon application and academic merit.

The University also offers support in the form of scholarships and awards to some students based upon application and/or nomination.

# **Graduate Program Requirements**

- The Degree of MEd
  - The Degree of Master of Education with a specialization in Adult, Community and Higher Education
  - The Degree of Master of Education with a specialization in Educational Administration and Leadership
  - The Degree of Master of Education with a specialization in Indigenous Peoples Education
  - O The Degree of Master of Education with a specialization in Social Justice and International Studies in Education
- The Degrees of EdD and PhD
- Certificates

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the following subject heading:

Education - Policy Studies (EDPS)



# The Degree of MEd (Educational Policy Studies) [Graduate]

#### **Program Requirements**

All MEd students must declare a specialization and complete department core courses, specialization and elective courses, outlined below according to Specialization.

The MEd degree has two routes. The course-based route normally requires a minimum of  $\star$  3 in graduate courses and a  $\star$  3 capping exercise.

The thesis-based route normally requires a minimum of  $\pm 24$  in graduate courses and a thesis.

All students are admitted into the course-based route. There are limited spaces available in the thesis-based route to which students may make application following admission. MEd students may apply for a transfer from the course-based program to a thesis-based program after completing a minimum of  $\star 9$  in the course-based program.

No language other than English is required for the degree.

# The Degree of Master of Education with a specialization in Adult, Community and Higher Education (Education Policy Studies) [Graduate]

This specialization provides advanced study for individuals who work with adults in the capacity of teaching, administration, or community leadership within a variety of institutional, community, and workplace settings throughout the world.

# Program Requirements

In addition to the department core courses ( $\star$ 6), students must complete specialization core courses and optional courses for a total of  $\star$ 33 for course-based programs, or  $\star$ 24 for thesis-based programs.

# Department core courses $(\bigstar 6)$

- EDPS 580 Contemporary Issues in Education: Perspectives on Policy and Practice
- EDPS 581 Introduction to Evaluating Educational Research

# Specialization core courses $(\bigstar 6)$

- EDPS 521 Adult Learning and Development
- EDPS 577 Foundations of Adult and Higher Education

#### Options/Electives

500-level and above courses taken across the department or faculty, chosen in consultation with the supervisor or program advisor.

 Students may undertake a supervised individual study course if permitted by their specialization program and only with prior approval by their advisor/supervisor and the Graduate Coordinator. Permission will not be granted if the proposed content is available through regular course offerings.

#### Course-based Programs:

EDPS 900 - Directed Research Project

#### Thesis-based Program:

Registration in 900-level THES. All students in a thesis-based Master of Education shall present a thesis embodying the results of their research
on a topic approved by their supervisor.

#### Length of Program

There is no residence requirement for the Master of Education program.

The maximum time to complete the course-based MEd program as set by the Faculty of Graduate Studies and Research is six years.

The maximum time to complete the thesis-based MEd program as set by the Faculty of Graduate Studies and Research is four years.

# The Degree of Master of Education with a specialization in Educational Administration and Leadership (Educational Policy Studies) [Graduate]

This specialization provides advanced study for Canadian and International candidates in preparation for a broad range of administrative, supervisory, and leadership positions in public and non-government sectors, and in K-12 and post-secondary education institutions in Canada and world-wide.

# Program Requirements

In addition to the department core courses ( $\star$ 6), students must complete specialization core courses and optional courses for a total of  $\star$ 33 for course-based programs, or  $\star$ 24 for thesis-based programs.

# Department core courses $(\bigstar 6)$

- EDPS 580 Contemporary Issues in Education: Perspectives on Policy and Practice
- EDPS 581 Introduction to Evaluating Educational Research

#### Specialization core courses $(\bigstar 6)$

EDPS 511 - Evolving Concepts in Educational Administration and Leadership

• EDPS 512 - Administrative and Leadership Process in Education

#### Options/Electives

- 500-level and above courses taken across the department or faculty, chosen in consultation with the supervisor or program advisor.
- Students may undertake a supervised individual study course if permitted by their specialization program and only with prior approval by their
  advisor/supervisor and the Graduate Coordinator. Students must have already completed at least one course (★3) in their program in order to
  receive permission. Permission will not be granted if the proposed content is available through regular course offerings.

#### Course-based Programs:

EDPS 900 - Directed Research Project

#### Thesis-based Program:

Registration in 900-level THES. All students in a thesis-based Master of Education shall present a thesis embodying the results of their research
on a topic approved by their supervisor.

#### Length of Program

There is no residence requirement for the Master of Education program.

The maximum time to complete the course-based MEd program as set by the Faculty of Graduate Studies and Research is six years.

The maximum time to complete the thesis-based MEd program as set by the Faculty of Graduate Studies and Research is four years.

# The Degree of Master of Education with a specialization in Indigenous Peoples Education (Educational Policy Studies) [Graduate]

Grounded in the traditions of the Aboriginal peoples of Alberta, the international and interdisciplinary focus of this specialization attracts students from a variety of disciplines and locations. This specialization combines the conventional parameters and standards of university education with the collective efforts of Indigenous students, scholars, and Elders.

Its aim is to facilitate and support individuals whose work is grounded in the values, integrity, and knowledge systems of Indigenous peoples locally and globally. Cultural activities include orientation week-ends, sharing circles, Elders support and ceremony.

# Program Requirements

In addition to the department core courses ( $\star$ 6), students must complete specialization core courses and optional courses for a total of  $\star$ 33 for course-based programs, or  $\star$ 24 for thesis-based programs.

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#### Department core courses $(\bigstar 6)$

- EDPS 580 Contemporary Issues in Education: Perspectives on Policy and Practice
- EDPS 581 Introduction to Evaluating Educational Research

#### Specialization core courses ( $\star$ 9 are required)

- EDPS 535 Indigenous Research Methodologies
- EDPS 537 Issues in Indigenous Education
- EDPS 538 From Oral Language to Written Text
- EDPS 539 Revitalizing Indigenous Language

#### Specialization electives options

- EDPS 536 Critical Pedagogy and Transformative Practices in Indigenous Education
- EDPS 636 Indigenous Ontologies in the Global Context
- EDPS 601 Cree Language Course

#### Options/Electives:

- 500-level and above courses taken across the department or faculty, chosen in consultation with the supervisor or program advisor.
- Students may undertake a supervised individual study course if permitted by their specialization program and only with prior approval by their advisor/supervisor and the Graduate Coordinator. Permission will not be granted if the proposed content is available through regular course offerings.

#### Course-based Programs:

• EDPS 900 - Directed Research Project

#### Thesis-based Program:

Registration in 900-level THES. All students in a thesis-based Master of Education shall present a thesis embodying the results of their research
on a topic approved by their supervisor.

# Length of Program

There is no residence requirement for the Master of Education program.

The maximum time to complete the course-based MEd program as set by the Faculty of Graduate Studies and Research is six years.

The maximum time to complete the thesis-based MEd program as set by the Faculty of Graduate Studies and Research is four years.



# The Degree of Master of Education with a specialization in Social Justice and International Studies in Education (Educational Policy Studies) [Graduate]

Social Justice and International Studies in Education (SJI) focuses on the theoretical, philosophical, and ideological underpinnings of education as well as the social and cultural contexts in which education takes place. Formerly known as "educational foundations," the SJI specialization draws heavily on philosophy, history, sociology, and other social sciences in its approach to the study of education within varying local, national and international settings. Accordingly, ethics, epistemology, historiography, political economy, sociology, social and political theory, comparative education, and cultural studies provide the conceptual lenses through which education is systematically examined. SJI courses thus explore linkages between education and economic, political and cultural systems, and expose students to a range of political, moral-ethical, and epistemological frameworks for thinking about social and economic inequality, gender and race relations, multiculturalism, sexual orientation, school-to-work transitions, and North-South conflicts.

#### **Program Requirements**

In addition to the department core courses ( $\star$ 6), students must complete specialization core courses and optional courses selected from the following for a total of  $\star$ 33 for course-based programs, or  $\star$ 24 for thesis-based programs.

#### Department core courses $(\bigstar 6)$

- EDPS 580 Contemporary Issues in Education: Perspectives on Policy and Practice
- EDPS 581 Introduction to Evaluating Educational Research

#### Specialization core courses $(\bigstar 6)$

- EDPS 590 Foundations of Education: Perspectives on Canadian Issues
- EDPS 591 Foundations of Education: Perspectives on International Issues

# Specialization electives (Course-based programs require $\star$ 9; Thesis-based programs require $\star$ 6)

- EDPS 501 Conference Course on Selected Topics Courses proposed and taught by SJI faculty (only applicable to 501s offered from Fall 2017 onwards)
- EDPS 513 Educational Policy and Reform
- EDPS 515 Sexual and Gender Minorities in Education and Culture
- EDPS 520 Adult Education, Popular Movements and NGOs in the Global South
- EDPS 522 Citizenship Education: Global Contexts
- EDPS 523 Education and Development Theory
- EDPS 525 Globalization, Global Education and Change
- EDPS 526 Race, Racialization and Education
- EDPS 527 Youth, Culture and Education
- EDPS 528 Global Transformations, Indigenous Knowledge and the Crisis of Sustainability
- EDPS 530 History of Education
- EDPS 544 Critical and Feminist Pedagogical Research

- EDPS 554
- EDPS 556
- EDPS 562 Social Theory and Education
- EDPS 563 Social Justice Education from a Sociological Perspective
- EDPS 564 Education and Social Change
- EDPS 565
- EDPS 636

#### Options/Electives

- 500-level and above courses taken across the department or faculty, chosen in consultation with the supervisor or program advisor.
- Students may undertake a supervised individual study course if permitted by their specialization program and only with prior approval by their advisor/supervisor and the Graduate Coordinator. Permission will not be granted if the proposed content is available through regular course offerings.

#### Course-based Programs:

• EDPS 900 - Directed Research Project

#### Thesis-based Program:

Registration in 900-level THES. All students in a thesis-based Master of Education shall present a thesis embodying the results of their research
on a topic approved by their supervisor.

# Length of Program

There is no residence requirement for the Master of Education program.

The maximum time to complete the course-based MEd program as set by the Faculty of Graduate Studies and Research is six years.

The maximum time to complete the thesis-based MEd program as set by the Faculty of Graduate Studies and Research is four years.

# The Degrees of EdD and PhD (Educational Policy Studies) [Graduate]

# **Program Requirements**

All EdD and PhD students must declare a specialization and complete department core courses, specialization and elective courses, outlined below according to Specialization.

The EdD and PhD degrees require a minimum of  $\bigstar 24$  in graduate courses and a dissertation.

No language other than English is required for the degree.

- The Degrees of EdD and PhD with a specialization in Adult, Community and Higher Education
- The Degrees of EdD and PhD with a specialization in Educational Administration and Leadership
- The Degrees of EdD and PhD with a specialization in Indigenous Peoples Education
- The Degrees of EdD and PhD with a specialization in Social Justice and International Studies in Education

# The Degrees of EdD and PhD with a specialization in Adult, Community and Higher Education (Educational Policy Studies) [Graduate]

This specialization provides advanced study for individuals who work with adults in the capacity of teaching, administration, or community leadership within a variety of institutional, community, and workplace settings throughout the world.

#### <u>Program Requirements</u>

In addition to the department core courses ( $\star$ 6), students must complete specialization core courses and optional courses for a minimum total of  $\star$ 24 in graduate courses.

#### Department core courses $(\bigstar 6)$

- EDPS 680 Policy Research and Education
- EDPS 681 Research Frameworks and Qualitative Methodologies

#### **Options**

- 500-level or 600-level courses taken across the department or faculty chosen to enhance the program.
- Students may undertake a supervised individual study course if permitted by their specialization program and only with prior approval by their supervisor and the Graduate Coordinator. Permission will not be granted if the proposed content is available through regular course offerings.

#### Dissertation

Registration in 900-level THES. All students in a doctoral program are required to present a dissertation embodying the results of their research
on a topic approved by their supervisor and supervisory committee.

#### Candidacy Exam

The completion of coursework, the Academic Integrity and Ethics Training and the Candidacy Exam must be completed within three years of the start of the program. For part time students, these requirements must be complete within four years of the start of the program.

## Residence Requirements

The minimum period of residence for the PhD degree is two academic years of full-time study at the University of Alberta.

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Students pursuing the EdD degree may satisfy their residence requirement in one of two registration patterns. Students are expected to have significant contact with the University of Alberta during their residence through time spent on campus and through interactions with the faculty and graduate students at the University:

#### Pattern A:

As part of the program there will be a period of full-time study for a minimum of 12 continuous months.

#### Pattern B:

Students must complete at least  $\star$ 18 (courses and/or THES registration) in each of the first three years. For students who start their programs part-time, the candidacy exam must be completed by the end of year four.

#### Length of Program

The maximum time to complete doctoral programs as set by the Faculty of Graduate Studies and Research is six years.

# The Degrees of EdD and PhD with a specialization in Educational Administration and Leadership (Educational Policy Studies) [Graduate]

This specialization provides advanced study for Canadian and International candidates in preparation for a broad range of administrative, supervisory, and leadership positions in public and non-government sectors, and in K-12 and post-secondary education institutions in Canada and world-wide.

# Program Requirements

In addition to the department core courses ( $\star$ 6), students must complete specialization core courses and optional courses for a minimum total of  $\star$ 24 in graduate courses.

# Department core courses $(\bigstar 6)$

- EDPS 680 Policy Research and Education
- EDPS 681 Research Frameworks and Qualitative Methodologies

# Specialization core courses ( $\bigstar$ 3 to $\bigstar$ 9)

- \* EDPS 511 Evolving Concepts in Educational Administration and Leadership
- \* EDPS 512 Administrative and Leadership Process in Education
- EDPS 635 Organization Theory I

\*Doctoral students are only exempt from these required courses if they have taken these courses or an equivalent in their master's degree prior to entering the doctoral program. If not exempted, these courses will be required in addition to the other requirements in the doctoral program.

#### **Options**

- 500-level or 600-level courses taken across the department or faculty chosen to enhance the program.
- Students may undertake a supervised individual study course if permitted by their specialization program and only with prior approval by their supervisor and the Graduate Coordinator. Students must have already completed at least one course (★3) in their program in order to receive permission. Permission will not be granted if the proposed content is available through regular course offerings.

#### Dissertation

Registration in 900-level THES. All students in a doctoral program are required to present a dissertation embodying the results of their research
on a topic approved by their supervisor and supervisory committee.

#### Candidacy Exam

The completion of coursework, the Academic Integrity and Ethics Training and the Candidacy Exam must be completed within three years of the start of the program. For part time students, these requirements must be complete within four years of the start of the program.

# Residence Requirements

The minimum period of residence for the PhD degree is two academic years of full-time study at the University of Alberta.

Students pursuing the EdD degree may satisfy their residence requirement in one of two registration patterns. Students are expected to have significant contact with the University of Alberta during their residence through time spent on campus and through interactions with the faculty and graduate students at the University:

#### Pattern A:

As part of the program there will be a period of full-time study for a minimum of 12 continuous months.

#### Pattern B:

Students must complete at least  $\star$ 18 (courses and/or THES registration) in each of the first three years. For students who start their programs part-time, the candidacy exam must be completed by the end of year four.

# Length of Program

The maximum time to complete doctoral programs as set by the Faculty of Graduate Studies and Research is six years.

# The Degrees of EdD and PhD with a specialization in Indigenous Peoples Education (Educational Policy Studies) [Graduate]

Grounded in the traditions of the Aboriginal peoples of Alberta, the international and interdisciplinary focus of this specialization attracts students from a variety of disciplines and locations. This specialization combines the conventional parameters and standards of university education with the collective efforts of Indigenous students, scholars, and Elders.

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# **GRADUATE STUDIES AND RESEARCH**

Its aim is to facilitate and support individuals whose work is grounded in the values, integrity, and knowledge systems of Indigenous peoples locally and globally. Cultural activities include orientation week-ends, sharing circles, Elders support and ceremony.

Students are not normally admitted to the EdD in this specialization.

#### **Program Requirements**

In addition to the department core courses ( $\star$ 6), students must complete specialization core courses and optional courses for a minimum total of  $\star$ 24 in graduate courses.

#### Department core courses $(\bigstar 6)$

- EDPS 680 Policy Research and Education
- EDPS 681 Research Frameworks and Qualitative Methodologies

#### Specialization core courses $(\pm 12)$

- EDPS 535 Indigenous Research Methodologies
- EDPS 537 Issues in Indigenous Education
- EDPS 538 From Oral Language to Written Text
- EDPS 539 Revitalizing Indigenous Language

#### Specialization electives options

- EDPS 536 Critical Pedagogy and Transformative Practices in Indigenous Education
- EDPS 636 Indigenous Ontologies in the Global Context
- EDPS 601 Cree Language Course
- 500-level or 600-level courses taken across the department or faculty chosen to enhance the program.
- Students may undertake a supervised individual study course if permitted by their specialization program and only with prior approval by their supervisor and the Graduate Coordinator. Permission will not be granted if the proposed content is available through regular course offerings.

#### Dissertation

Registration in 900-level THES. All students in a doctoral program are required to present a dissertation embodying the results of their research
on a topic approved by their supervisor and supervisory committee.

#### Candidacy Exam

The completion of coursework, the Academic Integrity and Ethics Training and the Candidacy Exam must be completed within three years of the start of the program. For part time students, these requirements must be complete within four years of the start of the program.

# Residence Requirements

The minimum period of residence for the PhD degree is two academic years of full-time study at the University of Alberta.

Students pursuing the EdD degree may satisfy their residence requirement in one of two registration patterns. Students are expected to have significant contact with the University of Alberta during their residence through time spent on campus and through interactions with the faculty and graduate students at the University:

#### Pattern A:

As part of the program there will be a period of full-time study for a minimum of 12 continuous months.

#### Pattern B:

Students must complete at least  $\star$ 18 (courses and/or THES registration) in each of the first three years. For students who start their programs part-time, the candidacy exam must be completed by the end of year four.

#### Length of Program

The maximum time to complete doctoral programs as set by the Faculty of Graduate Studies and Research is six years.

# The Degrees of EdD and PhD with a specialization in Social Justice and International Studies in Education (Educational Policy Studies) [Graduate]

Social Justice and International Studies in Education (SJI) focuses on the theoretical, philosophical, and ideological underpinnings of education as well as the social and cultural contexts in which education takes place. Formerly known as "educational foundations," the SJI specialization draws heavily on philosophy, history, sociology, and other social sciences in its approach to the study of education within varying local, national and international settings. Accordingly, ethics, epistemology, historiography, political economy, sociology, social and political theory, comparative education, and cultural studies provide the conceptual lenses through which education is systematically examined. SJI courses thus explore linkages between education and economic, political and cultural systems, and expose students to a range of political, moral-ethical, and epistemological frameworks for thinking about social and economic inequality, gender and race relations, multiculturalism, sexual orientation, school-to-work transitions, and North-South conflicts.

Students are not normally admitted to the EdD in this specialization.

# Program Requirements

In addition to the department core courses ( $\star$ 6), students must complete specialization core courses and optional courses for a minimum total of  $\star$ 24 in graduate courses.

#### Department core courses $(\bigstar 6)$

- EDPS 680 Policy Research and Education
- EDPS 681 Research Frameworks and Qualitative Methodologies

#### **Options**

- 500-level or 600-level courses taken across the department or faculty chosen to enhance the program.
- Students may undertake a supervised individual study course if permitted by their specialization program and only with prior approval by their supervisor and the Graduate Coordinator. Permission will not be granted if the proposed content is available through regular course offerings.

#### Dissertation

Registration in 900-level THES. All students in a doctoral program are required to present a dissertation embodying the results of their research
on a topic approved by their supervisor and supervisory committee.

#### Candidacy Exam

The completion of coursework, the Academic Integrity and Ethics Training and the Candidacy Exam must be completed within three years of the start of the program. For part time students, these requirements must be complete within four years of the start of the program.

# Residence Requirements

The minimum period of residence for the PhD degree is two academic years of full-time study at the University of Alberta.

Students pursuing the EdD degree may satisfy their residence requirement in one of two registration patterns. Students are expected to have significant contact with the University of Alberta during their residence through time spent on campus and through interactions with the faculty and graduate students at the University:

#### Pattern A:

As part of the program there will be a period of full-time study for a minimum of 12 continuous months.

#### Pattern B:

Students must complete at least  $\star$ 18 (courses and/or THES registration) in each of the first three years. For students who start their programs part-time, the candidacy exam must be completed by the end of year four.

## Length of Program

The maximum time to complete doctoral programs as set by the Faculty of Graduate Studies and Research is six years.



# Certificates (Educational Policy Studies) [Graduate]

# Free-Standing Graduate Certificates

#### **Entrance Requirements**

Applicants to Graduate Certificates must meet the general admission requirements of the Faculty of Graduate Studies and Research (see Admission) and are subject to regulations for certificates specified in Regulations of the Faculty of Graduate Studies and Research.

#### **Program Requirements**

The Graduate Certificates normally require ★9 in graduate courses. Certificates will be awarded for the successful completion of the designated courses within the Certificate and with a final GPA of 2.7 or above. Certificates must be completed within four years (see Regulations of the Faculty of Graduate Studies and Research).

No language other than English is required for the degree.

#### Length of Program

There is no residence requirement for the Graduate Certificates program. Normally, the Graduate Certificates must be completed within four years.

# <u>Graduate Certificate in Teaching and Learning in Higher Education $(\star 9)$ </u>

This Graduate Certificate in Teaching and Learning in Higher Education is to provide academic staff, graduate students and postdoctoral fellows with the opportunity to complete a formal and externally recognizable program in the theories, practice (design, development and delivery) and assessment of teaching and learning in higher education. Courses required for the program include EDPS 558, EDPS 559, EDPS 560, and EDPS 561. See Course Listings for a description of the courses.

For more information contact the Department of Educational Policy Studies or visit edpolicystudies.ualberta.ca.

# **Educational Psychology [Graduate]**

Department of Educational Psychology 6-102 Education Centre North University of Alberta Edmonton, Alberta T6G 2G5 E-mail: edpygrad@ualberta.ca

Phone: (780) 492-1149 Fax: (780) 492-1318

www.edpsychology.ualberta.ca

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# GRADUATE STUDIES AND RESEARCH

#### **General Information**

The Department offers programs leading to the degree of PhD in the following specializations: Psychological Studies in Education; School and Clinical Child Psychology; Counselling Psychology (CPA accredited); Special Education; Measurement, Evaluation and Data Science; and Studies in Teaching and Learning English as a Second Language (TESL). Programs leading to the degree of MEd (thesis-basis) are offered in the following specializations: Psychological Studies in Education; School and Clinical Child Psychology; Counselling Psychology; School Counselling; Measurement, Evaluation and Data Science; Special Education; Technology in Education; and Teaching English as a Second Language (TESL). A course-based MEd program with a specialization in School Counselling is offered by the Department. Applicants following this program are selected based on their potential to serve as school counsellors. The Department houses an MEd program specializing in Health Sciences Education. This program is intended for those in Health Disciplines. Further information and admissions criteria may be found at www.edpsychology.ualberta.ca/graduateprograms/healthscienceseducation.aspx.

The MEd and PhD programs are designed to provide specialized education and preparation for teachers, administrators, consultants, psychologists, academics, research personnel, and others requiring specialized preparation in the program areas. Normally, a student's graduate program includes a combination of professional and research graduate-level courses offered by the Department, the Faculty of Education and other Departments and Faculties in the University.

# **Entrance Requirements**

The Department's minimum admission requirements are a four-year undergraduate degree with a minimum grade point average of 3.0 in the last two years of undergraduate work (or graduate work) at the University of Alberta, or an equivalent qualification from a recognized institution. For those students whose previous academic work was completed in a language other than English, the Department requires proof of proficiency in the English language. Any one of the following is acceptable:

- TOEFL score of 580 paper-based; or
- TOEFL score of 237 computer-based; or
- TOEFL score of 93 Internet-based, with a score of at least 24 on speaking and writing, and 20 on reading and listening; or
- An Academic IELTS score of 7.0 with no band less than 6.5; or
- An official CAEL (Canadian Academic English Language assessment system) score of at least 70 in all bands.

Areas within the Department may have higher standards.

The TESL program requires the following for those students whose first language is not English:

- TOEFL score of 600 paper-based (or 250 computer-based); and
- TSE score of 55 (minimum) (SPEAK scores are not acceptable); or
- TOEFL iBT (Internet-based) score of 98, with minimum scores of 28 in the speaking component, 22 in the reading component and 24 in the listening and writing components; OR
- An Academic IELTS score of 8 (minimum) on listening/speaking bands with no band less than 7; or
- An official CAEL (Canadian Academic English Language assessment system) score of at least 80 on listening/speaking bands with no band less than 70.

Additional information regarding English Language proficiency may be found at: www.gradstudies.ualberta.ca/applyadmission/elp.htm.

Additional details concerning admission requirements, including prerequisite courses, within each area may be found on the Department's website at www.edpsychology.ualberta.ca.

#### Financial Assistance

In addition to scholarships awarded by outside granting agencies such as the Social Sciences and Humanities Research Council of Canada, the Canadian Institutes of Health Research and by the University such as the Faculty of Graduate Studies and Research Scholarships, the Department offers financial support to some students in the form of graduate research assistantships and graduate teaching assistantships. Assistantship applications are available to students admitted to the Department.

# **Graduate Program Requirements**

- The Degree of MEd
- The Degree of EdD
- The Degree of PhD

#### **Graduate Courses**

Graduate courses can be found on Bear Tracks, Course Listings, using the following subject headings:

Education - Instructional Technology (EDIT)

Education - Psychology (EDPY)

# The Degree of MEd (Educational Psychology) [Graduate]

# **Program Requirements**

For the thesis-based MEd, students must complete a minimum of  $\star$ 15- $\star$ 36 in graduate-level courses in addition to a thesis. All candidates are required to demonstrate competence in research methods, and skills specific to their area of specialization. The required competence is usually demonstrated by completion of EDPY 501 and courses specific to each specialization area. For the coursebased MEd, students must complete a minimum of  $\star$ 21- $\star$ 36 in graduate-level courses in addition to a capping exercise or project.

The course-based MEd in School Counselling requires the successful completion of ★36 in graduate-level courses. Students accepted into the program will be practising teachers, and the program is designed to be taken on a part-time basis. Applicants are accepted into this program in alternate, odd years. Interested students should contact the Department of Educational Psychology (edpygrad@ualberta.ca).

More details concerning required coursework within each area may be found within the Department's website at www.edpsychology.ualberta.ca. Each student, in consultation with the Faculty advisor assigned at the time of admission, will develop a program of study to suit the student's specific background and area of interest.

# Length of Program

Students have a maximum four years to complete a thesis-based MEd. The course-based MEd must be completed in a maximum of six years. Students who are admitted to a thesis-based MEd degree program and who initially register as full-time students in these programs must register full-time for the remainder of their program.



# The Degree of EdD (Educational Psychology) [Graduate]

Not offered in 2015-2016.

# The Degree of PhD (Educational Psychology) [Graduate]

## **Program Requirements**

The PhD program consists of courses in the area of specialization, a candidacy examination, and the preparation and defence of a thesis on an approved topic.

No language other than English is required.

Students admitted to a PhD program must register full time throughout their program. Both the Counselling Psychology and School and Clinical Child Psychology programs require a one-year supervised internship. More details concerning required coursework and the development of the thesis within each area may be found at the Department's website: www.edpsychology.ualberta.ca. Each student, in consultation with the Faculty advisor assigned at the time of admission, will develop a program of study to suit the student's specific background and area of interest. By the end of the first year of study, PhD students must have a supervisory committee consisting of at least three faculty members whose interests are usually related to the student's area of study.

#### Length of Program

Candidates in the PhD program have a maximum completion time of six years. A typical time for completion of the PhD degree is four years.

# **Educational Studies [Graduate]**

Educational Studies Program 832 Education South University of Alberta Edmonton, Alberta T6G 2G5 E-mail: mesinfo@ualberta.ca www.mes.ualberta.ca

#### **General Information**

The MEd in Educational Studies offers leadership development for educators and administrators. The program is designed to provide theory, skills, and insights into practice that can be readily applied in the workplace. The program, designed for working professionals in a wide number of areas, is completed in two years through a combination of summer residencies and online courses in a cohort model.

# UNIVERSITY OF ALBERTA

# **GRADUATE STUDIES AND RESEARCH**

#### **Entrance Requirements**

The Department's minimum admission requirements are an undergraduate degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\star$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework. Applicants are required to have at least two years of teaching experience.

Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:

- a TOEFL score of at least 237 (computer-based) or a total score of 92 (Internet-based) with a score of at least 24 on speaking and writing and 20 on reading and listening, or equivalent.
- An Academic IELTS overall score of 6.5 with a minimum score of 6.5 on each band
- A PTE Academic score of 63

Applicants are also required to submit a letter of intent, a current resume, and two professional letters of recommendation.

# **Graduate Program Requirements**

The Degree of MEd

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading Educational Studies (EDU)

# The Degree of MEd (Educational Studies) [Graduate]

# **Program Requirements**

This is a course-based program that requires the completion of  $\bigstar 30$  in graduate-level course work, including  $\bigstar 24$  of required, core courses. Students are required to attend two three-week summer residencies, one during their first year and one during their second year.

# Core Courses (★24)

- EDU 503 Foundations of Curriculum
- EDU 510 Fundamentals of Educational Research
- EDU 511 Introduction to School Improvement
- EDU 512 Leadership in Educational Settings
- EDU 513 Leadership for Educational Change
- EDU 514 Planning for Educational Change
- EDU 515 Conducting Educational Research
- EDU 900 Program Synthesis

#### **Elective Courses**

Information on elective courses is available at https://www.ualberta.ca/educational-studies/mesprogram/elective-courses.

# Length of Program

Core courses are scheduled to permit completion of the degree by part-time study within two years.

The maximum time to complete the course-based MEd program as set by the Faculty of Graduate Studies and Research is six years.

# **Electrical and Computer Engineering [Graduate]**

Department of Electrical and Computer Engineering (ECE)
11th Floor Donadeo Innovation Centre for Engineering
University of Alberta
9211-116 Street NW
Edmonton, Alberta T6H 1H9
www.ece.engineering.ualberta.ca

#### **General Information**

The Department of Electrical and Computer Engineering offers graduate courses leading to the MEng, MSc, and PhD degrees to qualified graduates of recognized universities.

Electrical and Computer Engineering graduate students have the opportunity to work with an advisor in one of twelve research areas in the department. While a specific topic of focus is expected, the research conducted in many of the areas is interdisciplinary. This gives students experience with other facets of electrical and computer engineering, and engineering physics. The twelve areas of research in ECE include: biomedical engineering; communications; computer engineering; control systems; electromagnetics and microwaves; energy systems; integrated circuits and systems; microsystems and nanodevices; photonics and plasmas; signal and image processing; software engineering and intelligent systems; solid state electronics.

# **Entrance Requirements**

The Department's minimum requirements for admission to the MEng or MSc programs are an undergraduate degree with an admission GPA of at least 3.0 on the 4- point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\star$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

The Department's minimum requirements for admission to the PhD program are an undergraduate degree with an admission GPA of at least of 3.3 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\bigstar$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:

• a minimum TOEFL score of 92 (Internet-based) with at least 20 in each section or equivalent;

# ALBERTA

# **GRADUATE STUDIES AND RESEARCH**

- an overall band score of 7.0 on IELTS with at least 6.0 on each band;
- a minimum score of 90 on MELAB;
- a minimum overall score of 65 on the CAEL with at least 60 on each subtest;
- a minimum score of 62 on the PTE Academic.

Students are also required to submit a Curriculum Vitae and three letters of reference. Current U of A students applying for graduate admission do not need to submit references.

Students with a Master's degree in Electrical and Computer Engineering (or a related discipline) are only eligible for admission into the PhD program, and students with a doctoral degree in Electrical and Computer Engineering (or a related discipline) are ineligible for admission into the graduate program. The determination of related disciplines is made (on a case-by-case basis) by the Associate Chair - Graduate Program.

#### Application deadlines:

For Canadian citizens and permanent residents, the application deadlines are:

- May 31 for September Admission
- September 1 for January Admission

If it is necessary to apply after these deadlines, please contact the department directly at ecegadm@dualberta.ca

For International students, including applicants within Canada applying for a study permit, the application deadlines are:

- May 1 for September Admission
- September 1 for January Admission

#### Financial Assistance

Financial assistance is available on a competitive basis in the form of research assistantships, teaching assistantships, tuition scholarships and a variety of awards administered by the University and affiliated institutions. Details are found at www.gradstudies.ualberta.ca

# **Graduate Program Requirements**

- The Degree of MSc (Electrical and Computer Engineering) [Graduate]
- The Degree of MEng (Electrical and Computer Engineering) [Graduate]
- The MBA/MEng Joint Program (Electrical and Computer Engineering) [Graduate]
- The Degree of PhD (Electrical and Computer Engineering) [Graduate]

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading:

Electrical and Computer Engineering (ECE).



# The Degree of MSc (Electrical and Computer Engineering) [Graduate]

# **Program Requirements**

The Master of Science program is a thesis-based program.

Students are required to complete a minimum of  $\pm 15.5$  in coursework and a thesis.

#### Coursework

- Five ★3 graduate-level courses which must be recommended by the thesis supervisor and approved by the Associate Chair Graduate Program
- ENGG 600 (★0.5)- Engineering Ethics and Integrity
- Additional coursework may be required

#### Thesis

Registration in 900-level THES

## Ethics Requirement

Engineering students meet their ethics requirement through ENGG 600 and the Graduate Ethics Training (GET) course offered by FGSR.

#### Professional Development Requirement

Engineering students must meet their Professional Development requirement through the completion of two courses, registration for which is through eClass. Contact the Department for further information.

# Academic Standing Requirement

Students are required to maintain a minimum cumulative grade point average of 3.0 throughout the course of the program.

Failure to maintain the required cumulative GPA will normally result in a recommendation by the Associate Chair – Graduate Program to FGSR that the student be placed on academic probation or required to withdraw.

# Residence Requirement

The minimum period of residence is two consecutive four-month terms of full-time attendance at the University of Alberta.

## Length of Program

The time required to complete the MSc will vary according to the previous training of the applicant and the nature of the research undertaken; however, a typical time of two years is normally required.

The maximum time to complete the thesis-based MSc program as set by the Faculty of Graduate Studies and Research is four years.

# The Degree of MEng (Electrical and Computer Engineering) [Graduate]

#### **Program Requirements**

The Master of Engineering program is a course-based program.

Students are required to complete a minimum of  $\pm 27.5$  in coursework including a  $\pm 3$  project.

#### Coursework

- Eight ★3 graduate-level courses which must be approved by the Associate Chair Graduate Program
- ENGG 600 (★0.5)- Engineering Ethics and Integrity
- Additional coursework may be required.

#### Capstone Project

ECE 910 (★3) – Directed Research Project.

## Ethics Requirement

Engineering students meet their ethics requirement through ENGG 600 and the FGSR Graduate Ethics Training (GET) course.

#### Professional Development Requirement

Engineering students must meet their Professional Development requirement through the completion of two courses, registration for which is through eClass. Contact the Department for further information.

## **Academic Standing Requirement**

Students are required to maintain a minimum cumulative grade point average of 3.0 throughout the course of the program.

Failure to maintain the required cumulative GPA will normally result in a recommendation by the Associate Chair – Graduate Program to FGSR that the student be placed on academic probation or required to withdraw.

# Residence Requirement

The minimum period of residence is one four-month term of full-time attendance at the University of Alberta.

## Length of Program

The time required to complete the MEng is typically one and a half years to two years.

The maximum time to complete the course-based MEng program as set by the Faculty of Graduate Studies and Research is six years.

# The MBA/MEng Joint Program (Electrical and Computer Engineering) [Graduate]

The Faculty of Business and the Faculty of Engineering offer a program of joint study which enables students to earn both the MBA and MEng degrees after two calendar years of full-time study. Only students with an undergraduate degree in engineering are admissible to this program.

For application information, entrance requirements and other details, refer to the The MBA/MEng Combined Program (Business) [Graduate] of the University Calendar.

# The Degree of PhD (Electrical and Computer Engineering) [Graduate]

# **Program Requirements**

Students are required to complete a minimum of  $\bigstar$ 18.5 in coursework and a thesis.

#### Coursework

- Six ★3 graduate-level courses
  - Course requirements depend upon individual circumstances and must be approved by the Associate Chair Graduate Program.
  - Emphasis is on research leading to a thesis of high calibre.
  - The student's supervisory committee will recommend courses to be taken by the student to make up for course deficiencies and to support thesis research.
- ENGG 600 (★0.5)- Engineering Ethics and Integrity
- Additional coursework may be required

#### **Thesis**

Registration in 900-level THES

#### Ethics Requirement

Engineering students meet their ethics requirement through ENGG 600 and the FGSR Graduate Ethics Training (GET) course.

# ALBERTA

# **GRADUATE STUDIES AND RESEARCH**

#### Professional Development Requirement

Engineering students must meet their Professional Development requirement through the completion of two courses, registration for which is through eClass. Contact the Department for further information.

#### Candidacy Exam

PhD students must undergo a Candidacy exam. The Candidacy exam must be held within two years from the initial registration in the program. All course requirements must be completed before the exam takes place.

# **Academic Standing Requirement**

Students in the doctoral program are expected to maintain a cumulative grade point average of 3.3 or higher before proceeding to their candidacy examinations.

Failure to maintain the required cumulative GPA will normally result in a recommendation by the Associate Chair – Graduate Program to FGSR that the student be placed on academic probation or required to withdraw.

Students whose average is above 3.0 but below 3.3 may be recommended for change of program category into the MSc program.

## Residence Requirement

The minimum period of residence is two academic years of full-time attendance at the University of Alberta.

# Length of Program

The time required to complete the program will vary with the individual candidate; however, four to five years is typical.

The maximum time to complete the PhD program as set by the Faculty of Graduate Studies and Research is six years.

# **Elementary Education [Graduate]**

Department of Elementary Education 551 Education South University of Alberta Edmonton, Alberta T6G 2G5 E-mail: elemgrad@ualberta.ca

FAX: (780) 492-7622

www.uofaweb.ualberta.ca/elementaryed/

# UNIVERSITY OF ALBERTA

# GRADUATE STUDIES AND RESEARCH

#### **General Information**

The Department of Elementary Education offers graduate programs leading to the degrees of MEd, EdD, and PhD, in the following areas: Art; Curriculum Studies; Early Childhood Education; ESL; Second Language; Instructional Studies; Language Arts; Mathematics; Physical Education; Music; School Libraries (MEd only); Science; Social Studies; Technology in Education (MEd only); and Teacher Education (PhD only). These programs are designed to help prepare consultants and supervisors, master teachers, and curriculum scholars and researchers.

Application forms for admission to graduate programs can be secured at www.gradstudies.ualberta.ca

# **Entrance Requirements**

The Department's minimum admission requirements to the master's program include a valid teaching certificate, and an undergraduate degree equivalent to a BEd degree from the University of Alberta with a minimum grade point average of 3.3 on the last graded ★60 completed. Successful teaching experience is also required.

To be admitted to the EdD or PhD program a candidate is normally required to have the equivalent of a University of Alberta MEd degree, a minimum GPA of 3.3, as well as successful teaching experience. Under certain circumstances it is possible to enter with the equivalent of the BEd degree, but in such instances potential candidates may be required to complete additional course requirements.

In the case of both master's and doctoral programs, international applicants from non-English speaking institutions must have a minimum TOEFL score of 580 (paper-based) or 93 (Internet-based) with a minimum of 24 on the speaking and writing and 20 on reading and listening bands of the test. Other acceptable test scores: IELTS with a minimum overall band score of 7.0, with at least 6.5 on each band; MELAB with a minimum score of 90; or CAEL with an overall minimum score of 70, with at least 60 on each subtest.

#### Financial Assistance

A limited number of graduate assistantships are available.

# **Graduate Program Requirements**

- The Degree of MEd
- The Degree of EdD
- The Degree of PhD

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading Elementary Education (EDEL and EDES).



# The Degree of MEd (Elementary Education) [Graduate]

# **Program Requirements**

Two routes to the MEd degree are available: a thesis-based route and a course-based route. Requirements in the thesis-based route normally consist of  $\star$ 21 plus a thesis. Requirements for the course-based MEd degree normally include graduate coursework equivalent to  $\star$ 30 plus a capping experience (noncredit). There is no residence requirement for the thesis-based master's program, but a one-year residency is recommended.

There is no residence requirement for the course-based master's program.

All master's applicants are admitted to the course-based route. Once admitted, students will meet with their assigned Program Advisor to begin planning their coursework and overall program of study. Students may subsequently request to change to the thesis-based route after completing EDEL 567 and one graduate course in their area of study. Students who are interested in the thesis-based route should discuss this with their Program Advisor and plan to take EDEL 567 early in their program.

#### Length of Program

The time required to complete the MEd program varies with the individual candidate and the route selected. The thesis-based MEd may be completed in two years and must be completed within four years. The course-based MEd may be completed in two years and must be completed within six years.

# The Degree of EdD (Elementary Education) [Graduate]

# Program Requirements

The EdD program requirements are individually defined and normally range from  $\pm 24$  to  $\pm 48$  plus a dissertation.

The residence requirement for the EdD program is met by the completion of 12 months of continuous full-time study.

# Length of Program

The time required to complete the EdD program will vary with the individual candidate; however, normally four to five years are required and the program must be completed within six years.

# The Degree of PhD (Elementary Education) [Graduate]

# **Program Requirements**

The PhD program requirements are individually defined and normally range from  $\pm 24$  to  $\pm 48$  plus a dissertation.

The minimum period of residence is two academic years (Fall and Winter terms) of full-time attendance at the University of Alberta. Full-time study means ★9 per term.

# UNIVERSITY OF ALBERTA

# GRADUATE STUDIES AND RESEARCH

# Length of Program

The time required to complete the PhD will vary according to the previous academic preparation of the applicant and the nature of the research undertaken; however, normally four to five years of study and research are required and the program must be completed within six years.

# English and Film Studies [Graduate]

Department of English and Film Studies 3-5 Humanities Centre University of Alberta Edmonton, Alberta T6G 2E5 E-mail: efs@ualberta.ca

#### **General Information**

The Department of English and Film Studies (EFS) offers graduate work leading to the Master of Arts and Doctor of Philosophy degrees in English language, literature, and culture.

Research in EFS embraces a wide array of scholarly explorations dedicated to the understanding, elucidation, and production of literary and cultural texts, broadly conceived. Scholars in EFS engage in ground-breaking research across four broad zones of inquiry: literary history, print culture, critical and cultural theory, and screen cultures.

The University's libraries hold the equivalent of nearly 9,000,000 volumes, ranking second in Canada and in the top twenty in North America, and subscribe to over 100,000 electronic journals, and to 1100 databases. Over 100,000 rare books, and significant archival material, are held in the Special Collections.

#### **Entrance Requirements**

For the MA program, the Department's minimum admission requirements are a BA in English (or its equivalent) with a minimum GPA of 3.3 in courses in English, and with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last ★60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework. The graduate committee uses the two GPA benchmarks as part of its decision process.

Applicants to the MA program must meet the following prerequisite course requirements:

- at least ★54 in English courses,
- at least ★27 in a breadth of courses representing the major historical periods [Old and Middle English, Early Modern, Restoration and Eighteenth Century, Nineteenth Century, and Twentieth Century literature and culture] and in Canadian, American, Indigenous, and postcolonial literature and culture, and
- some grounding in literary and cultural theory.

For the PhD program, the Department's minimum admission requirements are an MA in English (or its equivalent) with a minimum GPA of 3.5 in courses in English, and with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\bigstar$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework. The graduate committee uses the two GPA benchmarks as part of its decision process.

Where applicable, applicants must meet the minimum English Language Requirement.

All applicants must submit:

- all academic transcripts
- names and contact information for three referees
- a curriculum vitae
- a Statement of Program see the Department website at https://www.ualberta.ca/english-filmstudies

## Financial Assistance

Please see the Department website for details.

## **Graduate Program Requirements**

- The Degree of MA in English (English and Film Studies) [Graduate]
- The Degree of PhD in English (English and Film Studies) [Graduate]

# **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading English (ENGL).

# The Degree of MA in English (English and Film Studies) [Graduate]

# **Program Requirements**

The MA program may be taken as either a course-based or a thesis-based degree.

#### Course-based MA

Students must complete a minimum of  $\star$ 24 in coursework, consisting of  $\star$ 21 in required courses, a proseminar, and a portfolio equivalent to  $\star$ 3.

#### Required courses ( $\star$ 21):

- Seven ★3 graduate-level courses.
- Up to 2 courses can be taken in another department with permission from the Associate Chair, Graduate Studies.
- Students without an Honors BA in English may require more courses, depending upon the number of English courses that have been taken as an
  undergraduate.

#### Seminar requirement

Proseminar A (Please contact the department for more information)

#### Portfolio (★3)

• ENGL 900 – Directed Research Project. The capping exercise for the course-based MA is either an Academic Portfolio or a Creative Portfolio.

#### Thesis-based MA

Students must complete a minimum of  $\pm 18$  in coursework, a proseminar, and a thesis.

#### Required courses

- Six ★3 graduate-level courses.
- Up to 2 courses can be taken in another department with permission from the Associate Chair, Graduate Studies.
- Students without an Honors BA in English may require more courses, depending upon the number of English courses that have been taken as an undergraduate.

#### Seminar requirement

Proseminar A (Please contact the department for more information)

#### Thesis

Registration in 900-level THES. Completion and oral defense of a thesis is required. Students must submit a Thesis Proposal in their first year.

# Residence Requirement

For full-time MA students, both thesis-based and course-based, the minimum period of residence is two four-month terms of full-time attendance at the University of Alberta for candidates with an Honors degree in English (or its equivalent); for candidates without an Honors BA in English the residence requirement may be somewhat longer. The terms do not have to be consecutive.

# Length of Program

The time required to complete the MA will vary according to the previous training of the applicant and the nature of the research undertaken; however, a minimum of 12 months is normally required. Thesis-based MA degrees typically take longer than 12 months.

The maximum time to complete the course-based MA program as set by the Faculty of Graduate Studies and Research is six years. The maximum time to complete the thesis-based MA program as set by the Faculty of Graduate Studies and Research is four years.



# The Degree of PhD in English (English and Film Studies) [Graduate]

# **Program Requirements**

Students in the PhD program must complete a minimum of ★18 in coursework, two proseminars, and a thesis.

# Required courses (★18)

- Five ★3 graduate-level courses.
- Up to 2 courses can be taken in another department with permission from the Associate Chair, Graduate Studies.
- ENGL 800 or ENGL 801 PhD Colloquium, taken in the second year of the program.

#### Seminar requirement

- Proseminar A (Please contact the department for more information)
- Proseminar B

#### **Thesis**

Registration in 900-level THES. Completion and defense of a thesis is required.

#### Statement of Research Plan

In the first year of their program, students are required to submit a Statement of Research Plan, developed in consultation with their supervisor.

#### Long Thesis Proposal and Candidacy Exam

Normally at the end of their second year, PhD students are required to submit a Long Thesis Proposal, which forms the basis for the oral candidacy examination. The proposal must be approved by the supervisory committee before the student can proceed to the candidacy exam.

#### Language Requirement

PhD students must demonstrate basic proficiency in two languages other than English or advanced knowledge of one. Students should consult the Department's website for further information.

# Residence Requirement

The minimum period of residence is two academic years of full-time attendance at the University of Alberta, where an academic year is defined as the eightmonth period from September through April.

# Length of Program

The time required to complete the PhD will vary with the individual candidate; however, a minimum of two years of study and research is normally required.

The maximum time to complete the PhD program as set by the Faculty of Graduate Studies and Research is six years.

# Faculté Saint-Jean [Graduate]

Faculté Saint-Jean 8406, rue Marie-Anne Gaboury (91 St.) Edmonton, Alberta T6C 4G9 E-mail: matrise@csj.ualberta.ca

## **General Information**

Faculté Saint-Jean offers graduate work leading to a Master of Education degree specializing in Language and Culture and a Master of Arts degree specializing in Canadian Studies. These multidisciplinary programs recognize the uniqueness of the Faculté and enable students to pursue studies in French at the master's level.

#### <u>Information générale</u>

La Faculté Saint-Jean offre des programmes multi et transdisciplinaires de deuxième cycle menant à la Maîtrise en sciences de l'éducation-Études en langue et culture et la Maîtrise en arts en études canadiennes. Les programmes reflètent le caractère unique de la Faculté et permettent aux étudiants de poursuivre leurs études en français au niveau des études supérieures.

# **Graduate Program Requirements**

- The Degree of MEd in Etudes en langue et culture (Faculté Saint-Jean) [Graduate]
- The Degree of MA
- Maîtrise en sciences de l'éducation Études en langue et culture [Graduate]
- Maîtrise en arts
- The Graduate Certificate in School Administration Leadership
- Certificat supérieur en administration scolaire

# The Degree of MEd in Etudes en langue et culture (Faculté Saint-Jean) [Graduate]

This program proposes a multidisciplinary study of theories of language and culture and educational practices. It is designed for people both working in education and interested in educational issues. The program aims to train education specialists and professionals to take on key leadership roles in their school.

For more information, visit the Faculté Saint-Jean and the Faculty of Graduate Studies and Research websites.

Note: The Master of Education degree is not a teaching certificate. For more information, visit the Alberta Education website.

# **Entrance Requirements**

Faculté Saint-Jean's minimum admission requirements are an undergraduate degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last ★60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Applicants are also required to submit three letters of reference and a statement of intent.

Applicants to the course-based MEd program are required to have a minimum of two years of experience as a professional in education or educational training.

#### **Program Requirements**

The MEd may be taken as a course-based program or as a thesis-based program.

Students can choose to concentrate in one of three areas:

- School Administration and Leadership
- Inclusion, Diversity and Equality
- Numeracy, Literacy and Curriculum

**Note**: The School Administration and Leadership concentration can lead to a Graduate Certificate in School Administration). For more information, visit the section The Graduate Certificate in School Administration Leadership.

#### Course-based MEd

Students entering the course-based MEd must have minimum of two years of experience as a professional in education or educational training.

Students are required to complete a minimum of ★30 in coursework including a ★3 capping exercise

#### Required courses (★12)

- M EDU 520 Tendances actuelles en éducation
- M EDU 580 Méthodologie de la recherche en éducation I
- Two ★3 courses based on the chosen area of concentration, to be selected in consultation with the graduate program administration at Faculté Saint-Jean.

#### Elective Courses $(\pm 15)$

Five ★3 courses to be selected in consultation with the graduate program administration at Faculté Saint-Jean.

#### Capping Exercise $(\bigstar 3)$

M EDU 900 - Activité de synthèse

#### Thesis-based MEd

Students are required to complete a minimum of  $\bigstar$ 21 in coursework and a thesis.

#### Required courses (★12)

- M EDU 520 Tendances actuelles en éducation
- M EDU 580 Méthodologie de la recherche en éducation I
- Two ★3 courses based on the chosen area of concentration, to be selected in consultation with the graduate program administration at Faculté Saint-Jean.

#### Elective Courses $(\bigstar 9)$

Three ★3 courses to be selected in consultation with the graduate program administration at Faculté Saint-Jean.

#### Thesis

• Registration in 900-level THES. Students are required to successfully defend a thesis.

## Length of Program

In order to obtain an MEd degree, students in the thesis-based route must complete all the requirements within four years of the time they first register as candidates in the MEd program. Candidates in the course-based route must complete all the requirements within six years.

#### **Graduate Courses**

Graduate courses may be found in Course Listings, under the subject headings Maîtrise en sciences de l'éducation (M EDU) and Thesis (THES).

# The Degree of MA (Faculté Saint-Jean) [Graduate]

This program proposes a multidisciplinary and interdisciplinary study of Canada, including the study of Canada's francophonies. Emphasis is placed on culture and institutions in relation to socio-political conflicts, historical and social contexts. The program explores relations of identity/differences, sex/gender, race, language and class; nationalism, regionalism and globalization; economy, society and state.

Prospective students should consult the Graduate Program Coordinator at Faculté Saint-Jean for further information on the program.

# **Entrance Requirements**

Faculté Saint-Jean's requirements for admission to the Master of Arts program are as follows:

- A baccalaureate degree with a cumulative average of 3.0 (or equivalent) in the last ★60 of a program with at least ★30 of senior undergraduate
  courses, or the equivalent, in Canadian Studies or courses related to Canadian Studies (courses recognized by the academic institution of the
  student).
- 2. Three letters of reference sent directly to the Faculté Saint-Jean.
- 3. Language requirement: Possession of a baccalaureate degree or its academic equivalent from an academic institution recognized by the University of Alberta, in which the language of instruction is French, or any other relevant formation. The Faculté Saint-Jean reserves the right to require a satisfactory score on an approved French language examination. Second language requirement: Proficiency of a second language relevant to the research program (e.g., English or any native language).

## **Program Requirements**

Students are required to take a total of  $\star$ 18 in graduate courses/seminars and  $\star$ 12 for the thesis, for a total of  $\star$ 30.

### Structure of the Program

### Compulsory courses $(\bigstar 6)$ :

- ETCAN 500 Méthodologies interdisciplinaire et multidisciplinaire
- ETCAN 501 Méthodologies de recherche

# Options (★12) (among):

- ETCAN 504 Enjeux canadiens
- ETCAN 508 Séminaire d'Études canadiennes I
- ETCAN 510 Séminaire d'Études canadiennes II
- ETCAN 512 Les grandes oeuvres en Études canadiennes
- ETCAN 513 Thèmes choisis en Études canadiennes I
- ETCAN 515 Thèmes choisis en Études canadiennes II

#### Thesis $(\bigstar 12)$

## Length of Program

In order to obtain an MA degree, full-time students are expected to complete the program within two years. The maximum time for completion is four years.

### <u>Residence</u>

Part-time study may be permitted with the approval of the Graduate Program Coordinator at Faculté Saint-Jean.

# Maîtrise en sciences de l'éducation - Études en langue et culture [Graduate]

Le programme en langue et culture intègre plusieurs disciplines avec les théories et les pratiques des sciences de l'éducation. Il est conçu pour des personnes qui œuvrent dans les milieux de l'éducation et qui s'intéressent aux questions qui s'y rattachent. Le programme vise à former des spécialistes dans les domaines de l'éducation ainsi que des professionnels qui peuvent exercer un véritable rôle de leader dans leur milieu scolaire.

Pour obtenir plus de renseignements, les candidats peuvent consulter le site web de la Faculté Saint-Jean et de la Faculty of Graduate Studies and Research.

**Note** : Le diplôme de maîtrise en éducation (MEd) n'est pas un brevet d'enseignement. Pour plus de renseignements à ce sujet, veuillez consulter le site d'Alberta Education

#### Conditions d'admission

Les conditions minimales d'admission au programme de Maîtrise en sciences de l'éducation (MEd) sont les suivantes:

- L'obtention d'un baccalauréat universitaire reconnu par l'Université de l'Alberta, avec une moyenne d'admission minimale de 3,0 sur l'echelle de 4
  points, ou l'équivalent, dans les ★60 derniers crédits des cours universitaires, ou sur l'équivalent des deux dernières années de cours à temps
  plein:
- 2. Trois lettres de recommandation ;
- 3. une lettre d'intention ;
- 4. Les candidats au programme de maîtrise en éducation dans la voie sans thèse (projet), doivent avoir une expérience minimale de deux ans comme professionnel de l'éducation ou de la formation scolaire .

## Les exigences du programme

Le programme de Maîtrise en sciences de l'éducation (MEd) offre deux voies possibles: l'une avec thèse, l'autre sans thèse (projet).

Les étudiants peuvent choisir de se concentrer dans l'un des trois domaines suivants :

- Leadership et administration scolaire
- Inclusion, diversité et équité
- Littératie, numératie et curriculum

**Note** : La concentration Leadership et administration scolaire peut mener à l'obtention d'un certificat de cycle supérieur en administration scolaire. Pour plus d'informations, veuillez consulter la section Certificat supérieur en administration scolaire.

### Programme MEd - Voie sans thèse (projet)

L'étudiant qui s'inscrit au programme de maîtrise en science de l'éducation dans la **voie sans thèse**, doit avoir une expérience minimale de deux ans comme professionnel de l'éducation ou de la formation scolaire.

Les étudiants doivent compléter un minimum de  $\pm 30$  de cours, y compris une activité de synthèse ( $\pm 3$ ).

#### Cours obligatoires $(\pm 12)$

Tous les étudiants inscrits au programme de MEd doivent suivre quatre cours obligatoires comme suit :

- M EDU 520 Tendances actuelles en éducation
- M EDU 580 Méthodologie de la recherche en éducation I
- Deux cours en fonction de la concentration retenue, à choisir en consultation avec l'administration du programme des études supérieures de la Faculté Saint-Jean.

#### Cours facultatifs $(\pm 15)$ :

 Les cinq cours facultatifs sont choisis en consultation avec le superviseur et l'administration du programme des études supérieures à la Faculté Saint-Jean.

#### Activité de synthèse (★3)

M EDU 900 - Activité de synthèse

### Programme MEd - Voie thèse

Les étudiants qui choisissent la voie thèse doivent compléter un minimum de ★21 de cours, y compris la préparation et la soutenance avec succès d'une thèse.

#### Cours obligatoires (★12)

Tous les étudiants inscrits au programme de MEd doivent suivre quatre cours obligatoires comme suit :

- M EDU 520 Tendances actuelles en éducation
- M EDU 580 Méthodologie de la recherche en éducation I
- Deux cours en fonction de la concentration retenue, à choisir en consultation avec l'administration du programme des études supérieures de la Faculté Saint-Jean.

#### Cours facultatifs $(\bigstar 9)$ :

• Les trois cours facultatifs sont choisis en consultation avec le superviseur et l'administration du programme des études supérieures à la Faculté Saint-Jean.

#### Thèse

Inscription dans les cours THES de niveau 900. Les étudiants doivent réussir la soutenance d'une thèse.

### Durée limite du programme:

La durée maximale pour compléter le programme de maîtrise en éducation pour la voie sans thèse (projet), tel qu'établi par la Faculty of Graduate Studies and Research, est de six ans.

Le temps maximum pour compléter le programme de maîtrise en éducation pour la voie thèse, tel qu'établi par Faculty of Graduate Studies and Research, est de quatre ans.

#### La liste des cours

Les cours du programme de la maîtrise en sciences de l'éducation se trouvent dans la Course Listings, sous les catégories Maîtrise en sciences de l'éducation (M EDU) et Thesis (THES).

# Maîtrise en arts [Graduate]

Ce programme propose une étude multidisciplinaire et interdisciplinaire du Canada, incluant l'étude des francophonies canadiennes. Il s'intéresse en particulier à la culture et aux institutions en relation avec les conflits sociopolitiques, les contextes historiques et sociaux. Les orientations du programme incluent les relations d'identités/différences, de sexe/genre, race, langue et classes; nationalismes, régionalismes et mondialisation; relations économie, société et Etat.

Les candidats devraient consulter la Coordonnatrice du programme des études supérieures de la Faculté Saint-Jean, pour obtenir plus de renseignements.

#### Conditions d'admission

Les conditions d'admission au programme de Maîtrise en arts en études canadiennes sont les suivantes:

- L'obtention d'un baccalauréat universitaire avec une moyenne cumulative minimale de 3,0, ou l'équivalent, dans les ★60 derniers d'un programme dont au moins ★30 de cours au niveau senior, ou l'équivalent, en Etudes canadiennes ou des cours reliés aux Etudes canadiennes (cours reconnus par l'institution de l'étudiant).
- 2. Trois lettres de recommandation adressées directement à la Faculté Saint-Jean.
- 3. Compétence langagière: L'obtention d'un baccalauréat universitaire, ou son équivalence académique, d'une institution reconnue par la University of Alberta, dans laquelle la langue d'instruction est le français, ou toute autre formation pertinente. Le Faculté Saint-Jean se réserve le droit d'exiger une note satisfaisante à un examen approuvé de compétence en français.

Les exigences d'une langue seconde: compétence dans une langue seconde pertinente au programme de recherche (e.g., Anglais ou une langue maternelle).

# Les exigences du programme

Les étudiants doivent compléter  $\pm$ 18 de cours au deuxième cycle et  $\pm$ 12 en soutenance d'une thèse pour un total de  $\pm$ 30.

### <u>La structure du programme</u>

#### Cours obligatoires $(\bigstar 6)$ :

- ETCAN 500 Méthodologies interdisciplinaire et multidisciplinaire
- ETCAN 501 Méthodologies de recherche

### Cours optionnels ( $\bigstar$ 12) (parmi):

- ETCAN 504 Enjeux canadiens
- ETCAN 508 Séminaire d'Études canadiennes I
- ETCAN 510 Séminaire d'Études canadiennes II
- ETCAN 512 Les grandes oeuvres en Études canadiennes
- ETCAN 513 Thèmes choisis en Études canadiennes I
- ETCAN 515 Thèmes choisis en Études canadiennes II

#### Thèse (★12)

### <u>Durée limite du programme</u>

Afin d'obtenir un diplôme de MA, les étudiants à temps plein devraient compléter le programme à l'intérieur de deux ans. Les étudiants doivent satisfaire à toutes les exigences dans un délai de quatre ans.

### <u>Résidence</u>

Les études à temps partiel doivent être approuvées par la personne qui coordonne le programme des études supérieures à la Faculté Saint-Jean.

# The Graduate Certificate in School Administration Leadership

### **Entrance Requirements**

This is an embedded certificate program. All applicants must be currently registered in the Faculty of Graduate Studies and Research in the Master Education program (MEd) of Faculté Saint-Jean.

Students may apply at any time after admission to the MEd program, but are advised to apply early to accommodate course selection. For more information, visit our website at https://www.ualberta.ca/campus-saint-jean/programmes/etudes-superieures, or e-mail maitrise@ualberta.ca.

## Program Requirements

Requirements for the graduate certificate in School Administration Leadership consist of the satisfactory completion of the following four courses:

# ALBERTA

# **GRADUATE STUDIES AND RESEARCH**

- M EDU 540 Dimensions politiques et administratives de l'éducation bilingue
- M EDU 560 L'administration de l'éducation
- M EDU 561 Formation des habiletés de supervision et de leadership
- M EDU 562 Stage pratique de direction

### Length of Program

All program requirements must be completed during the student's graduate degree program.

# Certificat supérieur en administration scolaire

### Conditions d'admission

Ceci est un programme de certificat intégré. Tous les candidats doivent être inscrits à la Faculty of Graduate Studies and Research dans le programme de Maîtrise en sciences de l'éducation (MEd) de la Faculté Saint-Jean. Les étudiants peuvent s'inscrire au certificat a tout moment après leur admission au programme de MEd, mais on conseille de faire la demande tôt pour s'assurer des choix de cours. Pour plus d'informations, visitez notre site Web à https://www.ualberta.ca/campus-saint-jean/programmes/etudes-superieures, or e-mail maitrise@ualberta.ca.

### Exigences du program

Pour obtenir le certificat supérieur en administration scolaire l'étudiant doit réussir les quatre cours suivants:

- M EDU 540 Dimensions politiques et administratives de l'éducation bilingue
- M EDU 560 L'administration de l'éducation
- M EDU 561 Formation des habiletés de supervision et de leadership
- M EDU 562 Stage pratique de direction

### Durée du programme

Toutes les exigences du certificat doivent être complétées au cours du programme de Maîtrise en sciences de l'éducation (MEd).

# Health Sciences Education [Graduate]

6-102 Education Centre North University of Alberta Edmonton, Alberta T6G 2G5 E-mail: medhse@ualberta.ca uab.ca/medhse

### **General Information**

The Health Sciences Education offers a program leading to the degree of MEd (course-based and thesis-based). This program is intended for those in Health Disciplines. Further information and admissions criteria may be found at www.edpsychology.ualberta.ca/graduateprograms/healthscienceseducation.aspx.

The MEd programs are designed to extend the knowledge and skills of health sciences educators in the areas of educational pedagogy, educational research, and interprofessional leadership within the collaborative context of communities of practice of professional educators.

This is a part-time program designed for health professionals or health professional educators who are working full-time.

Applications open on February 1. The deadline for applications is August 1.

# **Entrance Requirements**

The Department's minimum admission requirements are an undergraduate degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\bigstar$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Applicants should also have teaching experience in a health related discipline.

Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:

- TOEFL score of 237 (computer-based) or TOEFL score of 93 (internet-based) with a score of at least 24 on speaking and writing, and 20 on reading and listening or equivalent; or
- An IELTS score of 7.0 with no band less than 6.5; or
- An official CAEL (Canadian Academic English Language assessment system) score of at least 70 in all bands.

Applicants are also required to submit

- Three letters of reference (two of which must be from someone knowledgeable about the applicant's abilities and potential to pursue academic work.);
- a Statement of Intent which includes scholarly interests and relevance of work and teaching experience (500-800 words):
  - o explanation of what is desired from this degree,
  - o areas of interest in scholarly work or research,
  - professional interests,
  - o interest in interprofessional teamwork in education and practice;
- Curriculum Vitae.

All students will be admitted to the course-based program. Students may request a change of program category to a thesis-based route after completion of  $\star$ 6 to  $\star$ 9 credits of required coursework, in consultation with their advisor(s).

## **Graduate Program Requirements**

• The Degree of MEd (Health Sciences Education)

### Length of Program

The maximum time to complete the course-based MEd program as set by the Faculty of Graduate Studies and Research is six years. The maximum time to complete the thesis-based MEd program as set by the Faculty of Graduate Studies and Research is four years.

# The Degree of MEd (Health Sciences Education) [Graduate]

The program is designed as a blended delivery format. Blended delivery consists of a small number of face-toface classes combined with synchronous and asynchronous online sessions. Each blended delivery course is of eight week duration. Two consecutive days of the course are face-to-face. The synchronous sessions occur at some point during the week highlighted in the course schedule. The course instructor(s) determine when the face-to-face and synchronous sessions occur. The May course is 5 days in a row strictly face-to-face.

### **Program Requirements**

The MEd can be taken as a thesis-based program or as a course-based program.

#### Required coursework ( $\star$ 24):

All students are required to take the following eight courses:

- EDPY 501(★3)- Introduction to Methods of Educational Research in Health Sciences
- EDPY 597(★3)- Philosophy of Teaching
- EDPY 597(★3)- Learning and Teaching at the Adult Level
- EDPY 597(★3)- Curriculum Studies in the Health Sciences
- EDPY 597(★3)- Program Evaluation
- EDPY 597(★3)- Assessment and Evaluation in Health Sciences I
- EDPY 597(★3)- Assessment and Evaluation in Health Sciences II
- EDPY 597(★3)- Integrating Technology Across the Curriculum

In addition to the required courses, students must complete the following:

Course-based Program

Elective courses  $(\bigstar 6)$ 

two graduate-level (500 or higher) elective courses, to be selected in consultation with their advisor.

#### Capping Exercise

EDPY 903 - Directed Research Project

#### Thesis-Based Program

Registration in 900-level THES.

# History and Classics [Graduate]

Department of History and Classics
2-28 Tory Building
University of Alberta
Edmonton, Alberta T6G 2H4
E-mail: Lydia.Dugbazah@ualberta.ca
www.uofaweb.ualberta.ca/historyandclassics/

#### **General Information**

The Department of History and Classics has programs leading to the degrees of Master of Arts and Doctor of Philosophy.

The Department offers two course-based Classics MAs: one in Classical Languages (Greek, Latin, and classical studies), where some concentration is possible in classical literature or ancient history; the other in Classical Archaeology, which offers an opportunity to pursue archaeological fieldwork. The PhD in Classics is also offered in both Classical Languages and Classical Archaeology.

MA and PhD programs in History are offered in the following areas: Africa and the Middle East; British Empire; Modern Britain; Canada; China, Japan, and Korea; Medieval England; Early Modern England; Medieval Europe; Early Modern Western Europe; Modern Western Europe; Latin America; Russia and Eastern Europe; United States; Science, Medicine, and Technology; and Women. The MA may be either course-based or thesis-based.

The Department also offers a thesis-based MA in Ancient Societies and Cultures, with an emphasis on inter- and cross-disciplinary approaches.

The application deadline for September admission is normally early January. For the exact date and any additional information, contact the Graduate Chair, History and Classics.

### **Entrance Requirements**

The Department's minimum admission requirements are an undergraduate degree with an average of 3.5 in the last two years of undergraduate work (or graduate work) at the University of Alberta, or an equivalent qualification from a recognized institution, and a TOEFL score of 95 (Internet-based) or 580 (paper-based) as applicable (see English Language Requirement).

### <u>Academic Standing Requirements</u>

The Department of History and Classics requires a higher minimum cumulative grade point average than that acceptable to the Faculty of Graduate Studies and Research (see Minimum Faculty Requirements and Failure in or Failure to Complete a Course or Research Work). All students pursuing graduate degrees in History and Classics must maintain a minimum cumulative grade point average of 3.0 throughout the course of the program. A student whose cumulative grade point average falls below 3.0 may be required to withdraw.

### Modern Language Requirements

All candidates for the MA and PhD must demonstrate competence in reading at least one modern language other than English. In all programs the language requirement may be met by passing a translation examination administered by the Department or by taking and passing  $\star$ 6 in second-year or higher coursework, with at least a grade of B+. Exemptions from language examinations may be granted under certain specific conditions. Further details on language requirements are found in the *Higher Degrees Brochure* available from the Department.

#### Financial Assistance

The Department annually appoints a number of graduate research and teaching assistants. At the time of application, prospective graduate students should indicate whether they wish to be considered for an assistantship, but no appointment will be offered to any student until that student has been formally admitted to graduate studies. Graduate students are also eligible for various University fellowships and bursaries. For details see www.gradstudies.ualberta.ca

### **Graduate Program Requirements**

- The Degree of MA in Classics
- The Degree of MA in History
- The Degree of MA in Ancient Societies and Cultures
- The Degree of PhD in Classics
- The Degree of PhD in History

### **Graduate Courses**

Graduate courses can be found in Course Listings, under the following subject headings:

Classics (CLASS) Greek (GREEK) History (HIST) Latin (LATIN)

# The Degree of MA in Classics [Graduate]

The MA in Classical Languages and the MA in Classical Archaeology have different entrance and program requirements. Both programs should be able to be completed in three or four terms (one of which may be the Spring or Summer term), depending on the student's preparation and course selection.

# MA in Classical Languages

#### **Entrance Requirements**

In addition to general Departmental requirements, students must have a BA with a major in Classics, with the equivalent of GREEK 101/GREEK 102 and GREEK 301/GREEK 302 and LATIN 101/LATIN 102 and LATIN 301/LATIN 302 and ★9 at the 400-level in Greek and/or Latin.

### GRADUATE STUDIES AND RESEARCH

Students who have less preparation in the languages, but are otherwise well qualified for graduate study, may be considered for admission as qualifying students.

#### **Program Requirements**

Students must take and pass a minimum of seven graduate-level courses ( $\star$ 21) in CLASS, GREEK, and/or LATIN, including at least three ( $\star$ 9) in Greek or Latin and two ( $\star$ 6) in the other language [one ( $\star$ 3) may be taken outside Classics]; successfully complete two consecutive registrations in CLASS 900 ( $\star$ 3), which requires an examination on primary and/or secondary sources relevant to the research topic and a research paper of 40-50 pages; take and pass CLASS 501 ( $\star$ 1); and fulfil the modern language requirement in French, German or Italian.

### MA in Classical Archaeology

### **Entrance Requirements**

In addition to general Departmental requirements, students must have a BA with a major in Classics, with the equivalent of at least  $\star$ 6 of (Ancient) Greek or Latin at the 100-level and with eight courses ( $\star$ 24) in Classics at the 200-level or above, at least two ( $\star$ 6) of which must be at the 400-level. Students with a major in Archaeology, Anthropology, History, or Art History may also be accepted, provided that they have taken at least six courses ( $\star$ 18) in Classics at the 200-level or above.

#### **Program Requirements**

Students must take and pass a minimum of six ( $\star$ 18) graduate-level courses, of which at least three ( $\star$ 9) must be in Classics (others will normally be in Anthropology or in a discipline such as History, Art History, or Museum Studies, and must be approved by the Department); take and pass two consecutive registrations in CLASS 900 ( $\star$ 3), which requires an examination on primary and/or secondary sources relevant to the research topic and a research paper of 40-50 pages; take and pass CLASS 501 ( $\star$ 1); and fulfil the modern language requirement in French, German or Italian.

# The Degree of MA in History [Graduate]

# **Entrance Requirements**

Students holding a four-year Honors or Special BA in History from the University of Alberta, or a comparable degree from another university, may be admitted to the status of candidate for the MA degree. Students who lack the above qualification, but who hold an acceptable bachelor's degree (or its equivalent), may be admitted as a qualifying graduate student; as such, the student will be expected to complete additional courses before proceeding to the MA program proper.

Qualifying graduate students must normally take ten ( $\star$ 30) courses, at least  $\star$ 18 of them in History courses. The courses, usually senior undergraduate courses at the 300- or 400-level, will be chosen in consultation with the Graduate Chair. Students must attain a grade point average of 3.5, with no single grade below B-. Students should also plan to complete the language requirement by the end of their qualifying year; advancement to candidacy status may be delayed until it is fulfilled.

### Program Requirements

Both the course-based MA in History and the thesis-based MA in History may be subsequently used as a qualification for application to the PhD program. Students must declare which program they intend to follow at the beginning of their graduate studies. Any students wishing to change their program must seek the approval of the Graduate Committee.

For students specializing in Canadian History, the modern language requirement will normally be French (in appropriate cases, the Graduate Committee may permit another language to be substituted at the MA level). For all other students, the specific language requirement(s) will be determined in consultation with the student's supervisor.

#### 1. Thesis MA in History:

Students must take and pass one of HIST 601 ( $\star$ 3), HIST 603, HIST 604, HIST 605, or HIST 610 ( $\star$ 3), or SOC 519; take and pass HIST 602; take and pass HIST 609; take and pass  $\star$ 12 in 600-level HIST courses [maximum of  $\star$ 6 should be in the area of concentration and maximum of  $\star$ 3 in HIST 699]; fulfil the language requirement; and write a thesis (minimum of  $\star$ 6 in thesis registration), which should normally be not more than 100 pages in length.

#### 2. Course-based MA in History:

Students must take and pass one of HIST 601 ( $\star$ 3), HIST 603, HIST 604, HIST 605, or HIST 610 ( $\star$ 3), or SOC 519; take and pass HIST 602; take and pass  $\star$ 15 in 600-level HIST courses [maximum of  $\star$ 6 in HIST 699; fulfil the language requirement; and write a research paper [ $\star$ 6 in HIST 900] which normally should not exceed 50 pages in length but which should reflect a significant use of primary materials and research. The paper will be assessed by two readers normally from the Department. Both must approve the project. It is expected that this degree will be completed in one to two years. The Department will not provide supervisory services for more than two registrations in HIST 900.

Successful completion of the MA program does not guarantee admission to the doctoral program. Students wishing to go on to a PhD must make formal application.

The minimum period of residence is two four-month terms of full-time attendance at the University of Alberta.

## Length of Program

The time required to complete the MA will vary according to the previous training of the applicant and the nature of the research undertaken; however, a minimum of 12 months is normally required.

# The Degree of MA in Ancient Societies and Cultures [Graduate]

### **Entrance Requirements**

In addition to general Departmental requirements, students should hold a BA degree either in Classics or History or a suitable related field (e.g., Religious Studies, Philosophy, Anthropology) and must demonstrate appropriate preparation for the desired program of study, including a level of language proficiency to conduct research on the primary sources, as applicable to the student's program (e.g., suitable preparation in Greek, Hebrew, Latin and/or Sanskrit).

### **Program Requirements**

Students must take and pass CLASS 501 ( $\star$ 1); take and pass a minimum of six ( $\star$ 18) graduate-level courses, at least two of which ( $\star$ 6) must be courses related to the student's chosen area of specialization; fulfill the modern language requirement with French, German, Italian, or another language appropriate to the area of specialization; and write a thesis, the text of which should normally be not more than 100 pages in length. Depending on the student's preparation and chosen area of specialization, an intermediate-level language examination in a second ancient language or  $\star$ 6 at the senior undergraduate level with a minimum grade of B or equivalent in that language may be required.

### Length of Program

Students should be able to complete the program in three or four terms depending on preparation and course selection.

# The Degree of PhD in Classics [Graduate]

Course requirements, language proficiency, and length of program for both the PhD in Classical Languages and the PhD in Classical Archaeology depend to some extent on the student's previous training and the student's anticipated needs for the chosen area of specialization. Four to six years are normally required to complete the program.

The minimum period of residence is two academic years of full-time attendance at the University of Alberta.

## PhD in Classical Languages

The PhD in Classical Languages is a broad-based program leading to a general qualification in Classics. Students are encouraged to explore all aspects of the ancient Greek and Roman cultures in courses, preparation for qualifying exams, and the thesis.

#### **Entrance Requirements**

In addition to general Departmental requirements, students must have an MA in Classics or the equivalent.

#### **Program Requirements**

#### Courses:

Students must take and pass nine ( $\star$ 27) graduate-level courses, including at least three ( $\star$ 9) in Greek and three ( $\star$ 9) in Latin and two ( $\star$ 6) in History and/or Art and Archaeology [one ( $\star$ 3) may be a directed study in the proposed area of research and one ( $\star$ 3) may be taken outside Classics]; and CLASS 501 ( $\star$ 1).

#### Modern language requirement:

Students must fulfil modern language requirements in German and in French or Italian. (Completion of a language requirement for a recent MA degree will satisfy the requirement for the PhD.)

#### Comprehensive examinations:

Students must pass three written comprehensive examinations: one in Greek language and literature; one in Latin language and literature; and one in a special field of the student's choosing that is not directly related to the general field of research. The language and literature examinations are based on the Departmental reading list and consist of two parts, one testing translation skills and the other testing general knowledge of the development of the relevant literature. The third written examination is based on a reading list drawn up by the student and assessors, and consists of one to three broad questions. After the written examinations have been taken, there is an oral examination that covers all three fields.

It is expected that students will take the qualifying examinations by the middle of their third year.

#### Candidacy examination:

An oral examination on the student's general field of research for the thesis, including consideration of the student's thesis proposal is designed to assess whether the student has (1) an adequate knowledge of the discipline and of the subject matter relevant to the thesis, and (2) the ability to pursue and complete original research at an advanced level.

It is recommended that students take the oral candidacy examination by the end of their third year.

#### Thesis and final oral examination:

The final oral examination will be on the student's thesis, the text of which should normally be 200-300 pages in length.

# PhD in Classical Archaeology

Course work can normally be completed in one year, but for students deficient in a required language an additional year may be necessary.

#### **Entrance Requirements**

In addition to general Departmental requirements, students must have an MA in Classics or the equivalent.

#### **Program Requirements**

#### Courses:

Students must take and pass six ( $\star$ 18) graduate-level courses, including at least three ( $\star$ 9) from the Department of History and Classics at the 500-600 level; two ( $\star$ 6) courses at the 500-level in Greek or Latin (as is appropriate to the field of study), which may be included among those satisfying the preceding requirement; and CLASS 501 ( $\star$ 1).

#### Modern Language requirement:

Students must fulfil the Departmental language requirements in two modern languages relevant to the student's field of study.

#### Comprehensive examinations:

Students must pass two written comprehensive examinations: one on the major ancient literary and archaeological sources relevant to the study of Classical or Hellenistic Greek art, monuments and topography; and one on the major ancient literary and archaeological sources relevant to the study of Roman Republican or Imperial art, monuments and topography. After the written examinations have been taken, there is an oral examination that covers both fields.

It is recommended that students take the oral candidacy examination by the middle of their third year.

#### Candidacy examination:

An oral examination on the student's thesis proposal is designed to assess whether the student has (1) an adequate knowledge of the discipline and of the subject matter relevant to the thesis, and (2) the ability to pursue and complete original research at an advanced level.

It is recommended that students take the oral candidacy examination by the end of their third year.

#### Thesis and final oral examination:

The final oral examination will be on the student's thesis, the text of which should normally be 200-300 pages in length.

# The Degree of PhD in History [Graduate]

The minimum period of residence for the PhD in History is two academic years of full-time attendance at the University of Alberta. The time required to complete the program will vary according to the previous training of the student and the nature of the research undertaken; however, four to six years are normally required.

## **Entrance Requirements**

Students proposing to enter a PhD in History program are expected to hold an acceptable MA degree or its equivalent. In exceptional cases a student admitted as a candidate for the MA may subsequently be permitted to enter the PhD program without writing a master's thesis.

### <u>Program Requirements</u>

A candidate must: take and pass two of HIST 601 ( $\star$ 3), HIST 603 ( $\star$ 3), HIST 604 ( $\star$ 3), HIST 605 ( $\star$ 3) or 610 ( $\star$ 3) or 500 519 ( $\star$ 3) if the student does not hold credit in equivalent courses acceptable to the Department; take and pass  $\star$ 9 or  $\star$ 12 in 600-level history courses, depending on previously taken courses offered in satisfaction of the preceding section (students who have already satisfied the preceding section must take and pass  $\star$ 12 in 600-level history courses; those who offer one previously taken course in satisfaction of the preceding section must take and pass an additional  $\star$ 9 in 600-level history courses; those who offer no courses in satisfaction of the preceding section must take and pass an additional  $\star$ 9 in 600-level history courses); take and pass HIST 602 ( $\star$ 1) if the student has not previously done so; and fulfil the language requirement. For students specializing in Canadian History, the modern language requirement will normally be French; for all other students, the specific language requirement(s) will be determined in consultation with the student's supervisor. In addition, the student may be required to pass a second language examination, but the Department never requires any student to pass examinations in more than two languages other than English. The student must also submit a thesis proposal of ten to twenty pages based on some preliminary research.

### GRADUATE STUDIES AND RESEARCH

Upon completing the requirements outlined above (normally not later than 18 months after entering the program), the candidate will be expected to pass comprehensive examinations in three fields. The construction of the fields is flexible and explained fully in the Department's *Higher Degrees Brochure*. These fields will be: (1) general field; (2) special thesis field; and (3) thematic, theoretical, methodological and/or comparative field. These fields must be approved by the Graduate Committee of the Department. Students write an examination in each field, and then take an oral examination that covers all the fields.

If the candidate passes the comprehensive examinations, the candidate will be permitted to proceed to the candidacy examination. Upon successful completion of the candidacy examination, students will advance to formal candidacy for the PhD.

A student who has been admitted to candidacy for the PhD may proceed to the degree by completing a thesis, the text of which should normally be 250-400 pages in length.

# **Human Ecology [Graduate]**

Department of Human Ecology 3-02 Human Ecology Building University of Alberta Edmonton, Alberta T6G 2N1 E-mail: hec.grad@ualberta.ca

### **General Information**

The Department of Human Ecology offers a PhD in Human Ecology, and master's degrees in Textiles and Clothing, Material Culture, Family Ecology and Practice, and Aging. Students come from a variety of academic backgrounds and upon graduation have taken employment in a wide range of careers in social service agencies, museums and cultural agencies, government, research and teaching.

### **Entrance Requirements**

Applicants to the PhD program must possess a thesis-based master's degree from a recognized institution and have achieved a minimum grade point average of 3.0 on a 4 point scale, or its equivalent, in the last  $\bigstar$ 60. Applicants who have the equivalent of an honor's baccalaureate degree in a related field from a recognized institution, and who present a minimum grade point average of 3.7 on a 4 point scale, or its equivalent, in the last  $\bigstar$ 60, may also be considered for admission to the doctoral program. Applicants also will be required to provide evidence of research potential as demonstrated by previous scholarly work.

Candidates for the MSc or MA degrees should hold a four-year bachelors degree with a minimum grade point average of 3.0 in the last  $\star$  60 at the University of Alberta, or an equivalent qualification from a recognized institution. An applicant proceeding from either a three-year program in a related field, or a four-year program in a different field, may be admitted as a qualifying student.

Applicants to all programs will also be required to present three letters of reference from individuals knowledgeable about their academic and research capabilities, and may be required to present a minimum TOEFL score of 580 (paper-based) or 92 (Internet-based) where applicable (see English Language Requirement).

#### Academic Standing Requirements

The Department of Human Ecology requires higher grades than those acceptable to the Faculty of Graduate Studies and Research (see Failure in or Failure to Complete a Course or Research Work). The minimum acceptable grade in any course taken by students registered in the master's and doctoral programs in Human Ecology is a grade of B-. Grades below a B- count as failing grades for graduate students in Human Ecology.

The Department of Human Ecology also requires higher cumulative grade point averages than those acceptable to the Faculty of Graduate Studies and Research (see Failure in or Failure to Complete a Course or Research Work). All students pursuing a master's degree in Human Ecology must maintain a minimum cumulative grade point average of 3.0 throughout the course of the program. All students pursuing a doctoral degree in Human Ecology must maintain a minimum cumulative grade point average of 3.3 throughout the course of the program. Students whose cumulative grade point average falls below the required minimum may be required to withdraw at any time.

#### Financial Assistance

A limited number of teaching and research assistantships are available for well-qualified students.

### **Graduate Program Requirements**

- The Degree of MA in Material Culture
- The Degrees MSc in Textiles and Clothing
- The Degree of MSc in Family Ecology and Practice
- The Degree of MSc in Aging
- The Degree of PhD in Human Ecology

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading Human Ecology (HECOL).

# The Degree of MA in Material Culture [Graduate]

Both thesis-based and course-based master's programs are offered by the Department of Human Ecology.

The MA in Material Culture focuses on the ways in which people contribute to, and are affected by, the production, mediation, and consumption of clothing, objects, buildings, and environments.

### Requirements for the thesis-based master's degree include

★20 including HECOL 661 and HECOL 662, ★6 in qualitative research methods, quantitative research methods and/or statistics, ★2 of professional seminars (HECOL 691 and HECOL 692), and a minimum of ★6 of additional coursework depending on undergraduate background and the nature of the research problem under investigation. All candidates for the thesis based master's degree are required to conduct thesis research, and to make a minimum of two professional research presentations, at least one of which must be oral. For students in the thesis-based program, there is a residence requirement of two, four-month terms of full-time attendance at the University of Alberta.

#### Requirements for the course-based master's degree include

★26 including HECOL 661 and HECOL 662, ★2 of professional seminars (HECOL 691 and HECOL 692), and a minimum of ★12 of additional coursework depending on undergraduate background, work experience and the nature of the capping exercise. All students in the course-based master's program are required to complete ★6 of a capping exercise that may be an applied project or a practicum. For students in the course-based program there is no residence requirement.

### Length of Program

The time to complete the master's degree will vary with the individual candidate; however, a minimum of two years is normally required for the thesis route and a minimum of one year of full-time study for the course-based degree.

# The Degrees of MSc in Textiles and Clothing [Graduate]

### **Program Requirements**

Both thesis-based and course-based master's programs are offered by the Department of Human Ecology.

The MSc in Textiles and Clothing focuses on textile and apparel science. Requirements for the thesis-based master's degree include  $\bigstar$ 20 including HECOL 570 and HECOL 571,  $\bigstar$ 6 in qualitative research methods, quantitative research methods and/or statistics,  $\bigstar$ 2 of professional seminars (HECOL 691 and HECOL 692), and a minimum of  $\bigstar$ 6 of additional coursework depending on undergraduate background and the nature of the research problem under investigation. All candidates for the thesis-based master's degree are required to conduct thesis research, and to make a minimum of two professional research presentations, at least one of which must be oral. For students in the thesis-based program, there is a residence requirement of two, four-month terms of full-time attendance at the University of Alberta.

Requirements for the course-based master's degree include  $\bigstar$ 26 including HECOL 570 and HECOL 571,  $\bigstar$ 2 of professional seminars (HECOL 691 and HECOL 692), and a minimum of  $\bigstar$ 12 of additional coursework depending on undergraduate background, work experience and the nature of the capping exercise. All students in the course-based master's program are required to complete  $\bigstar$ 6 of a capping exercise that may be an applied project or a practicum. For students in the course-based program there is no residence requirement.

## Length of Program

The time to complete the master's degree will vary with the individual candidate; however, a minimum of two years is normally required for the thesis route and a minimum of one year of full-time study for the course-based degree.

# The Degree of MSc in Family Ecology and Practice [Graduate]

## Program Requirements

Both thesis-based and course-based master's programs are offered by the Department of Human Ecology.

### GRADUATE STUDIES AND RESEARCH

Requirements for the thesis-based master's degree include ★ 20 including HECOL 610 and HECOL 611, ★ 6 graduate-level research methods and/or statistics, ★ 2 of professional seminars (HECOL 691 and HECOL 692), and a minimum of ★ 6 additional graduate-level coursework, ★ 3 of which must be a HECOL course. All candidates for the thesis-based master's degree are required to conduct thesis research, and to make a minimum of two professional research presentations, at least one of which must be oral. For students in the thesis-based program, there is a residence requirement of two, four-month terms of full-time attendance at the University of Alberta.

Requirements for the course-based master's degree include  $\star$ 26 including HECOL 610, HECOL 611, HECOL 682,  $\star$ 2 of professional seminars (HECOL 691 and HECOL 692), and a minimum of  $\star$ 9 of additional graduate-level coursework,  $\star$ 3 of which must be a HECOL course. All students in the course-based master's program are required to complete a  $\star$ 6 capping exercise that may be an applied project or a practicum, and to make a professional presentation on the applied project or practicum. For students in the course-based program there is no residence requirement.

### Length of Program

The time required to complete the MSc will vary with the individual candidate; however, a minimum of two years is normally required for the thesis route and a minimum of one year for the course-based degree

# The Degree of MSc in Aging [Graduate]

### **Program Requirements**

Both thesis-based and course-based master's programs are offered by the Department of Human Ecology.

Requirements for the thesis-based master's degree include  $\bigstar$  20 including HECOL 604,HECOL 615 and  $\bigstar$ 6 graduate-level research methods and/or statistics,  $\bigstar$ 2 of professional seminars (HECOL 691 and HECOL 692), and a minimum of  $\bigstar$ 6 of additional graduate-level coursework,  $\bigstar$ 3 of which must be a HECOL course. All candidates for the thesis-based master's degree are required to conduct thesis research, and to make a minimum of two professional research presentations, at least one of which must be oral. For students in the thesis-based program, there is a residence requirement of two, four-month terms of full-time attendance at the University of Alberta.

Requirements for the course-based master's degree include  $\star$ 26 including HECOL 604,HECOL 615, HECOL 682,  $\star$ 2 of professional seminars (HECOL 691 and HECOL 692), and a minimum of  $\star$ 9 of additional graduate-level coursework  $\star$ 3 of which must be a HECOL course. All students in the course-based master's program are required to complete a  $\star$ 6 capping exercise that may be an applied project or a practicum, and to make a professional presentation on the applied project or practicum. For students in the course-based program there is no residence requirement.

# The Degree of PhD in Human Ecology [Graduate]

# Program Requirements

All doctoral students are required to make a minimum of two research presentations, at least one of which must be oral. All doctoral students also shall be required to conduct dissertation research and pass a written comprehensive examination, an oral candidacy examination, and a doctoral dissertation defence.

There is a residence requirement for the PhD program of two academic years, where academic year is defined as the eight-month period from September through April.

# **GRADUATE STUDIES AND RESEARCH**

On completion of the PhD program all students are expected to possess minimum competencies in:

- The discipline of Human Ecology: this normally would be acquired during master's level work. Students entering without a closely related
  master's degree would be expected to acquire these basic competencies during the doctoral program.
- Research methods and statistics: sufficient competency in research methods and/or statistics to enable students to read across the literature in
  their area of study, and to complete their dissertation research is expected. Basic competencies may be acquired during master's level work, or
  during the doctoral program; additional research skills required for successful completion of the student's dissertation research will be acquired
  during the doctoral program.
- The substantive area of the student's research: will be acquired during the doctoral program.

Students are required to take a minimum of ★ 20 beyond the master's program core requirements which generally includes the following:

#### Core Requirements

- HECOL 601 Ways of Knowing in Human Ecology
- ★9 graduate-level courses that support the student's content area and dissertation research
- ★6 graduate-level research methods and/or statistics

#### Two graduate professional seminars

- HECOL 693 Professional Seminar 3
- HECOL 694 Professional Seminar 4

#### Length of Program

All requirements for the degree must be completed within six years.

# Internetworking [Graduate]

Master of Science Internetworking Program
221 Athabasca Hall
University of Alberta
Edmonton, Alberta T6G 2E8
E-mail:mintinfo@cs.ualberta.ca
mint.ece.ualberta.ca or mint.ece.ualberta.edu

### **General Information**

The MSc in Internetworking program offers a theoretical and practical grounding in the principles of data communications and Internetworking. The degree is designed for individuals seeking to develop their understanding of the principles and practice of Internetworking, and to develop their ability to manage technical projects and / or companies operating in this area.

### GRADUATE STUDIES AND RESEARCH

Course work consists of core courses plus options covering protocols and protocol suites, application programming, modelling and simulation, security, etc., a laboratory course to integrate the course material, and a final project to demonstrate the use of skills in these areas.

### **Entrance Requirements**

Minimum admission requirements for this program are a four-year undergraduate degree with a grade point average of at least 3.0 on a 4 point scale, or the equivalent, in the last two years of previous relevant studies. Where applicable, a TOEFL score in excess of 600 (paper-based) or 100 (Internet-based) is required (see English Language Requirement). Students must hold a bachelor's degree in Computing Science, Electrical Engineering or Computer Engineering, or in a related field in Science or Engineering with some relevant experience. Industrial experience may also be considered as a factor when considering admission of students close to these boundaries. It should be noted that these are minimum requirements only.

### **Graduate Program Requirements**

The Degree of MSc

### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading Master of Internetworking, MINT.

# The Degree of MSc (Internetworking) [Graduate]

## Program Requirements

This is a course-based program that requires the completion of  $\bigstar$  30 in graduate-level course work, including six core courses and three electives. One of the core courses is a  $\bigstar$ 6 capping project. The core courses are scheduled regularly, and are conducted in intensive evening / weekend format. Elective courses are scheduled according to instructor availability, and follow the same intensive format. The weekend format of the MINT courses means that students can typically only register in a total of  $\bigstar$ 6 per term. Students wishing to maintain full-time status must register in at least  $\bigstar$ 9 per term. This can be reached by enrolling in, and successfully completing, one optional course per term outside the MINT program. Such optional courses cannot take the place of any of the six MINT core courses or three required electives. They may, however, be used to strengthen technical foundations or pursue other areas of interest. Optional courses from outside the MINT program will be included when calculating the student's cumulative grade point average. Students must maintain a cumulative grade point average of 2.7. Any optional courses in which a failing grade is obtained must be retaken or replaced with an approved alternate course (see Failure in or Failure to Complete a Course or Research Work). In addition, graduation requires a minimum 2.7 GPA on all MINT courses credited towards the degree.

Students must maintain standards acceptable to the Faculty of Graduate Studies and Research to remain in the program. While there is no full time residency requirement, the program must be completed within six years from admission.

# Length of Program

Core courses are scheduled to permit completion of the degree by part-time study within two academic years.

# Kinesiology, Sport, and Recreation [Graduate]

Faculty of Kinesiology, Sport, and Recreation Student Services 3-134 University Hall, Van Vliet Complex University of Alberta Edmonton, Alberta T6H 2H9 E-mail: ksrgrad.info@ualberta.ca

#### **General Information**

The Faculty of Kinesiology, Sport, and Recreation offers programs leading to the degrees of Master of Arts, Master of Science, Master of Coaching and Doctor of Philosophy. The areas available for study are listed below. For detailed information refer to UAB.CA/KSR

Adapted Physical Activity
Coaching Studies and Sport Psychology
Health Psychology and Behavioral Medicine
Neuroscience and Movement
Physiology
Recreation, Sport and Tourism
Sociocultural

The deadline for applications is February 1. Normally students are expected to start their program in September.

## **Entrance Requirements**

The Faculty's minimum admission requirements for the master's thesis and course-based programs are a four year baccalaureate degree, or its academic equivalent, in physical education, kinesiology, recreation or another related degree, with a minimum admission grade point average of 3.0 on most 4.0 grading systems or B on most letter grading systems, based on the most recent two years of full time study (or equivalent).

The Faculty's minimum admission requirements for the doctoral program are a master's degree, or its academic equivalent, with thesis in physical education, kinesiology, recreation, or another related degree, with a minimum admission grade point average of 3.0 on most 4.0 grading systems or B on most letter grading systems, based on the most recent two years of full time study (or equivalent).

Where applicable candidates must meet the minimum English Language Requirement set by the Faculty of Graduate Studies and Research.

## Financial Assistance

A number of graduate assistantships and scholarships are available each year to graduate students.

# **Graduate Program Requirements**

The Degree of MA

- The Degree of MA in Recreation and Leisure Studies
- The Degree of MSc
- The Degree of MCoach
- The Degree of PhD
- The Graduate Certificate in Indigenous Sport and Recreation
- The Graduate Certificate in Sport and Recreation Management

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the following headings:

Kinesiology (KIN)
Kinesiology, Sport, and Recreation (KRLS)
Recreation and Leisure Studies (RLS)

# The Degree of MA (Kinesiology, Sport, and Recreation) [Graduate]

Both a thesis-based and a course-based option are available in the Master of Arts (MA) degree program. While both are research-oriented programs, the thesis program requires fewer courses and places more emphasis on the development of research skills.

### <u>Program Requirements</u>

The minimum requirements for the thesis-based MA are the completion of  $\pm 12$  in addition to the thesis. All students must successfully complete either KSR 580 or KSR 581.

The minimum period of residence is two four-month terms of full-time attendance at the University of Alberta.

Students enrolled in the course-based MA degree program must complete as a minimum, the equivalent of  $\bigstar$ 30. Students must successfully complete at least one of KSR 580 or KSR 581 (each  $\bigstar$ 3). In addition, students must successfully complete a capping exercise ( $\bigstar$ 6). This will take the form of a completed research project, or successful completion of a comprehensive examination.

There is no residency requirement for the course-based degree program.

Both thesis-based and course-based MA students are required to complete the ethics and academic integrity training requirement (8 hours), and the professional development requirement (8 hours of professional development activities, and the Individual Development Plan).

### Length of Program

The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken. Normally a minimum of two years is required to complete the program. Thesis-based master's candidates must complete all the requirements within four years of the term in which they first register. Course-based master's candidates must complete all the requirements within six years of the term in which they first register.



# The Degree of MA in Recreation and Leisure Studies (Kinesiology, Sport, and Recreation) [Graduate]

Both thesis-based and course-based options are available in the Master of Arts in Recreation and Leisure Studies [MA(RLS)] program. While both are researchoriented programs, the thesis program requires fewer courses and places more emphasis on the development of research skills.

### **Program Requirements**

The minimum requirements for the thesis-based MA(RLS) are the completion of ★12 in addition to the thesis. All students must successfully complete KSR 500 and a graduate level research course, KSR 580 or KSR 581 is required.

Students must complete a residence requirement of two four-month terms of full-time attendance at the University of Alberta.

Students enrolled in the course-based MA(RLS) degree program must complete as a minimum, the equivalent of  $\bigstar 30$ . All students must successfully complete KSR 500 and at least one of KSR 580 or KSR 581. In addition, students must successfully complete a capping exercise ( $\bigstar 6$ ). This will take the form of a completed research project or successful completion of a comprehensive examination.

There is no residency requirement for the course-based degree program.

Both thesis-based and course-based MA(RLS) students are required to complete the ethics and academic integrity training requirement (8 hours), and the professional development requirement (8 hours of professional development activities, and the Individual Development Plan).

## Length of Program

The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken. Normally a minimum of two years is required to complete the program. Thesis-based master's candidates must complete all the requirements within four years of the term in which they first register. Course-based master's candidates must complete all the requirements within six years of the term in which they first register.

# The Degree of MSc (Kinesiology, Sport, and Recreation) [Graduate]

The Master of Science (MSc) degree is a thesis-based degree in which emphasis is placed on the development of research skills.

# Program Requirements

The minimum requirements for the MSc degree are the completion of  $\pm 12$  in addition to the thesis. As part of the degree requirements, students must successfully complete KSR 580 or KSR 581 (each  $\pm 3$ ).

The minimum period of residence is two four-month terms of full-time attendance at the University of Alberta.

MSc students are required to complete the ethics and academic integrity training requirement (8 hours), and the professional development requirement (8 hours of professional development activities, and the Individual Development Plan).

### Length of Program

The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken. Normally a minimum of two years is required to complete the program. Candidates must complete all the requirements within four years of the term in which they first register.

# The Degree of MCoach (Kinesiology, Sport, and Recreation) [Graduate]

The Master of Coaching degree is a course-based program which includes a practicum under the supervision of a mentor coach.

### **Program Requirements**

Students enrolled in the MCoach degree program must complete as a minimum, the equivalent of  $\bigstar$  30. Students must successfully complete either KSR 580 or KSR 581 (each  $\bigstar$ 3). KSR 572 ( $\bigstar$ 6) and a capping exercise KSR 900 ( $\bigstar$ 6). The capping exercise will be a significant piece of scholarly work in the field of coaching. Students are encouraged, but not required to select the remaining  $\bigstar$ 15 from the following list in consultation with the academic supervisor: KSR 511, KIN 540 KSR 541, KSR 544; KSR 575 or other relevant courses offered under the KSR 582 designation. MCoach students may choose, as optional courses, relevant graduate courses offered by other Faculties. All optional courses must be approved by the academic supervisor.

There is no residency requirement for the MCoach degree program.

MCoach students are required to complete the ethics and academic integrity training requirement (8 hours), and the professional development requirement (8 hours of professional development activities, and the Individual Development Plan).

## Length of Program

The time required to complete the program will vary according to factors such as the previous training of the applicant, the availability of courses and the nature of the project undertaken. Normally a minimum of two years is required to complete the program. MCoach candidates must complete all the requirements within six years of the term in which they first register.

# The Degree of PhD (Kinesiology, Sport, and Recreation) [Graduate]

# Program Requirements

The PhD degree is a research degree; however, a number of specific courses may be required within the various areas of specialization. Please consult the staff within each specified area for further details. All courses must be approved by the Faculty of Kinesiology, Sport, and Recreation. Emphasis is on research leading to the dissertation rather than on coursework. All PhD students will complete KSR 685 in the second year of their programs.

PhD students are required to complete the ethics and academic integrity training requirement (8 hours), and the professional development requirement (8 hours of professional development activities, and the Individual Development Plan).

The minimum period of residence is two academic years of full-time attendance at the University of Alberta.

### Length of Program

The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken. Normally a minimum of three years is required to complete the program. The maximum time permitted is six years from the date of the first registration.

# The Graduate Certificate in Indigenous Sport and Recreation [Graduate]

The Certificate in Indigenous Sport and Recreation is a Graduate Certificate offered in partnership between the Faculty of Native Studies and the Faculty of Kinesiology, Sport, and Recreation. The focus this certificate is the health and well-being of Indigenous people through sport and recreation. The intended purpose is to serve a demonstrated need in the realm of community based Indigenous sport and recreation, establish a deep understanding of the cultural context of Indigenous communities and populations and to enhance leadership in the growing field of Indigenous sport and recreation. The program will be delivered in a blended format. Specifically, the curriculum will consist of three courses valued at four credits each (12 credits total), plus participation at a mandatory, one-week, in-class (i.e. face to face) experiential learning experience. This 10 month certificate is designed around a cohort model so students will work together in this innovative, blended program that can be completed with minimal travel and little disruption to their work and family lives. The online portion of the program will use both synchronous and asynchronous teaching modalities to create interactive, dynamic, and supportive communities of learning whose members will become integral participants in this specific program researching Indigenous Peoples and Recreation best practices.

### **Entrance Requirements**

The requirements for admission will include an undergraduate degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last ★60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

A minimum of two years of professional experience is also required.

Applicants who do not hold a baccalaureate degree but have considerable relevant professional experience may also be admissible. Individuals who feel that this situation applies to them are encouraged to contact admissions to discuss their status. There will be no other routes in which admission will be granted. There will be no opportunity for a residency.

## <u>Program Requirements</u>

The graduate certificate will be granted upon successful completion of the three required courses:

- KSR 763 Indigeneity and Settler Colonialism [★4]
- KSR 764 Managing Recreation, Sport, and Physical Activity Programs in Indigenous Communities [★4]
- KSR 765 Indigenous Peoples' Physical Activity [★4]
- and attendance at the noncredit, mandatory intensive week

## **Laddering**

Students who complete the certificate in good standing may be able to use the courses from the certificate to receive advanced standing in the course-based Master of Arts in the Faculty of Kinesiology, Sport, and Recreation. Completion of the certificate does not guarantee admission to a master degree program.

The certificate may be used for both the basis of admission and laddered into the course-based master degree. Details can be found in the Calendar under Regulations of the Faculty of Graduate Studies and Research.

# The Graduate Certificate in Sport and Recreation Management [Graduate]

The Graduate Certificate in Sport and Recreation Management is offered by the Faculty of Kinesiology, Sport, and Recreation. The focus of this certificate is enhancing management and leadership skills in the fields of recreation, sport, and health programs, services, and facilities as well as increasing the organizational effectiveness of sport and recreational organizations or entities. The program is delivered 100% online. The online courses use both synchronous and asynchronous teaching modalities to create interactive, dynamic, and supportive communities of learning.

### Laddering

Students who complete the certificate in good standing may be able to use the courses from the certificate to receive advanced standing in the course-based Master of Arts in the Faculty of Kinesiology, Sport, and Recreation. Completion of the certificate does not guarantee admission to a master degree program. The certificate may be used for both the basis of admission and advanced standing into the course-based master degree. Details can be found in the Calendar under Regulations of the Faculty of Graduate Studies and Research.

### **Entrance Requirements**

The requirements for admission will include a baccalaureate degree with a minimum AGPA of 3.0 along with a minimum of 1 year of professional work experience in a related area or field of work. Students are also required to submit a letter of intent, a curriculum vitae or resume and one professional reference.

## Program Requirements

The curriculum will consist of four (4) courses valued at  $\pm 3$  each for a total of  $\pm 12$ .

# Required Courses (★12):

Choose four (4) courses from the following list:

- KRLS 711
- KRLS 712
- KRLS 713
- KRLS 714
- KRLS 715
- KRLS 716

All components of the certificate must be completed with 4 years from first registration for the certificate.

# Laboratory Medicine and Pathology [Graduate]

Laboratory Medicine and Pathology Graduate Program Office 5-411 Edmonton Clinic Health Academy University of Alberta Edmonton, Alberta T6G 1C9 E-mail: lmpgrad@ualberta.ca

#### **General Information**

The Department of Laboratory Medicine and Pathology provides a program leading to the degree of Master of Science (MSc) or Doctor of Philosophy (PhD) in Laboratory Medicine and Pathology.

For thesis based MSc and PhD degrees, research activities may be carried out in the General Program, or in one of three second-level specializations: Molecular Pathology, Analytical and Environmental Toxicology, and Biopreservation. A course and practicum-based MSc with specialization in Pathologists' Assistant is also offered.

Inquiries should be directed to the Graduate Coordinator of the Department of Laboratory Medicine and Pathology.

### **Entrance Requirements**

Candidates must hold a baccalaureate or its academic equivalent to enter this program. The Department requires a minimum admission grade point average equivalent to a 3.0 on most 4-point grading systems, based on the last two years of full time study at a recognized institution. Where applicable (see English Language Requirement), candidates must obtain a TOEFL score of at least 95 (internet-based, with at least 20 per section) or 570 (paper-based), or equivalent IELTS, PTE, MELAB or CAEL scores.

For the Pathologists' Assistant specialization, candidates must also have the following prerequisites: Microbiology ( $\star$ 3), Biology ( $\star$ 6), Physiology ( $\star$ 3), Biochemistry ( $\star$ 6), ANAT 200 or equivalent, English ( $\star$ 6) and a course in Medical Terminology.

Inquiries regarding these requirements should be directed to the Graduate Coordinator of the Department of Laboratory Medicine and Pathology.

### <u>Financial Assistance</u>

Funding from fellowships and studentships may be available from external agencies on a competitive basis. Supervisors may support students from operating grants.

### **Graduate Program Requirements**

- The Degree of MSc
- The Degree of PhD

#### **Graduate Courses**

Course requirements are approved by the Supervisor and Supervisory Committee based on the background of the student and the area of research specialization. LABMP 530 is a required course for all thesis-based students. All specializations have additional course requirements. Graduate courses can be found in Course Listings, under the subject heading Laboratory Medicine and Pathology (LABMP). Graduate courses in other departments may also be acceptable.

# The Degree of MSc (Laboratory Medicine and Pathology) [Graduate]

### Thesis-Based

The thesis-based MSc degree includes coursework, completion of a research project, and preparation of a thesis. All students must also make one or more presentations specified by the Department and attend specified seminars.

Students must maintain a cumulative program GPA of 3.0.

#### Degree of MSc in Laboratory Medicine and Pathology (General Program)

Students must complete a minimum  $\star$ 9 of graded graduate level courses in Laboratory Medicine and Pathology (LABMP) or approved courses in other departments. LABMP 530, normally taken in the first year, is mandatory.

#### Degree of MSc with Specialization in Analytical and Environmental Toxicology

Students must complete a minimum ★9 of graded graduate level courses in Laboratory Medicine and Pathology (LABMP) or approved courses in other departments. LABMP 530, normally taken in the first year, and LABMP 550 are mandatory. It is recommended that all students also complete LABMP 551.

#### Degree of MSc with Specialization in Biopreservation

Students must complete a minimum ★9 of graded graduate level courses in Laboratory Medicine and Pathology (LABMP) or approved courses in other departments. LABMP 530, normally taken in the first year, and LABMP 510 are mandatory. It is recommended that all students also complete LABMP 511.

#### Degree of MSc with Specialization in Molecular Pathology

Students must complete a minimum ★9 of graded graduate level courses in Laboratory Medicine and Pathology (LABMP) or approved courses in other departments. LABMP 530, normally taken in the first year, and LABMP 581 are mandatory. It is recommended that all students also complete LABMP 500.

#### Course and Practicum Based

#### Degree of MSc with Specialization in Pathologists' Assistant

The requirements of the Pathologists' Assistant specialization are  $\star$  21 of graded course work, a clinical practicum ( $\star$  24), a research project ( $\star$  6), and completion of a non-credit instructional methods course. All students must also make one or more presentations specified by the department and attend specified seminars.

Students must maintain a cumulative program GPA of 3.0.

#### Year 1

- ANAT 500 Human Development
- ANAT 503 Human Anatomy
- LABMP 500 Introduction to Human Disease
- LABMP 593 Systematic Pathology
- LABMP 594 Anatomic Pathology Techniques
- LABMP 595 Laboratory Management
- LABMP 596 Pathologists' Assistant Clinical Practicum I

#### Year 2

- LABMP 597 Pathologists' Assistant Clinical Practicum II
- LABMP 598 Pathologists' Assistant Clinical Practicum III
- LABMP 599 Pathologists' Assistant Clinical Practicum IV
- LABMP 900 Research Project

## Length of Program

For the thesis-based MSc, the minimum program length is one year. A realistic minimum length of the program is two years, and a maximum length is four years, depending on the research undertaken. The course and practicum-based MSc with specialization in Pathologists' Assistant is a continuous 24 month program which includes a 16-month clinical practicum.

# The Degree of PhD (Laboratory Medicine and Pathology) [Graduate]

The PhD program requirements include coursework, completion of an approved research project, and preparation of a thesis. For students entering the PhD program after a BSc degree, a minimum of ★12 graded graduate level courses is required. For students entering the PhD program after a MSc degree, a minimum of ★6 of graded graduate level courses is required. Students must also make one or more presentations specified by the Department and attend specified seminars.

Students must maintain a cumulative program GPA of 3.0.

## **Program Requirements**

#### Degree of PhD in Laboratory Medicine and Pathology (General Program)

Students must complete the required  $\star$ 12 or  $\star$ 6 graded graduate level courses in Laboratory Medicine and Pathology (LABMP) or approved courses in other departments. LABMP 530, normally taken in the first year, is mandatory.

#### Degree of PhD with Specialization in Analytical and Environmental Toxicology

Students must complete the required  $\star$ 12 or  $\star$ 6 graded graduate level courses in Laboratory Medicine and Pathology (LABMP) or approved courses in other departments. LABMP 530, normally taken in the first year, and LABMP 550 are mandatory. It is recommended that all students also complete LABMP 551.

### Degree of PhD with Specialization in Biopreservation

Students must complete the required ★12 or ★6 graded graduate level courses in Laboratory Medicine and Pathology (LABMP) or approved courses in other departments. LABMP 530, normally taken in the first year, and LABMP 510 are mandatory. It is recommended that all students also complete LABMP 511.

#### Degree of PhD with Specialization in Molecular Pathology

Students must complete the required  $\star$ 12 or  $\star$ 6 graded graduate level courses in Laboratory Medicine and Pathology (LABMP) or approved courses in other departments. LABMP 530, normally taken in the first year, and LABMP 581 is mandatory. It is recommended that all students also complete LABMP 500.

### Length of Program

For the PhD, the minimum program length is three years, and a maximum length is six years, depending on the research undertaken.

# Law [Graduate]

Faculty of Law
4th Floor, Law Centre
University of Alberta
Edmonton, Alberta T6G 2H5
E-mail: admissions@law.ualberta.ca
www.law.ualberta.ca

#### **General Information**

The Faculty of Law offers programs of graduate study leading to the degrees of Doctor of Philosophy (PhD) and a Master of Laws (LLM). The Faculty also offers programs of joint study with the Faculty of Business leading to a combined MBA-JD program.

# ALBERTA

## GRADUATE STUDIES AND RESEARCH

### **Entrance Requirements**

The minimum admission requirements for the LLM are an undergraduate JD degree with an average of 3.0 in the last two years of the JD at the University of Alberta, or an equivalent qualification from a recognized institution. The minimum admission requirements for the PhD are an LLM degree or its equivalent with an average of 3.0 in the last two years of graduate and undergraduate work. In addition, a minimum TOEFL score of 600 (paper-based) or 100 (Internet-based, with at least 25 in each section), an IELTS (Academic) score with a minimum overall band score of 7.0, with at least 5.5 on each band, or a PTE (Academic) overall minimum score of 68 where applicable is required (see English Language Requirement). Specific requirements are found below, under the appropriate degree heading.

#### Financial Assistance

Financial assistance, including graduate research assistantships, may be available to suitably qualified candidates. Such assistance will involve candidates in the performance of certain research duties in the Faculty of Law, although such duties will not impede candidates in the pursuit of their own studies.

The Faculty of Law offers a number of scholarships and awards for PhD and LLM students. Eligible students are considered automatically by the Faculty of Law for these scholarships and awards at the time of admission. A current listing of Faculty of Law scholarships and awards can be found on the Faculty of Law website at www.lawschool.ualberta.ca/programs/graduate.

In addition, the University of Alberta offers certain scholarships to candidates of sufficiently high academic merit.

Inquiries regarding programs, courses and financial assistance other than University scholarships should be made to the Graduate Admissions Officer, Faculty of Law.

### **Graduate Program Requirements**

- The Degree of LLM
- MBA-JD Joint Program
- The Degree of PhD

#### **Graduate Courses**

Both the PhD and LLM graduate course work requirements will normally include the Graduate Seminar (LAW 696). This seminar offers an advanced analysis of different orientations to doctrinal, empirical, and fundamental research. Particular emphasis varies with the expertise of the instructor with current emphasis being on exploration of liberal and illiberal views of law and legal scholarship. It also provides the participants with an opportunity to exchange ideas on their own developing theoretical and technical approaches to a legal topic.

The Faculty also offers the graduate student Research Paper course (LAW 695) which is open to both PhD and LLM candidates. The Graduate Seminar on Specialized Legal Topics (LAW 699) is a variable topics course and can be taken more than once, provided new subject matter is being offered. PhD and LLM candidates may also take courses in the JD program under a graduate-level course designation and method of evaluation or graduate courses in other Faculties instead of, or in addition to, graduate courses in law with the approval of the PhD candidate's supervisor or the LLM candidate's supervisor or advisor and the Associate Dean (Graduate Studies), Faculty of Law, after consideration of the candidate's experience and needs and the availability of courses during the candidate's year of residency.

Graduate courses can be found in Course Listings, under the subject heading Law (LAW).

# The Degree of LLM (Law) [Graduate]

### **Entrance Requirements**

Applicants for this program must hold the degree of JD or its equivalent from this or another university, of sufficient standard to satisfy the Graduate Studies Committee of the Faculty of Law that they will be capable of undertaking and profiting by the program.

### Program Requirements

There are two programs available to students admitted to the LLM. Either may be subsequently used as a qualification for application to the PhD program. Successful completion of either the thesis-based or course-based LLM program, however, does not guarantee admission to the doctoral program. Students wishing to go on to a PhD program must make formal application.

Students must declare which program they intend to follow at the beginning of their graduate studies. Any students wishing to change their program must seek the approval of the Graduate Studies Committee.

- 1. Thesis-based LLM: Candidates must successfully defend a thesis of approximately 80 to 100 pages (20,000 to 25,000 words) in length, inclusive of footnotes or endnotes, on a topic selected in consultation with the candidate's supervisor and with the approval of the Associate Dean (Graduate Studies), Faculty of Law. In addition, candidates are required to successfully complete at least ★9 normally consisting of the Graduate Seminar (LAW 696), and two other courses. Candidates, however, may take graduate courses in other faculties instead of, or in addition to, these courses with the approval of the candidate's supervisor and the Associate Dean (Graduate Studies), Faculty of Law, after consideration of the candidate's needs and experience and the availability of courses.
- 2. Course-based LLM: Students must take and pass ★24 normally consisting of LAW 696 and ★21 in other courses to be determined in consultation with the student and their Academic Advisor and with the approval of the Associate Dean (Graduate Studies), Faculty of Law. Students may take graduate courses in other faculties instead of, or in addition to, these courses with the approval of the Associate Dean (Graduate Studies), Faculty of Law, after consideration of the candidate's needs and experience and the availability of courses. In at least one of the graduate LAW courses, the student must complete LAW 690, a major research paper, of approximately 40 to 60 pages (10,000 to 15,000 words) in length, inclusive of footnotes or endnotes, the topic to be approved by the course instructor and the Associate Dean (Graduate Studies), Faculty of Law.

# Residency

All thesis-based candidates must complete at least one academic year (i.e., Fall and Winter Terms) in residence at the University.

# Length of Program

The time required to complete the LLM will vary according to the previous education and experience of the applicant and the nature of the research undertaken; however, a minimum of 12 months of study is normally required. Thesis-based candidates must complete requirements within four years. Extensions may be granted in exceptional circumstances. Course-based candidates must complete requirements within six years.

# MBA-JD Joint Program [Graduate]

The Faculty of Business and the Faculty of Law offer a program of joint study which permits students to earn both the MBA and JD degrees in four years.

Students in the first year of either the regular MBA program or the Faculty of Law, as well as new entrants, are eligible to apply for the joint program. Refer to The MBA/JD Combined Program (Business) under Business for program details.

# The Degree of PhD (Law) [Graduate]

### **Entrance Requirements**

Applicants for this program must normally hold the degree of LLM or its equivalent from this or another university, of sufficient standard to satisfy the Graduate Studies Committee of the Faculty of Law, as well as the Faculty of Graduate Studies and Research, that they will be capable of undertaking and profiting by the program. On an exceptional basis, students enrolled in the Faculty's LLM program may apply to the Graduate Studies Committee, Faculty of Law, to bypass the LLM requirement and enrol as a candidate for the PhD degree

### <u>Program Requirements</u>

The program will normally include a minimum of ★9, normally consisting of the Graduate Seminar (LAW 696) and two other courses, often including a graduate-level Research Paper course (see Graduate Courses). However, candidates may take graduate courses in other Faculties, instead of, or in addition to these courses, with the approval of the candidate's supervisor and the Associate Dean (Graduate Studies), Faculty of Law, after consideration of the candidate's needs and experience and the availability of courses. As well, candidates must write a detailed dissertation description and outline on a dissertation topic selected in consultation with the candidate's supervisory committee and with the approval of the Associate Dean (Graduate Studies), Faculty of Law. This is followed by an oral candidacy examination concerning the dissertation description and outline. A candidate is normally required to complete all course work before taking the oral candidacy exam. After the candidate passes the oral candidacy exam, the candidate will then submit a dissertation approximately 250 to 350 pages (62,500) in length, inclusive of footnotes or endnotes, and make an oral defence of the dissertation.

## <u>Residency</u>

The residence period will ordinarily be one academic year (i.e., Fall and Winter terms), assuming an LLM upon entry from a university other than the University of Alberta. Candidates who hold a University of Alberta LLM may secure a waiver of residency, upon recommendation of the supervisory committee and approval of the Associate Dean (Graduate Studies), Faculty of Law.

# Length of Program

The time required to complete the PhD will vary according to previous education and experience of the applicant and the nature of the research undertaken; however, a minimum of two calendar years of full-time study is normally required, and candidates must complete requirements within six years. Extensions may be granted in exceptional circumstances.

# Library and Information Studies [Graduate]

School of Library and Information Studies 7-104 Education Centre North University of Alberta Edmonton, Alberta T6G 2G5 E-mail: slisiQualberta.ca www.slis.ualberta.ca

#### **General Information**

The School of Library and Information Studies, the only graduate professional library and information studies program in the prairie provinces, offers the Master of Library and Information Studies (MLIS) degree. The MLIS degree is offered on campus or completely online.

As a professional degree, the MLIS represents a program designed to develop the knowledge, understanding, attitudes, and skills that will prepare graduates to help people define their information needs, make their information seeking more effective, use information tools efficiently, evaluate information, critically examine Internet resources, make informed decisions about what to read, and help organizations manage their records and knowledge.

The MLIS program is accredited by the Committee on Accreditation of the American Library Association. This accreditation is also recognized by the Canadian Library Association.

### Student Organizations

The Library and Information Studies Students' Association represents all students enrolled in the MLIS program. Students elect their own officers, with the presiding officer representing them at meetings of the School Council. LISSA provides liaison between students and faculty and encourages participation in a variety of academic, professional, and extracurricular activities.

### **Entrance Requirements**

An applicant with a four-year undergraduate degree from the University of Alberta, or a comparable degree from another accredited university, who has obtained a minimum grade point average of 3.0 (or its equivalent) in the last 20 half-courses (or equivalent) of academic studies may be admitted as a candidate for the MLIS degree. Applicants who lack these qualifications are advised to make up any deficiency in consultation with the School of Library and Information Studies in order to be considered for admission as a candidate for the MLIS.

All applicants who are required to write an English language examination are advised to do so at an early date because a satisfactory score is required in order to be considered for admission (see English Language Requirement). The passing score is 90 for the MELAB; 600 (paper-based) or 100 (Internet-based) for the TOEFL; 70 for the CAEL with a minimum of 70 on each subtest; or 7.5 on the overall band for the IELTS (Academic) with a minimum of 7 on each test band.

Applicants without a degree from a Canadian university may be required to take the Graduate Record Examination administered by the Educational Testing Service. Students should arrange for the testing agency to report results to the School of Library and Information Studies, which will judge whether or not the results are satisfactory. Acceptable scores are 600 in the Verbal Section, 525 in the Quantitative Section, and 600 in the Analytical Section.

Applicants are judged not only on their academic record but also by their professional promise as indicated in three letters of reference (letters to support application for graduate admission), statement of purpose, and curriculum vitae.

### GRADUATE STUDIES AND RESEARCH

Admission offers are made from a review of complete applications received by the School by February 1. A complete application includes the application form and its supporting materials, transcripts, and three letters of reference (letters to support application for graduate admission). Where fewer than three academic referees are available, one professional/supervisor referee is acceptable for one of the references. All must be received before applications can be reviewed for admission to the MLIS program. Applicants considered will receive notification of a decision on their application no later than March 31. Once the School's acceptance limit is reached, subsequent acceptable applicants may be placed on a waiting list.

Decisions on internal scholarships and awards are normally made by June 1. Students are encouraged to seek out opportunities for scholarships and awards and to apply for these prior to and during the course of their programs.

Students who are offered admission to the MLIS program may have their admissions deferred to the following fall term if the School is notified in writing before the beginning of the Fall term.

Please consult www.slis.ualberta.ca for full application details.

### Financial Assistance

Inquiries regarding program and course details, and financial assistance should be made to the School of Library and Information Studies. Details about University awards are found at www.gradstudies.ualberta.ca.

#### **Academic Standing**

The pass mark for any course taken for credit towards the Master of Library and Information Studies degree is a grade of C+. A student who does not achieve a pass mark in any required course must repeat the course. A student who does not achieve a pass mark in an elective course must repeat the course or substitute another elective course.

An overall average of 2.7 must be maintained throughout the program. If the School decides that a graduate student is not making satisfactory progress in either coursework or research, the School may recommend to the Dean of the Faculty of Graduate Studies and Research that the student be required to withdraw.

#### Reexaminations

Graduate students are not permitted to take reexaminations.

### Appeals and Grievances

Students who have grievances related to academic judgments inherent in marks or grades awarded in any course should follow the grievance procedures set out by the School of Library and Information Studies and the Faculty which offers the course.

Students who have grievances related to a decision of the Faculty of Graduate Studies and Research (FGSR) affecting the student's academic program should first exhaust the appeal and grievance procedures of the School and then, if desired, may pursue the appeal procedures of the Faculty of Graduate Studies and Research. These procedures are available from the School and the Faculty of Graduate Studies and Research.

# <u>Time Limits for Completion of Program</u>

Candidates in the course-based route must have completed all the requirements within six years of the time they are first registered as a probationary graduate student or candidate in the Master's program. Candidates in the thesis-based route must have completed all requirements within four years of the time they are first registered.



### **Graduate Program Requirements**

- The Degree of MLIS
- The Degrees of MA/MLIS
- The MBA/MLIS Combined Program

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject headings Library and Information Studies (LIS).

### The Degree of MLIS (Library and Information Studies) [Graduate]

### Program Requirements

The minimum requirement for the MLIS degree is either  $\star$ 39 in graduate courses and a thesis, or  $\star$ 48 in graduate courses and a capping exercise. Students may, with approval, include up to  $\star$ 9 offered by a department other than the School of Library and Information Studies.

The following courses are required for both the thesis and course-based routes of the MLIS program: LIS 501, LIS 502, LIS 503, LIS 504, LIS 505 and ★6 from the approved Information Technology courses (see SLIS website for current offerings). LIS 501 is normally a prerequisite for the rest of the program. LIS 597 (or equivalent) is a requirement in the thesis route of the MLIS program.

Credit for courses taken elsewhere may be granted as transfer credit by the Dean of the Faculty of Graduate Studies and Research, on the recommendation of the School of Library and Information Studies. Contact the School for details.

### The Degrees of MA/MLIS (Library and Information Studies) [Graduate]

The School of Library and Information Studies and the Digital Humanities Program offer a combined MA in Digital Humanities/MLIS program that students can complete within three years. Students pursuing the combined degree must take  $\star$ 12 in required Digital Humanities courses (DH 500, DH 510, DH 520, and DH 530) and  $\star$ 6 in Digital Humanities options. They must also take  $\star$ 18 in required Library and Information Studies courses: LIS 501, LIS 502, LIS 503, LIS 504, LIS 505 and LIS 597) and  $\star$ 9 in LIS options. The MLIS requirement to complete  $\star$ 6 from a list of designated Information Technology courses is fulfilled by content covered in the Digital Humanities courses. Students are strongly encouraged to take the required Digital Humanities courses during their first year. Students must also complete a thesis. The student's thesis committee should normally include faculty members from both programs.

Students wishing to apply for the combined degree need only complete one online application form by selecting "MA/MLIS" as the program. The application will be received by both programs. Students must satisfy the entrance requirements for both programs. Administrators of the two programs will consult regarding admission to the combined degree.

### Length of Program

A full-time student who is registered for the MLIS program normally will be able to complete the degree requirements in two years. A full-time student who is registered for the joint MA/MLIS degree normally will be able to complete the degree requirements in three years.



### The MBA/MLIS Combined Program (Library and Information Studies) [Graduate]

The School of Library and Information Studies and the Faculty of Business offer a program of combined study which enables students to earn both the MBA and MLIS degrees after three calendar years of full-time study or six years of part-time study. Students in the online offering of the MLIS program are not eligible for the combined MBA/MLIS program.

Each student must complete a Faculty of Graduate Studies and Research application form which will be received by both programs. A letter indicating the intention to apply to the MBA/MLIS program including a statement of the applicant's background and interests should also be enclosed. During, and up to the completion of the first year in the MLIS program, students will have the option to apply to the combined MBA/MLIS program.

### **Entrance Requirements**

Students wishing to apply for the MBA/MLIS combined program need only complete one online application form by selecting "MBA/MLIS" as the program. The application will be received by both programs. Students must satisfy the entrance requirements for both programs. Administrators of the two programs will consult regarding admission to the combined degree. There is limited enrolment and the entrance process is competitive.

### **Program Requirements**

The course requirements are normally as follows:

#### First Year

★24 in LIS (including ★15 in required courses excluding LIS 504 and up to ★6 in required Information Technology courses (see SLIS website for current offerings) and / or up to ★6 credits in electives)

#### Second year

★30 MBA required courses

#### Third year

- ★15 MBA (one required course SMO 641 and four electives)
- ★12 MLIS (LIS electives and up to one Information Technology course)

### **Academic Standing**

Respective academic standing provisions for each program apply. Students taking the MBA/MLIS program must meet each program's academic standing requirements. If a student withdraws from one of the degree programs or is required to withdraw because of unsatisfactory academic standing, but wishes to remain in the other degree program, the student may be permitted to continue the program of study in which the student retains good academic standing.

### Length of Program

A full-time student who is registered for the combined MBA/MLIS program normally will be able to complete the degree requirements in three years. Students may undertake the combined program on a part-time basis. The duration of the total program must not exceed six consecutive calendar years.

### Linguistics [Graduate]

Department of Linguistics 4-32 Assiniboia Hall University of Alberta Edmonton, Alberta T6G 2E7 E-mail: linggrad@ualberta.ca

#### **General Information**

The Department of Linguistics offers graduate programs in linguistics leading to the degrees of Master of Science and Doctor of Philosophy.

The Department supports research in experimental phonetics and phonology; psycholinguistics; quantitative linguistics; corpus linguistics; cognitive linguistics; language acquisition and bilingualism; field linguistics and language documentation; typology and language variation.

### **Entrance Requirements**

The Department's minimum admission requirements are an undergraduate degree with an average of 3.3 in the last two years of undergraduate work (or graduate work) at the University of Alberta, or equivalent qualifications from a recognized institution.

Candidates for the MSc must have completed, to the satisfaction of the Department, certain core courses in linguistics, or their equivalents. Candidates who lack this preparation may be required to undertake a year of qualifying studies before being admitted to the degree program.

Candidates for the PhD must normally hold the equivalent of the MSc in Linguistics at the University of Alberta.

English Language Proficiency: The minimum acceptable score on the Test of English as a Foreign Language (TOEFL) is 600 (paper-based) or 100 (Internet-based); on the Michigan Language Assessment Battery (MELAB) it is 85. The minimum acceptable score on the IELTS is an overall band score of 6.5, with a score of at least 5.5 on each test band. The minimum acceptable score on the CAEL is no less than 60 with at least 60 on each subtest. Applicants should arrange for their English language test results to be sent directly to the department.

The GRE General Test is recommended for all applicants from North America and other areas where the test is available.

### General Academic Standing Requirements

The Department of Linguistics requires a higher minimum cumulative grade point average and higher grades than those acceptable to the Faculty of Graduate Studies and Research (see Minimum Faculty Requirements and Failure in or Failure to Complete a Course or Research Work). The minimum acceptable passing grade in any course taken by students registered in the master's and doctoral programs in Linguistics is a grade of B-. Grades below a B- count as failing grades for graduate students in

# UNIVERSITY OF ALBERTA

### GRADUATE STUDIES AND RESEARCH

Linguistics. All students pursuing graduate degrees in Linguistics must also maintain a minimum cumulative grade point average of 3.0 throughout the course of the program. A student whose academic standing falls below a grade point average of 3.0 may be required to withdraw at any time.

### Financial Assistance

Graduate assistantships are normally available for a limited time for students in full-time study who make satisfactory progress toward a degree and are deemed by the Department to be in good academic standing (see Failure in or Failure to Complete a Course or Research Work and the preceding paragraph). Students will be expected to apply for competitive awards. Exceptionally qualified applicants may be nominated for recruitment or other awards administered by the Faculty of Graduate Studies and Research. Information is available at www.gradstudies.ualberta.ca. Support for dissertation research is available on a competitive basis through internally administered research grants.

### **Graduate Program Requirements**

- The Degree of MSc
- The Degree of PhD

### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading Linguistics (LING).

### The Degree of MSc (Linguistics) [Graduate]

### **Program Requirements**

Two routes to the MSc are available: a thesis-based and a course-based route.

Requirements for the thesis-based MSc include a minimum of  $\star$ 21 including two required courses (LING 601 and LING 602) plus a thesis. Course options, including additional courses deemed necessary for the student's area of specialization, will be chosen in consultation with the graduate coordinator and the student's supervisor(s). The minimum period of residence is two four-month terms of full-time attendance at the University of Alberta

Requirements for the course-based MSc consist of a minimum of  $\star$ 27 including two required courses LING 601 and LING 602, and an MSc research project course LING 911. Course options, including additional courses deemed necessary for the student's area of specialization, will be chosen in consultation with the graduate coordinator and the student's supervisor(s). The minimum period of residence is two four-month terms of full-time attendance at the University of Alberta.

Students should demonstrate knowledge of a language other than English.

### Length of Program

The time required to complete the MSc will vary according to the applicant's previous training and the nature of the research undertaken; however, a minimum of three terms should be expected. The maximum time to completion of a course-based MSc is four years (eight terms) of full-time study.



### The Degree of PhD (Linguistics) [Graduate]

### **Program Requirements**

Requirements for the PhD include a minimum of ★24 including ★6 for the two preparation courses required for Doctoral Candidacy LING 693 and LING 694, plus a thesis. Specific courses, including courses deemed necessary for the student's area of specialization, will be chosen in consultation with the graduate coordinator and the student's supervisor(s). Students admitted to the PhD without an MSc in Linguistics or its equivalent may be required to take additional courses. The minimum period of residence is two academic years of full-time attendance at the University of Alberta.

Students should demonstrate knowledge of a language other than English.

### Length of Program

The time required to complete the PhD will vary with the individual candidate; however, a minimum of three years should be expected.

### Mathematical and Statistical Sciences [Graduate]

Department of Mathematical and Statistical Sciences 632 Central Academic Building University of Alberta Edmonton, Alberta T6G 2G1 E-mail: mathgrad@ualberta.ca

#### **General Information**

The Department of Mathematical and Statistical Sciences offers graduate programs leading to the degree of Master of Science and Doctor of Philosophy in a number of fields in the general areas of pure mathematics, applied mathematics, mathematical finance, mathematical physics, statistics, biostatistics, and statistical machine learning. Prospective graduate students should consult the Graduate Chair with regard to facilities available and the background required for the field in which they are particularly interested.

### **Entrance Requirements**

The Department generally does not accept students with an overall grade point average of less than 3.3 in their undergraduate years at the University of Alberta, or an equivalent qualification from another institution. Where applicable (see English Language Requirement), a minimum TOEFL score of 600 (paper-based) or 100 (Internet-based) is required for all graduate students. Additional information on specific requirements for admission to the MSc and PhD programs is found below, under the respective degree headings.

#### Financial Assistance

Graduate teaching assistantships are available for candidates working toward a higher degree. They involve at most 12 hours of work per week including teaching, class preparation and working time. Teaching assistantships will normally be limited to at most five years for students in the PhD program and to two years for students in the MSc program. Support will not be extended to more than a total of six years. Research assistantships are also available.

### **Graduate Program Requirements**

- The Degree of MSc
- The Degree of PhD
- Programs in Mathematical Physics
- Programs in Mathematical Finance
- Graduate Embedded Certificate in Data Science (DS)

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the following subject headings:

Mathematics (MATH)
Mathematical Physics (MA PH)
Statistics (STAT)

### The Degree of MSc (Mathematical and Statistical Sciences) [Graduate]

### **Entrance Requirements**

Candidates for the MSc must have an Honors degree or equivalent from a recognized university, with a strong background in mathematics and/or statistics. Candidates whose background is deemed to be deficient will be required to register as qualifying students and take additional courses.

### Program Requirements

The minimum requirement for the MSc degree is either  $\star$ 18 in graduate courses and a thesis, or  $\star$ 24 in graduate courses and a project equivalent to  $\star$ 6. Approval of the Graduate Chair of the Mathematical and Statistical Sciences Department is needed to take graduate courses that are not in mathematical or statistical sciences.

The minimum period of residence is two four-month terms of full-time attendance at the University of Alberta.

### Length of Program

The MSc program will normally be completed in 20 months; however, it may be done in a minimum of one year. An exception is the course-based MSc in Statistics, which will normally be completed in eight-12 months.



### The Degree of PhD (Mathematical and Statistical Sciences) [Graduate]

### **Entrance Requirements**

To be admitted as a provisional candidate for the PhD, a student must normally hold the equivalent of an MSc degree in mathematical or statistical sciences from the University of Alberta.

### Program Requirements

In addition to the examinations called for by the general regulations, the student must successfully complete an entrance year which includes two full terms of course work. The program of a full-time student in each of these terms shall normally include at least three mathematical and statistical sciences courses, or courses in approved or allied fields (graduate or senior undergraduate). In addition, each PhD candidate must satisfy a minimum course requirement specified by the Regulations and Guidelines for Graduate Programs in the Department of Mathematical and Statistical Sciences. In any case, ★6 must be in mathematical and statistical sciences courses at the 500-level or 600-level, in areas other than that of the student's thesis. The principal requirement for the PhD is a substantial contribution to knowledge, embodied in a thesis.

To satisfy the residence requirement for the PhD, candidates must spend at least two years in advanced study and research after the master's degree.

### Length of Program

The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken; however, a minimum of three years is normally required after the BSc or two years after the MSc.

# Programs in Mathematical Physics (Mathematical and Statistical Sciences) [Graduate]

The Master of Science and Doctor of Philosophy degrees in Mathematical Physics may be taken in the Department of Mathematical and Statistical Sciences. The program emphasizes interdisciplinary investigations of the mathematical and physical aspects of theories and mathematical models used in physics.

The entrance requirement for the Master of Science degree in Mathematical Physics is a four-year degree in Mathematical and Statistical Sciences or Physics with a GPA of 3.0 or better, or equivalent. The MSc degree may be obtained in a course-based or thesis-based program. For the course-based program ★24 in graduate courses at the 500-level or higher from a list of approved courses must be taken, and a project is required. For the thesis-based program ★18 in graduate courses at the 500-level or higher from a list of approved courses must be taken, and a thesis is required. The course work must include courses from both the Departments of Physics and Mathematical and Statistical Sciences.

The entrance requirement for the PhD program in Mathematical Physics is, normally, an MSc degree in Mathematical and Statistical Sciences or Physics, or equivalent. The PhD program requirements are essentially the same as those for the PhD in Mathematical Sciences with certain modifications in the required course work, advisory examination and entrance year as outlined in the Faculty of Graduate Studies and Research Regulations. These modifications are meant to enhance the interdisciplinary nature of the program.



# Programs in Mathematical Finance (Mathematical and Statistical Sciences) [Graduate]

The Master of Science and Doctor of Philosophy degrees in Mathematical Finance may be taken in the Department of Mathematical and Statistical Sciences.

The entrance requirement for the Master of Science degree in Mathematical Finance is a university degree that lasts four years or longer. The MSc degree may be obtained in a course-based or thesis-based program. For the course-based program ★24 graduate courses at the 500-level or higher from a list of approved courses must be taken, and a project is required. For the thesis-based program ★18 graduate courses at the 500-level or higher from a list of approved courses must be taken, and a thesis is required. The course work must include courses from both the Faculty of Business and the Department of Mathematical and Statistical Sciences.

The entrance requirement for the PhD program in Mathematical Finance is normally an MSc degree, or equivalent. The PhD program requirements are essentially the same as those for the PhD in Mathematical Sciences with certain modifications in the required course work, advisory examination and entrance year as outlined in the Faculty of Graduate Studies and Research Regulations. These modifications are meant to enhance the interdisciplinary nature of the program.

# Graduate Embedded Certificate in Data Science (DS) (Mathematical and Statistical Sciences) [Graduate]

The growing availability of large data sets in industry and government increases the demand for qualified data analysts. The certificate in DS allows PhD and MSc students in theory based mathematics programs to upgrade their qualifications towards data analysis. The DS certificate is open to registered students in MSc and PhD programs in Mathematics, Applied Mathematics, and Mathematical Physics.

#### For the DS certificate

For the DS certificate it is required that students complete the Graduate Teaching and Learning Certificate Level 1 (GTL Level 1) plus ★9 chosen from the following list:

- BIOL 501 Applied Bioinformatics
- CMPUT 551 Topics in Artificial Intelligence (this course requires solid programming skills. It is highly recommended to first take CMPUT 174 and CMPUT 175)
- CMPUT 659 Topics in Artificial Intelligence
- MATH 508 Computational Finance
- STAT 501 Directed Study I
- STAT 502 Directed Study II
- STAT 503 Directed Study III
- STAT 504 Directed Study IV
- STAT 505 Directed Study V
- STAT 568 Design and Analysis of Experiments
- STAT 575 Multivariate Analysis
- STAT 578 Regression Analysis

#### Additional Information

Other courses may be approved in consultation with the Associate Chair (Graduate Studies) at the Department of Mathematical and Statistical Sciences.

Upon successful completion of the graduate program, inclusive of the designated DS certificate courses, and the GTL Level 1, the student will be awarded the Embedded Certificate in Data Science in addition to their graduate degree.

### Mechanical Engineering [Graduate]

Department of Mechanical Engineering
10-203 Donadeo Innovation Centre for Engineering
University of Alberta
9211-116 Street NW,
Edmonton, Alberta T66 1H9
E-mail: meceadmin@ualberta.ca
www.mece.engineering.ualberta.ca

#### **General Information**

The Department of Mechanical Engineering offers graduate courses and provides research facilities for well qualified students of recognized universities who wish to pursue advanced studies leading to the MEng, MSc, and PhD degrees in Mechanical Engineering. In addition, the Department offers a program in Engineering Management to graduate engineers of any discipline, leading to the MEng, MSc, and PhD degrees in Engineering Management.

The general fields of study include solid mechanics, dynamics, thermodynamics, fluid mechanics, heat transfer, combustion, biomedical engineering, manufacturing engineering, and engineering management.

While the general guidelines for entrance and program requirements are listed below, specific details for each of the degrees are found in the document *Graduate Program Manual for MEng, MSc and PhD in Mechanical Engineering and Engineering Management*, available from the Department. As well, currently active areas of research are documented on the Department's home page.

### **Entrance Requirements**

The Department's minimum admission requirements for degrees in Mechanical Engineering and Engineering Management are an undergraduate degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last ★60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Applicants with exceptional or tenured work experience who do not meet the minimum admission requirements may apply for special consideration. Specific details are found in the document *Graduate Program Manual for MEng, MSc and PhD in Mechanical Engineering and Engineering Management*, available from the Department or on the Department's home page.

Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:

• a TOEFL score of 93 (Internet-based) or equivalent;

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- an overall IELTS score of at least 6.5 with at least 5.5 on each band;
- a minimum MELAB score of 85;
- an overall minimum CAEL score of 60 with at least 60 on each subset;
- an overall minimum PTE score of 59.

Applicants are also required to submit the following supporting documentation:

- Three letters of reference
- Curriculum Vitae
- Personal Statement

See Required Supporting Documentation on the Department website for further information.

#### **Application deadlines:**

Students wishing to be considered for select recruitment scholarships are encouraged to apply well in advance in the scholarship application deadlines – see Scholarships and Awards on the Faculty of Graduate Studies and Research website.

MEng Fall Admission (September):

January 15 for all applicants

There is no Winter Admission for the MEng program

MSc/PhD Fall Admission (September):

- May 15 for Canadian citizens
- March 15 for International students

MSc/PhD Winter Admission (January):

- September 15 for Canadian citizens
- July 15 for International students

#### Financial Assistance

Financial assistance is available in the form of scholarships and fellowships (see Graduate Financial Aid section of this calendar) and through the Department in the form of graduate assistantships and contract research (available for Canadian students and students holding valid work permits). The assistantships are normally available to students registered full time in thesis programs; funding is not normally provided for students registered part time or in MEng programs. Summer assistance can sometimes be arranged for students without scholarship support who continue their research full time through the summer months. Further information is available on the Department's home page.

### **Graduate Program Requirements**

- The Degree of MSc in Mechanical Engineering
- The Degree of MSc in Engineering Management
- The Degree of MEng in Mechanical Engineering
- The Degree of MEng in Engineering Management
- The MBA/MEng Joint Program (Mechanical Engineering)
- The Degree of PhD in Mechanical Engineering

The Degree of PhD in Engineering Management

### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject headings Mechanical Engineering (MEC E) and Engineering Management (ENG M).

**Note**: The courses ENG M 620, MEC E 630, MEC E 639, MEC E 663, MEC E 661, MEC E 680 and MEC E 681 normally will be offered annually. Other lecture-based courses will be offered when there is sufficient enrolment.

### The Degree of MSc in Mechanical Engineering [Graduate]

### **Program Requirements**

Students are required to complete a minimum of  $\bigstar 15.5$  in coursework and a thesis.

#### Coursework

- Five ★3 graduate-level courses which must be approved by the Graduate Coordinator and/or Thesis Supervisor(s)
  - One course must be in a foundational area of mechanical engineering chosen from the following:
    - MEC E 615
    - MEC E 620
    - MEC E 630
    - MEC E 639
    - MEC E 640
    - MEC E 650
    - MEC E 663
    - MEC E 671
    - MEC E 673
    - MEC E 680
    - MEC E 681
    - MEC E 683
    - MEC E 690
  - A maximum of one MEC E 700-level course and one MEC E 500-level course, OR a maximum of two MEC E 700-level courses and no
     MEC E 500-level courses can be credited towards the minimum course requirements
  - No reading courses can be credited towards the minimum course requirement
- ENGG 600 (★0.5)- Engineering Ethics and Integrity
- Additional coursework may be required

#### **Thesis**

Registration in 900-level THES

#### **Ethics Requirement**

Engineering students meet their ethics requirement through ENGG 600 and the Graduate Ethics Training (GET) course offered by FGSR.

#### Professional Development Requirement

Engineering students must meet their Professional Development requirement through the completion of two courses, registration for which is through eClass. Contact the Department for further information.

#### Academic Standing Requirement

Students are required to maintain a minimum cumulative grade point average of 3.0 throughout the course of the program.

Failure to maintain the required cumulative GPA will normally result in a recommendation by the Graduate Coordinator to FGSR that the student be placed on academic probation and/or be required to withdraw.

#### Residence Requirement

The minimum period of residence is two four-month terms of full-time attendance at the University of Alberta.

### Length of Program

The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken. Normally, it will take 24 months to complete the MSc.

The maximum time to complete the thesis-based MSc program as set by the Faculty of Graduate Studies and Research is four years.

### The Degree of MSc in Engineering Management [Graduate]

### **Program Requirements**

Students are required to complete a minimum of  $\pm 15.5$  in coursework and a thesis

#### Coursework

- Five ★3 graduate-level courses which must be approved by the Graduate Coordinator and/or Thesis Supervisor(s)
  - At least three courses must be ENG M courses
  - No reading courses can be credited towards the minimum course requirement
- ENGG 600 (★0.5)- Engineering Ethics and Integrity
- Additional coursework may be required.

#### **Thesis**

Registration in 900-level THES

#### **Ethics Requirement**

Engineering students meet their ethics requirement through ENGG 600 and the FGSR Graduate Ethics Training (GET) course.

#### Professional Development Requirement

Engineering students must meet their Professional Development requirement through the completion of two courses, registration for which is through eClass. Contact the Department for further information.

### Academic Standing Requirement

Students are required to maintain a minimum cumulative grade point average of 3.0 throughout the course of the program.

Failure to maintain the required cumulative GPA will normally result in a recommendation by the Graduate Coordinator to FGSR that the student be placed on academic probation and/or be required to withdraw.

### Residence Requirement

The minimum period of residence is two four-month terms of full-time attendance at the University of Alberta.

### Length of Program

The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken. Normally, it will take 18 to 24 months to complete the MSc.

The maximum time to complete the thesis-based MSc program as set by the Faculty of Graduate Studies and Research is four years.

### The Degree of MEng in Mechanical Engineering [Graduate]

### **Program Requirements**

Students are required to complete a minimum of  $\pm 30.5$  in coursework including a  $\pm 3$  capstone project.

#### Coursework

ullet Nine ullet3 graduate-level courses which must be approved by the Graduate Coordinator

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- o five must be in the candidate's major field (i.e., MEC E courses)
- A maximum of three courses in any combination of MEC E 500- and MEC E 700-level courses can be credited towards the minimum course requirements
- No reading courses can be credited towards the minimum course requirements.
- ENGG 600 (★0.5)- Engineering Ethics and Integrity
- Additional coursework may be required.

#### Capstone Project

 MEC E 910 (★3) – Directed Research Project. Students are responsible for securing a capstone supervisor and should do so based on common research interests. Students are encouraged to enroll in MEC E 910 only in the academic term in which they plan to formally submit their capstone project.

#### Ethics Requirement

Engineering students meet their ethics requirement through ENGG 600 and the FGSR Graduate Ethics Training (GET) course.

#### Professional Development Requirement

Engineering students must meet their Professional Development requirement through the completion of two courses, registration for which is through eClass. Contact the Department for further information.

### Academic Standing Requirement

Students are required to maintain a minimum cumulative grade point average of 3.0 throughout the course of the program.

Failure to maintain the required cumulative GPA will normally result in a recommendation by the Graduate Coordinator to FGSR that the student be placed on academic probation and/or be required to withdraw.

### Residence Requirement

There is no residence requirement for the degree of MEng in Mechanical Engineering.

### Length of Program

Normally, it takes 18 to 24 months to complete the MEng degree.

The maximum time to complete the course-based MEng program as set by the Faculty of Graduate Studies and Research is six years.



### The Degree of MEng in Engineering Management [Graduate]

### **Program Requirements**

Students are required to complete a minimum of  $\bigstar 30.5$  in coursework including a  $\bigstar 3$  capstone project.

#### Coursework

- Nine ★3 graduate-level courses which must be approved by the Graduate Coordinator
  - five must be in the candidate's major field (i.e., ENG M courses)
  - A maximum of three courses in any combination of MEC E 500- and MEC E 700-level courses can be credited towards the minimum course requirements
  - No reading courses can be credited towards the minimum course requirements.
- ENGG 600 (★0.5)- Engineering Ethics and Integrity
- Additional coursework may be required

#### Capstone Project

 MEC E 910 (★3) – Directed Research Project. Students are responsible for securing a capstone supervisor and should do so based on common research interests. Students are encouraged to enroll in MEC E 910 only in the academic term in which they plan to formally submit their capstone project.

#### **Ethics Requirement**

Engineering students meet their ethics requirement through ENGG 600 and the FGSR Graduate Ethics Training (GET) course.

#### Professional Development Requirement

Engineering students must meet their Professional Development requirement through the completion of two courses, registration for which is through eClass. Contact the Department for further information.

#### Academic Standing Requirements

Students are required to maintain a cumulative grade point average of 3.0 throughout the course of the program.

Failure to maintain the required cumulative GPA will normally result in a recommendation by the Graduate Coordinator to FGSR that the student be placed on academic probation and/or be required to withdraw.

### Residence Requirement

There is no residence requirement for the degree of MEng.

### Length of Program

Normally, it takes 18 to 24 months to complete the MEng degree.

### The MBA/MEng Joint Program (Mechanical Engineering) [Graduate]

The Faculty of Business and the Faculty of Engineering offer a program of joint study which enables students to earn both the MBA and MEng degrees after two calendar years of full-time study. Only students with an undergraduate degree in engineering are admissible to this program. For application information, entrance requirements and other details, refer to The MBA/MEng Combined Program (Business) [Graduate] in the University Calendar.

### The Degree of PhD in Mechanical Engineering [Graduate]

### **Program Requirements**

Students entering the PhD program after a master's degree are required to complete a minimum of ★15.5 in coursework and a thesis.

Students entering the PhD program after a bachelor's degree are required to complete a minimum of ★30.5 in coursework and a thesis.

#### Coursework

- MEC E 680
- For students entering after a master's degree:
  - o four ★3 graduate-level courses which must be approved by the Graduate Coordinator, Thesis Supervisor(s) and/or Thesis Supervisory Committee
    - A maximum of one MEC E 700- level course and no 500-level Mechanical Engineering courses can be credited towards the minimum course requirements
    - No reading courses can be credited towards the minimum course requirement
- For students entering after a bachelor's degree:
  - o nine ★3 graduate-level courses which must be approved by the Graduate Coordinator, Thesis Supervisor(s) and/or Thesis Supervisory Committee Five courses must be in the major field (i.e., MEC E courses)
    - A maximum of two MEC E 700- level and one MEC E 500-level courses, OR a maximum of three MEC E 700-level and
       no MEC E 500-level courses can be credited toward towards the minimum course requirements
    - In exceptional cases students may petition the Graduate Coordinator to reduce the course requirements
    - No reading courses can be credited towards the minimum course requirement
- ENGG 600 (★0.5)- Engineering Ethics and Integrity
- Additional coursework may be required

#### **Thesis**

Registration in 900-level THES

#### **Ethics Requirement**

Engineering students meet their ethics requirement through ENGG 600 and the FGSR Graduate Ethics Training (GET) course.

#### Professional Development Requirement

Engineering students must meet their Professional Development requirement through the completion of two courses, registration for which is through eClass. Contact the Department for further information.

#### Candidacy Exam

For full-time students, the PhD candidacy exam is typically held within the first two academic years. Whether a student is registered full-time or part-time, he or she must complete the candidacy exam within the first three academic years as per FGSR regulations. For additional details, see the document *Graduate Program Manual for MEng, MSc and PhD in Mechanical Engineering and Engineering Management*, available from the Department or on the Department's home page.

#### Academic Standing Requirement

Students are required to maintain a minimum cumulative grade point average of 3.3 throughout the course of the program.

Failure to maintain the required cumulative GPA will normally result in a recommendation by the Graduate Coordinator to FGSR that the student be placed on academic probation and/or be required to withdraw.

### Residence Requirement

The minimum period of residence is two academic years of full-time attendance at the University of Alberta.

### Length of Program

The time required to complete the PhD will vary with the individual candidate; however, a minimum of 36 months is almost always required.

The maximum time to complete the PhD program as set by the Faculty of Graduate Studies and Research is six years.

### The Degree of PhD in Engineering Management [Graduate]

### **Program Requirements**

Students entering the PhD program after a master's degree are required to complete a minimum of  $\star$ 15.5 in coursework and a thesis.

Students entering the PhD program after a bachelor's degree are required to complete a minimum of ★30.5 in coursework and a thesis.

#### Coursework

- For students entering after a master's degree:
  - five ★3 graduate-level courses which must be approved by the Graduate Coordinator, Thesis Supervisor(s) and/or Thesis Supervisory
     Committee
    - No reading courses can be credited towards the minimum course requirement
- For students entering after a bachelor's degree:
  - ten ★3 graduate-level courses which must be approved by the Graduate Coordinator, Thesis Supervisor(s) and/or Thesis Supervisory
     Committee
    - In exceptional cases students may petition the Graduate Coordinator to reduce the course requirements
    - No reading courses can be credited towards the minimum course requirement
- ENGG 600 (★0.5)- Engineering Ethics and Integrity
- Additional coursework may be required

#### **Thesis**

Registration in 900-level THES

#### **Ethics Requirement**

Engineering students meet their ethics requirement through ENGG 600 and the FGSR Graduate Ethics Training (GET) course

#### Professional Development Requirement

Engineering students must meet their Professional Development requirement through the completion of two courses, registration for which is through eClass. Contact the Department for further information.

#### Candidacy Exam

The PhD candidacy exam is typically held within the first two academic years; for additional details, see the document *Graduate Program Manual for MEng, MSc and PhD in Mechanical Engineering and Engineering Management,* available from the Department or on the Department's home page

#### Academic Standing Requirement

Students are required to maintain a minimum cumulative grade point average of 3.3 throughout the course of the program.

Failure to maintain the required cumulative GPA will normally result in a recommendation by the Graduate Coordinator to FGSR that the student be placed on academic probation and/or be required to withdraw.

### Residence Requirement

The minimum period of residence is one academic year of full-time attendance at the University of Alberta.

### Length of Program

The time required to complete the PhD will vary with the individual candidate; however, a minimum of 36 months is almost always required.

The maximum time to complete the PhD program as set by the Faculty of Graduate Studies and Research is six years.

### Medical Genetics [Graduate]

Department of Medical Genetics Faculty of Medicine and Dentistry 839 Medical Sciences Building University of Alberta Edmonton, Alberta T6G 2H7 E-mail: mggradpr@ualberta.ca

#### **General Information**

The Department of Medical Genetics offers the MSc in Medical Sciences (Medical Genetics) degree (see Medical Sciences) either as part of a postgraduate training program for post-MD applicants or as an independent degree program for those proceeding from a BSc. The PhD degree is granted through the Medical Sciences program (see The Degree of PhD). Research may be carried out in a variety of medical genetics-related disciplines for which staff in the Department have active research programs. Inquiries should be directed to the Graduate Coordinator in the Department of Medical Genetics.

### **Entrance Requirements**

The Department's minimum admission requirements are an undergraduate degree with an admission GPA of at least 3.2 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\bigstar$ 60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:

- TOEFL (internet based) minimum score overall 100 with at least 20 per section or equivalent,
- Pearson Test of English (Academic) minimum score of 70,
- CAEL minimum score of 70 with 70 per section,
- MELAB minimum score of 91.

All other proof of English language proficiency will be evaluated on a case by case basis.

For all applicants, a curriculum vitae and a statement of interest and preferred area of research must also be included in the application.

### <u>Academic Standing Requirement</u>

Students are required to maintain a minimum cumulative grade point average of B (3.0) or better throughout their program.

### Financial Assistance

Financial assistance in the form of Graduate Research Assistant Fellowships from supervisor operating funds is normally available to students in good standing. Further information will be provided upon request. Students are encouraged to apply for studentships from external agencies. Students may also be eligible for awards from the Faculty of Graduate Studies and Research and the Faculty of Medicine and Dentistry.

### **Graduate Program Requirements**

- The Degree of MSc
- The Degree of PhD

### **Graduate Courses**

Graduate courses can be found in Course Listings under the subject heading Medical Genetics (MDGEN).

### The Degree of MSc in Medical Sciences - Medical Genetics [Graduate]

### **Program Description**

The general description for the MSc program is as presented for all MSc programs in Medical Sciences (see The Degree of MSc).

Students are required to complete a minimum of  $\bigstar 6$  in graded graduate-level coursework, and a thesis.

#### **Required Courses**

- MDGEN 601 Selected Topics in Medical Genetics OR
- MDGEN 605 Directed Reading in Medical Genetics
- MDGEN 602 Special Topics in Medical Genetics
- For students in the (MatCH) specialized umbrella scholarship program, course substitutions will be allowed with permission of graduate coordinator.

#### Thesis

Registration in 900-level THES

#### Seminar

Students must present their research in progress at a seminar to the Department in the second year and fourth year (if applicable) of their graduate program.

### Residence Requirement

The MSc program has a minimum residence requirement of one and a half academic years (where an academic year is defined as the eight-month period from September through April) of full-time on-campus registration.

### Length of Program

The maximum time to complete the thesis-based MSc program as set by the Faculty of Graduate Studies and Research is four years.

### The Degree of PhD in Medical Sciences - Medical Genetics [Graduate]

### **Program Description**

The general description for the PhD program is as presented for all PhD programs in Medical Sciences (see The Degree of MSc).

Students are required to complete a minimum of  $\star$ 6 in graded graduate-level coursework, and a thesis.

#### Required courses

- MDGEN 601 Selected Topics in Medical Genetics OR
- MDGEN 605 Directed Reading in Medical Genetics
- MDGEN 602 Special Topics in Medical Genetics taken three times.
- For students in the (MatCH) specialized umbrella scholarship program, course substitutions will be allowed with permission of graduate coordinator

#### **Thesis**

Registration in 900-level THES

#### Seminar

Students must present a research in progress seminar to the Department in the second year and fourth year of their graduate program.

#### PhD Proposal

All PhD students must submit a PhD Proposal to the Medical Sciences Graduate Program (MSGP) committee. The proposal must be approved prior to the candidacy exam.

Students who changed program category to the PhD from an MSc program must submit a PhD proposal by 24 months into their graduate program.

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Students who entered the PhD program having already completed the MSc degree must submit a PhD Proposal within the first 18 months of their program.

#### Candidacy Exam

The candidacy exam includes a research proposal on a topic related to but not on their specific research topic as chosen by the supervisory committee from two student-proposed topic areas. The research proposal will consist of ten single spaced pages and one summary page.

Students who changed program category to the PhD from an MSc program are required to complete their candidacy exam within the first 36 months of their program.

Students who entered the PhD program having already completed the MSc degree are required to complete their candidacy exam within the first 24 months of their program.

### Residence Requirement

The PhD program follows the minimum residence requirement of the Faculty of Graduate Studies and Research, which is two academic years (where an academic year is defined as the eight-month period from September through April) of full-time on-campus registration.

### Length of Program

The maximum time to complete the PhD program as set by the Faculty of Graduate Studies and Research is six years.

### Medical Microbiology and Immunology [Graduate]

Department of Medical Microbiology and Immunology 6-020 Katz Group Centre University of Alberta Edmonton, Alberta T6G 2E1 www.mmi.med.ualberta.ca E-mail: mmi.mail@ualberta.ca

#### **General Information**

The Department of Medical Microbiology and Immunology offers programs leading to the degrees of Master of Science and Doctor of Philosophy. Students may specialize in the following: bacteriology, immunology, parasitology, or virology. Both programs require coursework, completion of a research project, and preparing a thesis.

The staff of the Department of Medical Microbiology and Immunology is currently carrying out research in various aspects of cellular, molecular, reproductive, and tumour immunology; microbial pathogenesis; and the development of novel methods for the diagnosis and treatment of infectious diseases.

The Department is well equipped with the modern facilities required for research in medical microbiology and immunology.

Prospective students are invited to consult with the Graduate Coordinator for further information and to visit the Department's home page on the worldwide web.

#### **Entrance Requirements**

The Department generally does not accept students with less than an honors grade (3.3 at the University of Alberta) in the last two years of their undergraduate degree, or an equivalent qualification from another recognized institution. Where applicable, a minimum TOEFL score of 600 (paper-based) or 96 (Internet-based) is required. We also require international students applying to our program to hold a Master's degree in a related area of Basic Science, but may grant waivers in cases where the applicants specifically address the suitability of their undergraduate training to our program.

#### Financial Assistance

Exceptionally qualified applicants may be nominated for University of Alberta entrance scholarships by the department. Students accepted into a graduate program are encouraged to apply for a studentship through the Department to outside agencies such as the Alberta Heritage Foundation for Medical Research, NSERC and the Canadian Institutes of Health Research. In addition, a limited number of graduate assistantships are available.

### **Graduate Program Requirements**

- The Degree of MSc
- The Degree of PhD

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading:

Medical Microbiology and Immunology (MMI)

### The Degree of MSc (Medical Microbiology and Immunology) [Graduate]

### **Program Requirements**

Course requirements depend on the area of specialization and the undergraduate background of the student; however, a minimum of ★6 in graduate-level courses is required. Each student must participate each year and must register once for credit during the program in the Medical Microbiology and Immunology seminar course, MMI 501.

Terminal MSc students are required to maintain a program GPA of at least 2.7; however, students wishing to proceed to a later PhD in the Department must maintain a program GPA of at least 3.0.

A candidate for the MSc degree must submit an acceptable thesis and defend it orally before a committee formed according to Faculty of Graduate Studies and Research guidelines.

No language other than English is required for the degree.

The minimum period of residence is two years of full-time attendance at the University of Alberta.

### Length of program

The time required to complete the program depends on the student's background and the nature of the thesis project. Normally, a minimum of two years of full-time study and research is required for the MSc degree.

### The Degree of PhD (Medical Microbiology and Immunology) [Graduate]

### **Program Requirements**

Course requirements depend on the area of specialization and the undergraduate background of the student; however, a minimum of  $\bigstar 9$  in graduate-level courses—one of which must be MMI 605—is required. In addition, each student must participate each year and must register once for credit during the program in the Medical Microbiology and Immunology seminar course, MMI 501.

Students are required to maintain a GPA of at least 3.0.

After completion of required coursework, students must pass an oral candidacy examination in order to continue in the program.

A candidate for the PhD degree must submit an acceptable thesis and defend it orally before a committee formed according to Faculty of Graduate Studies and Research guidelines.

No language other than English is required for the degree.

The minimum period of residence is three years of full-time attendance at the University of Alberta.

### Length of program

The time required to complete the program depends on the student's background and the nature of the thesis project. Normally, a minimum of four years of full-time study and research is required for the PhD degree.

### Medical Sciences [Graduate]

Office of Research
Faculty of Medicine and Dentistry
2-13 Heritage Medical Research Centre
University of Alberta
Edmonton, Alberta T6G 2S2
E-mail: fmdgrd@ualberta.ca

#### **General Information**

The Medical Sciences Graduate Program consists of seven member departments in the Faculty of Medicine and Dentistry and offers programs leading to the degrees of Master of Science and Doctor of Philosophy. This Program has a long history within the Faculty, and continues to provide excellence in graduate education relating to basic and clinical sciences.

### **Entrance Requirements**

The minimum requirements a student must have for admission into the MSc or PhD in Medical Sciences programs are as follows: 1) an undergraduate degree with a GPA of at least 3.0 in the last two years of undergraduate or graduate study at the University of Alberta, or equivalent qualification from another institution, 2) a minimum TOEFL score of 570 (paper-based) or 95 with at least 20 per section (Internet-based); MELAB minimum score of 91; CAEL minimum score of 70 with at least 70 on each subtest; or IELTS minimum score of 7.0 with at least 6 on each band, and 3) meet Departmental criteria over and above the minimal requirements of the Medical Sciences Graduate Program. Admission to the MSc or PhD in Medical Sciences program is dependent on the recommendation of the Medical Sciences Graduate Program Committee

#### Financial Assistance

Students accepted into the program are encouraged to apply for studentships from outside agencies such as the Alberta Innovates – Health Solutions or the Canadian Institutes of Health Research. Exceptionally qualified students may be nominated for University of Alberta PhD Scholarships.

### **Graduate Program Requirements**

- The Degree of MSc
- The Degree of PhD

### The Degree of MSc (Medical Sciences) [Graduate]

### **Program Requirements**

The Departments of Anesthesiology and Pain Medicine, Dentistry, Medical Genetics, Obstetrics and Gynecology, Ophthalmology and Visual Sciences, Paediatrics, and Radiology and Diagnostic Imaging participate in an interdisciplinary MSc program in Medical Sciences.

The requirements for this degree consist of coursework, completion of a research project, and preparation of a thesis. Course requirements are recommended by the Supervisor and Supervisory Committee based on the background of the student and the area of specialization to be undertaken. A minimum of ★3 in graded graduate level courses is required. Notwithstanding the above, students must fulfill the department's MSc program requirements as approved and stated in the department's graduate program requirements.

No language other than English is required for the degree.

### Length of Program

The minimum length of the MSc program is 18 months from the start of the program, or the department-specific requirement where stated.



### The Degree of PhD (Medical Sciences) [Graduate]

### **Program Requirements**

The Departments of Dentistry, Medical Genetics, Obstetrics and Gynecology, Ophthalmology and Visual Sciences, Paediatrics, and Radiology and Diagnostic Imaging participate in an interdisciplinary PhD in Medical Sciences program.

The requirements for this degree consist of coursework, completion of a research project, and preparation of a thesis. Course requirements are recommended by the Supervisor and Supervisory Committee based on the background of the student and the area of specialization to be undertaken. For students entering the PhD program after a BSc degree, the minimum course requirement is ★6 of graded graduate level courses listed in the Medical Sciences Graduate Program Approved Course Listing, or approved equivalent is required. For students entering the PhD program after a MSc degree, the minimum course requirement is ★3 of graded graduate level courses listed in the Medical Sciences Graduate Program Approved Course Listing, or approved equivalent. Notwithstanding the above, students must fulfill the department's MSc program requirements as approved and stated in the department's graduate program requirements.

No language other than English is required for the degree.

### Length of Program

The minimum length of the PhD program is 36 months, or the department-specific requirement, where stated.

### Medicine [Graduate]

Department of Medicine
13-103 Clinical Sciences Building
University of Alberta
Edmonton, Alberta T6G 2G3
E-mail: domgrad@ualberta.ca, domreas@ualberta.ca

#### **General Information**

The Department of Medicine offers the degrees of MSc and PhD. The Department offers a specialization in Translational Medicine (MSc only) as well as a general program in Medicine, either as part of a coordinated program of training leading to the fulfillment of requirements for postgraduate training in the medical specialties, or as a separate program for those proceeding from a BSc or equivalent degree.

Research may be carried out in the basic sciences, epidemiology, public health sciences, or clinical sciences and may be either theoretical or applied in nature.

The Department of Medicine maintains a compilation of applicable guidelines and regulations available on the Department website.

Inquiries should be directed to either the Graduate Program Advisor or the Graduate Coordinator of the Department of Medicine.

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### GRADUATE STUDIES AND RESEARCH

### **Entrance Requirements**

For Master's programs, the Department's minimum admission requirements are an undergraduate degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\star$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

For Doctoral programs, The Department's minimum admission requirements are a research-based master's degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\star$ 60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

The Research Training Committee will determine if a student has sufficient research experience to be admitted directly to the PhD program.

Where applicable, applicants must meet the minimum English Language Requirement.

Applicants are also required to submit a curriculum vitae (CV), statement of interest, two letters of reference, and a letter from their prospective supervisor indicating their agreement to supervise and describing the sources of funding. For University of Alberta Residents, one of the letters of reference must be a letter of support from their Program Director.

For Canadian citizens, the application deadlines are August 1 for September entrance, December 1 for January entrance, April 1 for May entrance, and June 1 for July entrance.

For international students, the application deadlines are June 1 for September entrance, October 1 for January entrance, February 1 for May entrance, and April 1 for July entrance.

### <u>Academic Standing Requirements</u>

All students are required to maintain a minimum cumulative GPA of 2.7, with no grade less than B-.

#### Financial Assistance

The Department of Medicine requires the supervisor to provide all personal and research funding, but the student is encouraged to apply for funding from other sources such as award competitions to take some of the financial burden off the supervisor. For MD research trainees in the Clinician Investigator MSc Program, personal funding is available through external funding agencies, the Postgraduate Medical Education Office, or through clinical departments or divisions.

### **Graduate Program Requirements**

- The Degree of MSc
- The Degree of MSc with Specialization in Translational Medicine
- The Degree of PhD

### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading Medicine (MED).

### The Degree of MSc (Medicine) [Graduate]

### **Program Requirements**

Students are required to complete a minimum of  $\star$ 9 of graduate level coursework and a thesis.

#### Coursework

- The supervisory committee will determine the courses to be taken in consultation with the student. Final approval of the program will be made by the Graduate Coordinator.
- It is highly recommended that all graduate students take a course in statistics.
- Graduate students may take graduate courses offered by other Departments with the approval of their supervisory committee.

#### Thesis

Registration in 900-level THES.
 Students must also complete and successfully defend a thesis.

#### Ethics requirement

As part of the ethics training requirement of 8 hours (see Academic Integrity and Ethics Training Requirement), the Graduate Ethics Training course must be completed.

There is no second language requirement for the MSc.

### Residence Requirement

The minimum period of residence is one calendar year of full-time attendance at the University of Alberta. One calendar year is defined as 12 consecutive months.

### Length of Program

The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken. A minimum of 18 months is normally required.

The maximum time to complete the thesis-based MSc program as set by the Faculty of Graduate Studies and Research is four years.



# The Degree of MSc with Specialization in Translational Medicine (Medicine) [Graduate]

### **Program Requirements**

Students are required to complete a minimum of  $\star 9$  of graduate level coursework, and a thesis.

#### Coursework

Students are expected to complete three out of four of the following required courses:

- MED 602 Principles of Translational Medicine Chronic Disease
- MED 604 Principles of Translational Medicine Vascular Medicine
- MED 606 Principles of Translational Medicine Inflammatory Infectious Disease
- MED 608 Principles of Translational Medicine Metabolism

#### **Thesis**

Registration in 900-level THES.
 Students must also complete and successfully defend a thesis.

#### **Ethics Requirement**

As part of the ethics training requirement of 8 hours (see Academic Integrity and Ethics Training Requirement), the Graduate Ethics Training course must be completed.

There is no second language requirement for the MSc.

### Length of Program

The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken. A minimum of 18 months is normally required.

The maximum time to complete the thesis-based MSc program as set by the Faculty of Graduate Studies and Research is four years.

### The Degree of PhD (Medicine) [Graduate]

### **Program Requirements**

Students are required to complete a minimum of  $\pm 12$  of graduate level coursework, and a thesis.

#### Coursework

- The supervisory committee will determine the courses to be taken in consultation with the student. Final approval of the program will be made by the Graduate Coordinator.
- It is highly recommended that all graduate students take a course in statistics.
- Graduate students may take graduate courses offered by other Departments with the approval of their supervisory committee.

#### Thesis

Registration in 900-level THES.
 Students must also complete and successfully defend a thesis.

#### Candidacy exam

The candidacy exam consists of a written grant proposal and an oral defense of the proposal. The candidacy exam is normally held within 18 months of the start of the program.

#### **Ethics Requirement**

As part of the ethics training requirement of 8 hours (see Academic Integrity and Ethics Training Requirement), the Graduate Ethics Training course must be completed.

There is no second language requirement for the PhD.

### Residence Requirement

The minimum period of residence is three academic years of full time attendance at the University of Alberta, where an academic year is defined as the eightmonth period from September through April.

For students holding an MD the minimum period of residence is one calendar year of full-time attendance at the University of Alberta, where one calendar year is defined as 12 consecutive months.

### Length of Program

The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken. A minimum of three years is normally required.

The maximum time to complete the PhD program as set by the Faculty of Graduate Studies and Research is six years.



### Mining and Petroleum Engineering [Graduate]

Department of Civil and Environmental Engineering
School of Mining and Petroleum Engineering
7-203 Donadeo Innovation Centre for Engineering
University of Alberta
9211 - 116 Street, NW
Edmonton, Alberta T6G 1H9
E-mail: civeinfo@ualberta.ca
www.civil.engineering.ualberta.ca

For complete details of Graduate Studies in Mining and Petroleum Engineering, see Civil and Environmental Engineering.

### Modern Languages and Cultural Studies [Graduate]

Department of Modern Languages and Cultural Studies 200 Arts Building University of Alberta Edmonton, Alberta T6G 2E6 E-mail: mlcsgrad@ualberta.ca

#### **General Information**

The Department of Modern Languages and Cultural Studies offers Master of Arts and Doctor of Philosophy degrees. Our graduate programs produce specialists working in the specialization disciplines of Applied Linguistics, Media and Cultural Studies, Translation Studies and Transnational and Comparative Literatures.

#### Applied Linguistics

This specialization involves research in one of the following areas: second language acquisition and pedagogy, discourse studies, sociolinguistics, and multilingualism.

#### Media and Cultural Studies

This specialization involves the analysis of different media using theories of cultural studies. Areas of emphasis include: folklore studies, gender and sexuality studies, native studies, popular culture, game and design studies, and urban studies.

#### **Translation Studies**

This specialization involves research in one or more of the following: cultural translation, history of translation, literary translation, multilingual translation, translation theory and criticism.

#### Transnational and Comparative Literatures

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### GRADUATE STUDIES AND RESEARCH

This specialization involves the study of global literature, criticism, theory, and their intersections with language, art, and culture, either within a single language or across languages.

The Department of Modern Languages and Cultural Studies emphasizes multidisciplinary and cross-linguistic approaches, but also has the capacity to deliver individualized programs in specific fields and languages. All work and research in MLCS is based within a multilingual and global context.

For more information, see the Modern Languages and Cultural Studies website.

### **Entrance Requirements**

The Department's minimum admission requirement for the MA program is an undergraduate degree in a related field or the equivalent with an admission GPA of at least 3.3 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\star$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

The minimum admission requirement for the PhD program is an MA degree or the equivalent, related to the area of specialization with an admission GPA of at least 3.3 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last «60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Graduate students entering a degree program in MLCS are required to have at least one language other than English, as assessed by the Graduate Committee.

Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:

- a TOEFL score of 100 (Internet-based) or equivalent,
- an IELTS score of 7.0,
- other acceptable English language proficiency tests.

Applicants are also required to submit the following

- Curriculum Vitae
- Three references (for PhD applicants, one referee should be the Master's supervisor)
- Statement of Purpose describe academic background and reasons for pursuing graduate studies
- Two academic writing samples one written in English and one in the language of focus area.
- Applicants to the thesis-based MA or PhD programs must also submit a Research Proposal 4-5 pages, including a review of background literature, general
  information regarding methodology and goals, and a bibliography.

For information on how to apply see Admissions on the Department website.

The application deadline is January 15 for programs beginning the following September.

### **Academic Standing Requirements**

The Department of Modern Languages and Cultural Studies requires a higher minimum cumulative grade point average and higher passing grades than those acceptable to the Faculty of Graduate Studies and Research (see Academic Standing). The minimum passing grade in any course taken by students registered in the master's and doctoral programs in MLCS is a grade of B-. Grades below a B- count as failing grades for graduate students in MLCS. All students pursuing graduate degrees in MLCS must also maintain a minimum cumulative grade point average of 3.0 throughout the course of the program. A student whose academic standing falls below a grade point average of 3.0 may be required to withdraw at any time.

#### Financial Assistance

Financial assistance in the form of scholarships and graduate assistantships may be available to qualified students. For further information, see Tuition and Funding on the Department website.

### **Graduate Program Requirements**

- The Degree of MA
- The Degree of PhD

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the following subject headings:

Comparative Literature (C LIT)

French (FREN)

German (GERM)

Italian (ITAL)

Modern Languages and Cultural Studies (MLCS)

Russian (RUSS)

Scandinavian (SCAND)

Slavics (SLAV)

Spanish (SPAN)

Ukrainian (UKR)

### The Degree of MA (Modern Languages and Cultural Studies) [Graduate]

Both thesis-based and course-based MA programs are offered. The thesis-based program is research focused, while the course-based program is focused on developing a variety of academic and professional skills.

All students are required to declare a specialization at the time of admission.

Students specializing in Applied Linguistics or Translation Studies will engage in research in a language other than English chosen from any of the languages in which the Department has sufficient current expertise.

Students specializing in Media and Cultural Studies or Transnational and Comparative Literatures will engage in research in at least one language or culture other than or in addition to the English-speaking context chosen from any of the areas in which the Department has sufficient current expertise.

Admitted MA students with a four-year undergraduate degree or the equivalent may request a change of program category to the PhD program on the recommendation of the department.

### **Program Requirements**

#### Course-based MA

Students are required to complete a minimum of  $\pm 24$ , including  $\pm 18$  in coursework and a  $\pm 6$  portfolio.

#### Required courses

◆ 18 in graduate-level courses in the area of specialization. Courses chosen will depend on the student's background and must be approved by
the Associate Chair (Graduate).

#### Portfolio

Each portfolio consists of a total of six modules tailored to the student's professional goals. See The Portfolio on the Department website for further information.

- MLCS 795 Portfolio I
- MLCS 796 Portfolio II

#### Thesis-based MA

Students are required to complete a minimum of  $\bigstar 24$  including  $\bigstar 21$  in coursework, a  $\bigstar 3$  portfolio and a thesis.

#### Required courses

- ★18 in graduate-level courses in the area of specialization. Courses chosen will depend on the student's background and must be approved by the Associate Chair (Graduate).
- MLCS 797 Academic and Professional Writing

#### Portfolio

The portfolio course consists of three modules tailored to the student's professional goals. See The Portfolio on the Department website for further information.

MLCS 795 - Portfolio I

#### **Thesis**

Registration in 900-level THES.

#### Professional Development Requirement

All students in MLCS fulfill the FGSR Professional Development requirement through completion of the portfolio.

### Length of Program

The expected time to completion is eighteen months for the course-based MA and two years for the thesis-based MA.

The maximum time to complete the course-based MA program is four years (see Time Limit for Completion of Graduate Programs).

The maximum time to complete the thesis-based MA program as set by the Faculty of Graduate Studies and Research is four years.

### The Degree of PhD (Modern Languages and Cultural Studies) [Graduate]

All students are required to declare a specialization at the time of admission.

Students specializing in Applied Linguistics or Translation Studies will engage in research in a language other than English chosen from any of the languages in which the Department has sufficient current expertise.

Students specializing in Media and Cultural Studies or Transnational and Comparative Literatures will engage in research in at least one language or culture other than or in addition to the English-speaking context chosen from any of the areas in which the Department has sufficient current expertise.

### <u>Program Requirements</u>

Students are required to complete a minimum of  $\star$ 30, including  $\star$ 21 in coursework, a  $\star$ 3 portfolio,  $\star$ 6 in colloquia and a thesis.

#### Required courses

- ★18 in graduate-level courses in the area of specialization. Courses chosen will depend on the student's background and must be approved by the Associate Chair (Graduate).
- MLCS 797 Academic and Professional Writing

#### Portfolio

The portfolio course consists of three modules tailored to the student's professional goals. See The Portfolio on the Department website for further information.

MLCS 795 - Portfolio I

#### Colloquium courses

MLCS 798 - Comprehensives Colloquium

MLCS 799 - Candidacy Colloquium

#### Thesis

Registration in 900-level THES.

#### Comprehensive Exams

The comprehensive exam tests the student's knowledge in areas related to their specialization. That knowledge will be gathered from 2 reading lists prepared by the student in consultation with the supervisor and approved by the supervisory committee. See Candidacy on the Department website for further information.

#### Candidacy Exam

The candidacy exam is an oral defense of the thesis proposal. Students are expected to complete the candidacy exam successfully in their second year of study. The candidacy exam must be successfully completed by the end of the student's third year in the program.

#### Professional Development Requirement

All students in MLCS fulfill the FGSR Professional Development requirement through completion of the portfolio.

### Language Requirement

PhD students must demonstrate at least a reading knowledge of two languages other than English. Credits taken to satisfy the language requirements do not count toward the degree.

### Length of Program

The time necessary to complete the requirements for the PhD depends upon the student's progress. The expected time to completion is five to six years.

The maximum time to complete the PhD program as set by the Faculty of Graduate Studies and Research is six years.

# Music [Graduate]

Department of Music 3-82 Fine Arts University of Alberta Edmonton, Alberta T6G 2C9 Phone: (780) 492-3263 Fax: (780) 492-9246

E-mail: musicgs@ualberta.ca www.music.ualberta.ca

#### **General Information**

The Department of Music offers programs leading to the degrees of Master of Arts, Master of Music, Doctor of Music, and Doctor of Philosophy. The MA and PhD include work in the areas of Musicology, Music Theory, Ethnomusicology, Popular Music, and interdisciplinary music studies. The MMus program includes specializations in Performance (keyboard instruments, piano pedagogy, orchestral instruments, wind band conducting, and voice), Choral Conducting, and Composition. The DMus program is offered in piano and organ performance, in choral conducting, and in composition, and is considered on an individual basis for applicants in other performance areas.

### **Entrance Requirements**

For the MA program the Department's minimum admission requirements are a Bachelor's degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\star$ 60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

For the MMus program the Department's minimum admission requirements are a BMus degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\star$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework. An audition, preferably in person, is required as part of the admission procedure for applicants to the MMus in Performance and in Choral Conducting. A portfolio of compositions (together with recordings if possible) is required for applicants to the MMus in Composition.

For the DMus program the Department's minimum admission requirements are an MMus degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution, as well as evidence of outstanding ability and accomplishment in the area of concentration. The admission GPA will be calculated on the last ★60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework. An audition, preferably in person, is required as part of the admission procedure for applicants to the DMus in Performance and in Choral Conducting.

For the PhD program the Department's minimum admission requirements are an MA or MMus degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution, as well as evidence of outstanding ability and accomplishment in the area of concentration. The admission GPA will be calculated on the last  $\star$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:

- a minimum TOEFL score of 100 (internet-based) with at least 20 on each of the individual skill areas
- a minimum overall band score of 7.0 on the IELTS with a minimum of 6.5 on each band
- an equivalent score on a recognized English language examination.

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# GRADUATE STUDIES AND RESEARCH

Applicants must also submit the following

- a current Curriculum Vitae
- a Statement of Interest one or two pages summarizing their background in music and outlining future career goals
- a brief summary of personal achievements outside of music (involvement in student government and the university community, involvement in professional societies and volunteerism)
- three letters of reference. Referees should be knowledgeable about the applicant's academic and research potential and capabilities.

Applicants to the MA and the PhD must submit two sample academic papers.

Applicants to the MMus or DMus in performance or choral conducting must submit an Application for Audition. Please consult the Auditions page on the Department of Music website for dates and specific repertoire guidelines. Choral conducting applicants must also submit a list of repertoire conducted over the last five years. DMus Performance applicants must provide a list of repertoire performed and learned over the past five years.

Applicants to the MMus or DMus in composition must submit an electronic portfolio with at least three works, including relevant scores in PDF format, as well as sound files and any other related media files. Links to audio/video streaming sites are acceptable.

For DMus applicants, an interview will be part of the selection process.

#### **Application Deadlines**

To receive full consideration for funding and to be assured of an audition date, applications must be received by December 1. For further information email queries to musicqs@ualberta.ca.

If required, audition application forms must be received by December 1. If a video file/link is being submitted in lieu of an in-person audition, the video file/link must be received no later than December 15.

# Academic Standing Requirement

The Department of Music requires its graduate students to maintain an average GPA of at least 3.3 in the main area of concentration during each year of study.

#### Financial Assistance

Graduate assistantships are available within the Department; the deadline for application for graduate assistantships is outlined on the department's website, address above

# **Graduate Program Requirements**

- The Degree of MA (Music) [Graduate]
- The Degree of MMus (Music) [Graduate]
  - The Degree of MMus with a specialization in Choral Conducting (Music) [Graduate]
  - The Degree of MMus with a specialization in Composition (Music) [Graduate]
  - O The Degree of MMus with a specialization in Performance (Music) [Graduate]
- The Degree of DMus (Music) [Graduate]
- The Degree of PhD (Music) [Graduate]

## **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading Music (MUSIC).

# The Degree of MA (Music) [Graduate]

## **Program Requirements**

The MA program allows students to explore broad and complex subjects in theory, musicology, ethnomusicology, and popular music.

The MA may be taken as either a course-based program or a thesis-based program. Students must declare which program they intend to follow at the beginning of their graduate studies. Students wishing to request a change of program category must seek the approval of the graduate committee.

#### Course-based MA:

Students must complete a minimum of  $\star$ 30 in graduate-level course work, including  $\star$ 27 in required courses and at least  $\star$ 3 in a capping project.

#### **Required Courses**

- MUSIC 614 (★3)- Proseminar in Musicology
- MUSIC 650 (★3)- Proseminar in Music Theory
- MUSIC 665 (★3)- Issues in Ethnomusicology
- A minimum of six ★3 graduate-level options
- At the discretion of the supervisor, further coursework may be required.
  - Students who have not taken a bibliography and research methods course (or equivalent) will be required to take MUSIC 505. This
    course will not be considered as one of the approved graduate-level options.

#### Capping Project

MUSIC 903(★3)/906(★6)/909(★9)- Directed Research Project. The Capping project will consist of a research paper and an oral presentation.

#### Thesis-based MA:

Students must complete a minimum of  $\bigstar 24$  in graduate-level course work. Completion of a thesis is also required.

#### **Required Courses**

- MUSIC 614 (★3)- Proseminar in Musicology
- MUSIC 650 (★3)- Proseminar in Music Theory
- MUSIC 665 (★3)- Issues in Ethnomusicology
- A minimum of five ★3 graduate-level options

- At the discretion of the supervisor, further coursework may be required.
  - Students who have not taken a bibliography and research methods course (or equivalent) will be required to take MUSIC 505. This
    course will not be considered as one of the approved graduate-level options.

#### Thesis

Registration in 900-level THES. Students must complete and successfully defend a thesis.

## Language Requirement

MA students are required to demonstrate a reading knowledge of French or German, or another language other than English, appropriate to the area of research and approved by the student's supervisor. This requirement will normally be completed before the thesis or capping project is undertaken. Coursework undertaken to satisfy this requirement will not be credited toward the program.

## Residence Requirement

The minimum period of residence for the MA (thesis-based) degree is two four-month terms of full-time attendance at the University of Alberta.

## Length of Program

The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken; however, a minimum of two years is normally required.

The maximum time to complete the course-based MA program as set by the Faculty of Graduate Studies and Research is six years. The maximum time to complete the thesis-based MA program as set by the Faculty of Graduate Studies and Research is four years.

# The Degree of MMus (Music) [Graduate]

The Degree of MMus has specializations in Choral Conducting, Composition and Performance. All MMus students are required to declare a specialization and complete the program requirements as outlined below.

# The Degree of MMus with a specialization in Choral Conducting (Music) [Graduate]

The Department of Music offers one of the few active graduate programs in choral conducting in Canada. The program emphasizes practical experience in conducting and rehearsal technique, knowledge of repertoire, and development of research skills. The Concert Choir and Madrigal Singers provide opportunities to participate both as a singer and as a choral assistant.

# Program Requirements

Students must complete a minimum of ★24 in graduate-level course work. Completion of a thesis-equivalent is also required.

#### Coursework

- MUSIC 630 (★6)- Choral Conducting
- MUSIC 633 (★3)- Seminar in Choral Literature I
- MUSIC 634 (★3)- Seminar in Choral Literature II
- MUSIC 638 (★3)- Choral Conducting
- MUSIC 640 (★3)- Choral Ensemble
- Two ★3 graduate-level options.
  - At the discretion of the supervisor, students who have not taken a bibliography and research methods course (or equivalent) will be required to take MUSIC 505. The fulfillment of this requirement will count as one of the approved options.
- At the discretion of the supervisor, further coursework may be required.

#### Thesis

- Registration in 900-level THES. A juried recital will be considered the equivalent of the thesis.
- For program completion and convocation, there is no requirement to submit the thesis-equivalent to FGSR.

## Language Requirements

All MMus Choral Conducting students are required to demonstrate a reading knowledge of French or German, or another language other than English, appropriate to the area of research and approved by the student's supervisor. This requirement will normally be completed before the essay is undertaken. Coursework undertaken to satisfy this requirement will not be credited toward the program.

# Residence Requirements

The minimum period of residence for the MMus degree is two consecutive four-month terms of full-time attendance at the University of Alberta.

# Length of Program

The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken; however, a minimum of two years is normally required.

The maximum time to complete the MMus program as set by the Faculty of Graduate Studies and Research is four years.

# The Degree of MMus with a specialization in Composition (Music) [Graduate]

Composition students work closely with faculty members who specialize in modern composition for acoustic media, electroacoustic or electronic media, computer music programming, hardware and software experimentation, and improvisation. Progressive, non-standard approaches to the sonic arts are encouraged. Composition students are encouraged to engage in a diverse and inclusive approach to contemporary musical creation and performance.

# **Program Requirements**

Students must complete a minimum of  $\star$ 24 in graduate-level course work. Completion of a thesis-equivalent is also required.

#### Coursework

- MUSIC 545 (★3)- Seminar in Computer Applications to Music OR
  - MUSIC 645 (★3)- Seminar in Computer Music Composition
- MUSIC 580 (★3) Advanced Contemporary Repertoire, **OR** 
  - MUSIC 581 (★3)- Advanced Studies in Avant Garde
- One (★3) graduate-level theory course selected from the following:
  - MUSIC 555 (★3)-Issues in Theory and Analysis
  - MUSIC 556 (★3)-Seminar in Music Theory
  - MUSIC 651 (★3)- Seminar in Music Analysis
- MUSIC 660 (★6)- Advanced Composition I
- MUSIC 661 (★3)- Advanced Composition II
- Two ★3 graduate-level options approved by the supervisor.
  - At the discretion of the supervisor, students who have not taken a bibliography and research methods course (or equivalent) will be required to take MUSIC 505. The fulfillment of this requirement will count as one of the approved options.
- At the discretion of the supervisor, further coursework may be required.
- Students who have not taken at least ★3 in electronic music in their undergraduate training must complete MUSIC 445 (★3)- Electroacoustic Music IN ADDITION to their program requirements.

#### **Thesis**

- Registration in 900-level THES. The thesis consists of a portfolio of works (normally 3 or 4 compositions) composed and performed during the student's course of study. The portfolio will include scores, archival recordings of the performances, program notes, and any other relevant materials.
- For program completion and convocation, there is no requirement to submit the thesis-equivalent to FGSR.

# Residence Requirement

The minimum period of residence for the MMus degree is two four-month terms of full-time attendance at the University of Alberta

# Length of Program

The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken; however, a minimum of two years is normally required.

The maximum time to complete the MMus program as set by the Faculty of Graduate Studies and Research is four years.

# The Degree of MMus with a specialization in Performance (Music) [Graduate]

Performance studies are offered in piano, voice, strings and selected other instruments, as well as routes in piano pedagogy and wind band conducting.

# **Program Requirements**

Students must complete a minimum of ★24 in graduate-level course work. Completion of a thesis-equivalent is also required.

#### Coursework

- MUSIC 621 (★6) Applied Music **OR** 
  - MUSIC 632 (★6) Advanced Wind Band Conducting for Wind Band Conducting majors
- MUSIC 639 (★3) Chamber Music OR
  - MUSIC 631 (★3) Advanced Band Techniques for Wind Band Conducting majors
- Five ★3 graduate-level options
  - Options must include one course  $(\bigstar 3)$  in which a major paper is required
  - MMus students whose area of concentration is Organ may complete ★3 in an approved music option in lieu of MUSIC 639
  - All MMus Performance students concentrating in band or orchestral instruments (not including Wind Band Conducting majors) are required to take MUSIC 641 (★3)- Instrumental Ensemble as one of their options.
  - o All MMus Performance students concentrating in Wind Band Conducting are required to take MUSIC 643 as one of their options.
  - At the discretion of the supervisor, MMus students may be required to take MUSIC 625 as one of their options.
  - All MMUS Performance students concentrating in Piano Pedagogy are required to take MUSIC 603, 604 and 625 as three of their
    option courses.
  - At the discretion of the supervisor, students who have not taken a bibliography and research methods course (or equivalent) will be required to take MUSIC 505. The fulfillment of this requirement will count as one of the approved options.
- At the discretion of the supervisor, further coursework may be required.

#### **Thesis**

- Registration in 900-level THES.
  - o For performance a juried recital will be considered the equivalent of the thesis and final oral examination.
  - Students concentrating in Piano Pedagogy may present a juried recital or a Lecture-Recital
  - For students concentrating in Wind Band Conducting, four conducting performances will be presented over the course of the program
    and will be considered the equivalent of the thesis. An audio/video recording of the performances will be viewed by the examining
    committee. Links to audio/video streaming sites are acceptable.
- For program completion and convocation, there is no requirement to submit the thesis-equivalent to FGSR.

# Language Requirement

For students concentrating in Wind Band Conducting proficiency in an approved second language is required.

## Residence Requirements

The minimum period of residence for the MMus degree is two four-month terms of full-time attendance at the University of Alberta.

### Length of Program

The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken; however, a minimum of two years is normally required.

The maximum time to complete the MMus program as set by the Faculty of Graduate Studies and Research is four years.

# The Degree of DMus (Music) [Graduate]

The Degree of DMus has three separate program streams: Performance, Choral Conducting and Composition.

## **Program Requirements**

DMus students are normally required to complete ★30 to ★36 in graduate-level coursework. Completion of a thesis-equivalent is also required.

#### Coursework

- One ★3 graduate-level theory course normally selected from the following:
  - MUSIC 555 (★3)-Issues in Theory and Analysis
  - MUSIC 556 (★3)-Seminar in Music Theory
  - MUSIC 581 (★3) Advanced Studies in Avant-Garde
  - MUSIC 651 (★3)-Seminar in Music Analysis
- One ★3 graduate-level course in musicology
- At least eight ★3 graduate-level options, to be approved by the supervisory committee.
  - DMus students concentrating in Choral Conducting are required to take MUSIC 730 (★6) Choral Conducting (first year), MUSIC 738 (★3) Choral Conducting (second year), MUSIC 633 (★3) Seminar in Choral Literature I, MUSIC 634 (★3) Seminar in Choral Literature II and MUSIC 740 (★3) Choral Ensemble
  - DMus students concentrating in Performance are required to take MUSIC 721 ( $\star$ 3) and MUSIC 725 ( $\star$ 3).
  - At the discretion of the supervisor, students who have not taken a bibliography and research methods course (or equivalent) will be required to take MUSIC 505. The fulfillment of this requirement will count as one of the approved options.
- At the discretion of the supervisor, further coursework may be required.

#### **Thesis**

Registration in 900-level THES.

- The thesis for DMus candidates concentrating in Performance will consist of a solo final recital; an audio recording of the final solo program, submitted prior to the performance of the final recital; and comprehensive scholarly notes accompanying the audio recording. The final examination will include a defence of the solo final recital and recording, and the scholarly notes.
- The thesis for DMus candidates in Choral Conducting will consist of a scholarly essay and presentation of two public concerts. The final examination will include a defense of the essay.
- The thesis for DMus candidates in Composition will consist of a scholarly essay and composition of one substantial work either for large acoustic ensemble, mixed acoustic and electroacoustic media, or electroacoustic media. The final examination will include a defence of the composition and essay.
- For program completion and convocation, the thesis-equivalent must be submitted to FGSR for approval. Contact the Department for specific submission guidelines and procedures.

### Qualifying Exams

All DMus programs require qualifying and candidacy examinations, normally taken at the end of the second, or beginning of the third year.

- The qualifying exams for DMus students in Performance will consist of one essay in the area of music history, one essay in the area of music theory, and a two-part examination in musical literature focusing on the student's area of concentration.
- The qualifying exams for DMus students in Choral Conducting will consist of one scoreidentification exam, one extended essay on a selected topic
  in choral music; an extended essay on a selected topic in musicology; two theory papers providing analysis of one tonal and one post-tonal work;
  and a detailed summary of the proposal for the final essay.
- The qualifying exams for DMus students in Composition will consist of an orchestration or electro-acoustic sound design component, an essay
  component in music history, and if the student has not completed MUSIC 580 or equivalent, an examination on 20th century repertoire.

#### Candidacy Exam

The Candidacy exam will normally be scheduled within four weeks of successful completion of the Qualifying exams. For DMus students concentrating in Performance, qualifying and candidacy examinations must both be successfully completed prior to the third required juried recital or lecture-recital.

#### **Juried Recitals**

Students in the DMus program concentrating in Performance are required to present four juried recitals: normally a solo recital, a collaborative recital, a lecture recital and a final solo recital which is one component of the thesis-equivalent.

# <u>Language Requirements</u>

DMus students will be required to demonstrate reading proficiency in one approved language other than English before being admitted to candidacy. Coursework undertaken to satisfy this requirement will not be credited toward the program.

For students concentrating in Voice Performance, proficiency in two languages is required, normally chosen from French, German, Italian, Spanish, or Russian.

# Residence Requirements

The minimum period of residence is two academic years, where an academic year is defined as the eight-month period from September through April.

## Length of Program

The time required to complete the program will vary with the individual candidate; however, a minimum of three years of study and research is normally required.

The maximum time to complete the DMus program as set by the Faculty of Graduate Studies and Research is six years.

# The Degree of PhD (Music) [Graduate]

## **Program Requirements**

Students must complete a minimum of ★18 in graduate-level course work. Completion of a thesis is also required.

#### Coursework

- A minimum of six  $\star 3$  graduate-level courses to be chosen in consultation with the supervisor.
- PhD students are required to take three proseminar courses (MUSIC 614 (★3), MUSIC 650 (★3), MUSIC 665 (★3)) unless they have received prior credit in courses of similar description.
- Additional coursework may be recommended by the supervisory committee after the first year.
  - Students who hold a BMus or BA (Hon) in Music must complete the core of courses relevant to the MA.
  - Students who have not taken a bibliography and research methods course (or equivalent) will be required to take MUSIC 505. This
    course will not be considered as one of the approved graduate-level courses.

#### Thesis

 Registration in 900-level THES. All PhD students must present a thesis embodying the results of their research on a topic approved by the supervisory committee.

## Qualifying Requirements

All PhD programs require the student to complete qualifying requirements, normally by the end of the second year after completion of the coursework and language requirements, and prior to the oral candidacy exam. There are three qualifying requirements:

- A 45 minute public presentation on a piece of music
- Preparation of three subject area annotated bibliographies relevant to the dissertation topic
- Preparation of a dissertation proposal

#### Candidacy Exam

All PhD programs require candidacy (oral) examinations. Students will proceed to the candidacy examination once they have passed their qualifying requirements.

# Language Requirements

Students are required to demonstrate proficiency in one approved language other than English appropriate to the area of research and approved by the student's supervisory committee. Course work undertaken to satisfy this requirement will not be credited toward the program. Students must satisfy the language requirement prior to the qualifying and candidacy examinations.

# Residence Requirements

The minimum period of residence is two academic years of full-time attendance at the University of Alberta.

## Length of Program

The time required to complete the program will vary with the individual candidate; however, a minimum of three years of study and research is normally required.

The maximum time to complete the PhD program as set by the Faculty of Graduate Studies and Research is six years.

# Native Studies [Graduate]

Faculty of Native Studies 2-31 Pembina Hall University of Alberta Edmonton, Alberta T66 2H8 E-mail: nativest@ualberta.ca www.ualberta.ca/nativestudies Telephone: (780) 492-2991

Fax: (780) 492-0527

## **General Information**

The Faculty of Native Studies offers programs leading to the degrees of Master of Arts and Doctor of Philosophy.

While the programs vary in terms of the depth and breadth of study, they each support research on:

- Critical Indigenous Theory;
- Indigenous Governance;
- Indigenous Peoples and Place (with emphasis on the Prairies); and
- Indigenous Sexualities, Genders and Feminisms.

# ALBERTA

# GRADUATE STUDIES AND RESEARCH

### **Entrance Requirements**

For the MA program, the Faculty of Native Studies' minimum admission requirements are an undergraduate degree with an admission GPA of at least 3.0 on the 4- point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\star$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework. This is, however, a competitive process – a 3.0 GPA is necessary but may not be sufficient.

The Faculty of Native Studies' minimum admission requirements for the dissertation-based PhD in Indigenous Studies program are a master's degree with an admission GPA of at least 3.3 on the 4- point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last ★ 60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Applicants to the MA program should have at least ★12 of undergraduate courses in Native Studies or courses with significant Aboriginal content.

Where applicable, all applicants must meet the minimum English Language Requirement set by the Faculty of Graduate Studies and Research.

For the MA program, applicants are also required to submit the following:

- a two page statement of the proposed area of research
- An example of academic work appropriate to the application
- Three letters of reference (preferably academic)
- A current resume or curriculum vitae

For the PhD program, applicants are also required to submit the following:

- a statement detailing (a) research interest(s), and (b) background, commitment and scholarly preparedness for advanced, independent research in Indigenous Studies and related fields
- An example of academic work appropriate to the application
- Three letters of reference (preferably academic)
- A current resume or curriculum vitae
- Confirmation of a research supervisor is required in order to be admitted. Students are also required to have had a discussion with their preferred supervisor.

The application deadline is January 15 if you intend to apply for University of Alberta funding. Applications will be accepted until the program is full or until July 1.

For details on application procedures and information on financial assistance see the Faculty of Native Studies website.

# **Graduate Program Requirements**

- The Degree of MA
- The Degree of PhD in Indigenous Studies

### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading Native Studies (NS).



# The Degree of MA (Native Studies) [Graduate]

# **Program Requirements**

Students are required to complete a minimum of  $\pm 18$  in coursework and a thesis.

## Required coursework (★9)

- NS 520 Theoretical Perspectives in Native Studies
- NS 550 Research Practicum in Native Studies
- One graduate-level methodology course

### Elective courses $(\bigstar 9)$

- Three ★3 graduate-level courses
- A maximum of ★ 6 in coursework may be taken from outside the Faculty of Native Studies with consent of the Faculty.

#### **Thesis**

Registration in 900-level THES. Students must complete and successfully defend a thesis.

## Language Requirement

Proficiency in a language other than English (including an Aboriginal language) is recommended in accordance with the thesis topic.

# Length of Program

Full-time MA students will normally be expected to complete the program in two years.

The maximum time to complete the thesis-based MA program as set by the Faculty of Graduate Studies and Research is four years.

# The Degree of PhD in Indigenous Studies [Graduate]

# **Program Requirements**

Students are required to complete a minimum of  $\bigstar 9$  in coursework and a thesis.

### Required coursework

Coursework is to be taken in the first term of Year 1 of the program

- NS 620 Advanced Theoretical Perspectives in Indigenous Studies
- NS 655 Professional Seminar
- NS 690 Advanced Indigenous Methodologies

#### Thesis

Registration in 900-level THES. Over the second and third years of the program, students will conduct research, engage in scholarly activities, and
write a dissertation. The dissertation will be defended at an oral examination.

#### Comprehensive exams

During the second term of Year 1, students will prepare for and undertake two comprehensive examinations and submit a dissertation proposal.

#### Candidacy exam

An oral candidacy examination will be held based upon the written components of the comprehensive exams. All students should meet their candidacy requirement by the end of Year 1.

### Language Requirement

Proficiency in a language other than English (including an Aboriginal language) is recommended in accordance with the thesis topic.

# Residence Requirement

The residency requirement is two academic years of full-time attendance at the University of Alberta (where an academic year is defined as the eight-month period from September through April).

# Length of Program

Full-time PhD students will normally be expected to complete the program in three years. Candidates must complete their degree program within six years of the time they first register.

The maximum time to complete the PhD program as set by the Faculty of Graduate Studies and Research is six years.

# Neuroscience [Graduate]

Neuroscience and Mental Health Institute
4-120 Katz Group Centre for Pharmacy and Health Research
University of Alberta
Edmonton, Alberta T6G 2E1
E-mail: nmhi@ualberta.ca

#### **General Information**

The Neuroscience and Mental Health Institute at the University of Alberta is a group of more than 150 neuroscientists from approximately 27 departments across eight Faculties and two Schools. The Institute offers a graduate program that is designed for students who desire a broad training in various experimental and theoretical aspects of neuroscience while maintaining a research program that may be more specialized. This can be achieved by drawing on the expertise of specialists (members of the Institute) from various departments throughout the University who have research interests in neuroscience. The graduate program in Neuroscience offers both degrees of PhD and MSc through thesis research. Applicants not having a MSc degree will initially be admitted to the MSc program for the first year, after which they may transfer to the PhD program, provided their thesis proposal has been accepted and appropriate courses passed.

### **Entrance Requirements**

The Department's minimum admission requirements are an undergraduate degree with an admission GPA of at least 3.3 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\bigstar$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Students already possessing a master's degree will be considered for the PhD program provided they meet the minimum requirements for the MSc degree in Neuroscience.

Applicants to the MSc program are expected to have completed the following courses or their equivalents:

- ZOOL 342 OR PMCOL 371
- PHYSL 372

Students deficient in this area may be expected to take these courses soon after admission.

Applicants to the PhD program who do not have a sufficient Neuroscience background may be required to take additional courses to ensure an adequate background. These will be considered extra-to-degree.

Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:

- a TOEFL score of at least 100 (Internet-based) with at least 20 on each of the individual skill areas
- equivalent scores on other language proficiency tests approved by the Faculty of Graduate Studies and Research

All applicants must also provide three letters of academic reference, a current curriculum vitae, and a personal statement of interest.

Together with the above, successful acceptance is ultimately dependent upon an applicant obtaining a supervisory agreement with one of our faculty member mentors, that would include stipend support. Without a supervisory relationship identified, applications will not be successful.

# UNIVERSITY OF ALBERTA

# **GRADUATE STUDIES AND RESEARCH**

Applicants wishing to change their program to Neuroscience from other graduate programs within the University of Alberta will be considered upon receipt of a letter from the student outlining the reasons for the program change, letters of reference, transcripts, and a letter of support from the proposed supervisor. Students who have already completed the PhD candidacy examination in another program will not normally be considered.

For Canadian and US citizens (including Canadian permanent residents), the application deadline is July 1 for September admission, and November 1 for January admission. For international students, the application deadline is May 1 for September admission, and September 1 for January admission.

## **Academic Standing Requirements**

To remain in the program, students are required to maintain a minimum GPA of 3.3.

### Financial Assistance

A limited number of graduate research assistantships are available through the Institute. In addition, graduate teaching assistantships and research assistantships may be available through one of the departments participating in the graduate program in Neuroscience or from research grants. Other funding is provided by scholarships awarded to students by various agencies including the Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council, and the Provincial Government of Alberta. Students will be expected to apply for such external funding.

### **Graduate Program Requirements**

- The Degree of MSc
- The Degree of PhD

### **Graduate Courses**

#### The courses for the Neuroscience programs are

- BME 510 Neuroimaging in Neuroscience
- BME 520 Neuroplasticity
- CELL 502 The Birth and Death of a Cell
- EDPY 500 Introduction to Data Analysis in Educational Research
- EDPY 505 Quantitative Methods I
- NEURO 500 Research in Neuroscience
- NEURO 501 Graduate Research Project
- NEURO 510 Neurobiology of Aging and Neurodegenerative Disorders
- NEURO 572 Current Topics in Autonomic Neuroscience
- NEURO 603 Graduate Colloquium in Neuroscience
- NEURO 621 The Art of Grant Writing
- PHYSL 544 Current Topics in Neuroscience
- PSYCI 511 Biological Aspects of Psychiatry
- PSYCO 574 Advanced Topics in Neuroscience
- PSYCO 576 Cognitive Neuroscience

PTHER 567 - Neuroscience for Rehabilitation

### **Course Descriptions**

Descriptions of these courses can be found in Course Listings, under the relevant subject headings:

Biomedical Engineering (BME)
Cell Biology (CELL)
Educational Psychology (EDPY)
Neuroscience (NEURO)
Pharmacology (PMCOL)
Physical Therapy (PTHER)
Physiology (PHYSL)
Psychiatry (PSYCI)
Psychology (PSYCO)

Additional courses offered by other departments that are deemed relevant to the student's research interests may be approved on an individual basis.

# The Degree of MSc (Neuroscience) [Graduate]

# Program Requirements

Students are required to complete a minimum of  $\bigstar$ 6 in coursework and a thesis.

#### Coursework

- The only exception to course requirements for the MSc degree would be for clinical trainees such as medical residents, who, in consultation with
  and approval of the graduate coordinator, may be exempted.
- MSc students have the option, in consultation with their program supervisor, to complete a lab rotation course, typically during the first year. Students can choose either NEURO 500 (two terms; ★6) or NEURO 501 (one term; ★3). NEURO 500 involves rotations through three laboratories during the first year. Each rotation involves two months of research experience (six months in total). One rotation may be in the laboratory of the primary supervisor. Although this course is ★6, an additional lecture-based, graduate-level course will be required to meet the course requirements if students register in NEURO 500. NEURO 501 involves rotation through one laboratory taken outside of the laboratory of the primary supervisor.
- Students, in consultation with their supervisory committees, may also select courses in other areas important to their research programs.
- Students will be expected to attend weekly Neuroscience seminars.

#### **Thesis**

Registration in 900-level THES

# Language Requirement

No language other than English is required for the MSc.

# Residence Requirement

The minimum period of residence is two four-month terms of full-time attendance at the University of Alberta.

## Length of Program

The time required to complete the MSc will vary with the individual candidate, but the normal period is about two years to both complete the coursework (1st year) and benefit from the research training (1st and 2nd years).

The maximum time to complete the thesis-based MSc program as set by the Faculty of Graduate Studies and Research is four years.

# The Degree of PhD (Neuroscience) [Graduate]

## **Program Requirements**

PhD students must complete  $\pm 9$  in coursework and a thesis.

#### Coursework

- An important feature of the PhD program is the requirement that students participate in a lab rotation course, typically during the first year. Students must choose either NEURO 500 (two terms; ★ 6) or NEURO 501 (one term; ★3). NEURO 500 involves rotations through three laboratories. Each rotation involves two months of research experience (six months in total). One rotation may be in the laboratory of the primary supervisor. NEURO 501 involves rotation through one laboratory taken outside of the laboratory of the primary supervisor.
- Students, in consultation with their supervisory committees, may also select courses in other areas important to their research programs.
- Students will be expected to attend weekly Neuroscience seminars.

#### **Thesis**

Registration in 900-level THES.

#### Candidacy Exam

The candidacy examination must be scheduled by the end of the second year in the program. For students who change program category from the Master's program to the doctoral program, the candidacy examination must be scheduled by the end of the third year from the beginning of the Master's program and completed by the end of the fourth year.

## Language Requirement

No language other than English is required for the degree.

# Residence Requirement

The minimum period of residence is two academic years of full-time attendance at the University of Alberta, where an academic year is defined as the eightmonth period from September through April.

## Length of Program

The time required to complete the PhD will vary according to the previous training of the applicant and the nature of the research undertaken. However, a minimum of three years is normally required. Course work will generally be completed early in the program.

The maximum time to complete the PhD program as set by the Faculty of Graduate Studies and Research is six years.

# Nursing [Graduate]

Faculty of Nursing, Graduate Studies Office 4-171 Edmonton Clinic Health Academy University of Alberta Edmonton, Alberta T6G 1C9 Telephone: (780) 492-9546

FAX: (780) 492-2551

E-mail: graduate@nurs.ualberta.ca

### **General Information**

The Faculty of Nursing is organized into four broad Areas of Excellence: Nursing Pedagogy, Philosophy, and History (NPPH); Chronicity; Health Equity; and Health Systems. This initiative organizes the faculty's research efforts, facilitates the development of research partnerships and interdisciplinary linkages, and directly links with courses in the Master of Nursing (MN) and the PhD.

The MN program prepares nurses to fulfil leadership roles in advanced practice nursing; provide health promotion, prevention and specialized care in a variety of health care settings; teach in academic and clinical settings; and contribute to the development of health programs and policies. It provides a solid academic and practice foundation for pursuing a PhD in Nursing.

Students who choose a clinical focus may, upon completion of the MN program, apply for Nurse Practitioner (NP) Adult licensure, Nurse Practitioner (NP) Family All Ages licensure, or Nurse Practitioner (NP) Neonate with the College and Association of Registered Nurses of Alberta (CARNA). See the Faculty of Nursing website for further information about available clinical areas of focus.

The Post MN Program is for those who wish to be eligible for entry-to-practice as a Nurse Practitioner (Adult, Family/All Ages, or Neonate) and did not complete the required courses while in the MN program.

# UNIVERSITY OF ALBERTA

# GRADUATE STUDIES AND RESEARCH

The PhD (Nursing) program is designed to educate for excellence in the development and testing of nursing knowledge and research-based nursing practice. The number and types of courses included in the program will vary according to the individual needs of the student.

The embedded Graduate Certificate in Teaching and Learning in Nursing Education is recognition of the completion of three specific graduate level courses in teaching and learning. This certificate is provided to those students who, upon fulfillment of the requirements for either the Master of Nursing or PhD (Nursing) Program, have focused on the practice of teaching and completed the three graduate level teaching and learning courses. Preferably, students will declare an intention to receive the embedded Graduate Certificate in Teaching and Learning in Nursing Education at the beginning of their graduate program.

## **Entrance Requirements**

For the Master of Nursing, the Faculty's minimum admission requirements are:

- an undergraduate degree in Nursing with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent institution. The admission GPA will be calculated on the last \* 60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.
- Three letters of reference.
- An undergraduate course in each of statistics and research methods, with a minimum grade of B (or equivalent), preferably completed within the past six years.
- A minimum of one year of nursing experience is typically required.
- Students applying to the clinical focus stream must provide evidence of 4500 hours of RN experience and be a regulated member in a Canadian jurisdiction.
- Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:
  - A TOEFL score of at least 97 (internet-based) with a score of at least 22 on each of the individual skill areas, or equivalent;
  - o an IELTS overall score of 7.0 with the following minimum scores: Listening-7.5, Reading-6.5, Writing-7.0, Speaking-7.0, Overall-7.0.

For the PhD in Nursing, the Faculty's minimum admission requirements are:

- a Master's degree in Nursing with an admission GPA of at least 3.5 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last ★60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework. Students who do not hold the equivalent to this degree may be admitted and required to undertake additional course work in nursing theory, practice and/or research.
- A GPA of 3.5 in the last two years of study.
- Graduate qualitative and quantitative (with some statistics) research courses, or one graduate course in statistics and one in research methods (or equivalent), with a final grade of B or higher.
- Completion of an interview with the prospective supervisor.
- Written agreement with a supervisor.
- Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:
  - TOEFL score of 237 (computer-based) or TOEFL score of 93 (internet-based) with a score of at least 24 on speaking and writing, and 20 on reading and listening, or equivalent;
  - an IELTS overall score of 7.0 with the following minimum scores: Listening-7.5, Reading-6.5, Writing-7.0, Speaking-7.0, Overall-7.0.

#### The Faculty of Nursing also requires:

- Three letters of reference from academics and professionals knowledgeable about the applicant's academic and professional capabilities.
- Current curriculum vitae.
- A sample of written scholarly work, preferably a work in which the applicant is the sole or primary author.

# UNIVERSITY OF ALBERTA

# GRADUATE STUDIES AND RESEARCH

A completed "Background Information on PhD Applicant" form, available on the Faculty of Nursing website, that clearly outlines the applicant's academic, research and professional plans/expectations including: (a) Career Plans; (b) Research; (c) PhD Program Plan / Supervisory Expectations; (d) Name of Potential PhD Program/Dissertation Supervisor; (e) Awards/Financial Assistance applied for, if applicable.

The MN Bypass allows for outstanding MN Candidates who have successfully completed coursework in the MN program to request a change of program category to the PhD program without completing the MN degree. Additional research experience may be required within the PhD program for students selecting this option. See the Graduate Program Manual 7.2 Change of Category and see the Nursing website for the MN Bypass process.

## Financial Assistance

Information regarding graduate assistantships and other forms of financial assistance will be supplied upon request.

## **Graduate Program Requirements**

- The Degree of MN
- The Degree of MN with a specialization in Aging
- The Degree of PhD
- The Graduate Certificate in Teaching and Learning in Nursing Education

#### **Graduate Courses**

Course offerings vary from term to term depending upon student enrolment and availability of suitable instructors. A current listing is available on Bear Tracks: https://www.beartracks.ualberta.ca/

Graduate courses can be found in Course Listings, under the subject heading Nursing (NURS).

# The Degree of MN (Nursing) [Graduate]

# Program Requirements

The MN program aims to prepare graduates to:

- Demonstrate in-depth knowledge in advanced nursing practice
- Engage in reflection, to think critically, and to act with scientific integrity in scholarly endeavors
- Facilitate the learning process and participate in activities that influence health and healthcare policy
- Understand the interaction of the nursing profession with social, political, economic, and historical forces

Students in the MN program can select a thesis-based or course-based route.

Student programs are designed based on the chosen focus area and in light of the student's career goals, clinical interests, and research interests.

#### MN Thesis-based

Students in the thesis-based MN program are required to complete 10 courses ( $\star$ 3,  $\star$ 4 and/or  $\star$ 6) for a minimum total of  $\star$ 30 credits, plus a thesis.

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# GRADUATE STUDIES AND RESEARCH

Coursework includes five required courses. The remaining five courses are selected according to areas of focus, outlined below, and elective courses.

The thesis-based route is an opportunity for intensive research education in an area of student interest. It provides knowledge about particular content and research method and students work closely with their supervisors to complete the research.

#### MN Course-based

Students in the course-based MN program are required to complete 11 courses ( $\bigstar$ 3,  $\bigstar$ 4 and/or  $\bigstar$ 6) for a minimum total of  $\bigstar$ 33 credits, plus a  $\bigstar$ 3 capping exercise (NURS 900).

Coursework includes five required courses. The remaining six courses are selected according to areas of focus, outlined below, and elective courses. One elective course must be taken in the area of interest. The capping exercise is individually designed and is congruent with the student's area of study and may address topics such as clinical outcomes, evidence-based practice, total quality improvement, or knowledge translation. Course-based students should complete at least three courses per year.

All part-time course-based graduate students must register in a minimum of 3 units ( $\star$ 3) in course-work or in M REG 800 each September to August period to maintain their student status.

## Required courses ( $\star$ 15):

All MN students are required to take:

- NURS 502 Nature of Nursing Knowledge
- NURS 505 Transforming Practice
- NURS 506 Program Planning
- NURS 512 Quantitative Research
- NURS 513 Qualitative Research

The remaining course requirements are determined by the following areas of focus:

#### Clinical

This area may lead to entry-to-practice as a Nurse Practitioner (Adult, Family/All Ages, or Neonatal).

#### Focus Area required courses

For entry-to-practice as a Nurse Practitioner, students must select one of the clinical areas of focus.

- Adult/Older Adult: NURS 507, NURS 509, NURS 510, NURS 570 and NURS 580
- Family All Ages: NURS 507, NURS 509, NURS 515, NURS 575 and NURS 582
- Neonate: NURS 520, NURS 522, NURS 525, NURS 572 and NURS 582

#### Elective courses

Students in a course-based MN must complete one elective course in their clinical area of focus.

#### Teaching

Students opting for a Teaching focus will be introduced to principles of learning and pedagogy. Students earn a *Graduate Certificate in Teaching and Learning in Nursing Education* which will be reflected on the student's transcript. See the teaching certificate link: Teaching and Learning Certificate

#### Focus Area required courses

NURS 546, NURS 556, and NURS 586.

#### Elective courses

Two (thesis-based programs) or three (course-based programs) electives are required.

#### Research

In the Research focus area, students develop skills in research methodologies and work closely with faculty members to conduct a research project.

#### Focus Area required courses

NURS 588, NURS 683, and NURS 687.

#### Elective courses

Two (thesis-based programs) or three (course-based programs) electives are required.

#### Leadership

The Leadership focus prepares students for practice within the contexts of administration and management of health services.

#### Focus Area required courses

NURS 536 and NURS 584

#### Elective courses

Three (thesis-based programs) or four (course-based programs) electives are required.

#### Community

The Community focus addresses leadership in community settings, population health assessment, and approaches to working with population aggregates and communities, and community health issues.

#### Focus Area required courses

NURS 508, NURS 536 and NURS 584

#### Elective courses

Two (thesis-based programs) or three (course-based programs) electives are required.

# Clinical Requirements for Nursing Courses

Students are responsible for the health and safety requirements for all clinical practice courses in their graduate program. These requirements must be met prior to starting the clinical courses. If there is an associated fee, students are responsible for the costs incurred.

Registration with College and Association of Registered Nurses of Alberta (CARNA)

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# **GRADUATE STUDIES AND RESEARCH**

- Cardiopulmonary Resuscitation Certification (CPR)
- Health Status Form
- Immunization Requirements: See University Infectious Disease Regulation.
- Criminal Record Check (Security Clearance Check)
- Professional Ethics/Code of Student Behaviour

Please see the Faculty of Nursing's website for further information regarding clinical requirements

### Length of Program

The Master's program can be completed within a two-year plus one term period.

The maximum time to complete the thesis-based MN program as set by the Faculty of Graduate Studies and Research is four years. The maximum time to complete the course-based MN program as set by the Faculty of Graduate Studies and Research is six years.

# The Degree of MN with a specialization in Aging (Nursing) [Graduate]

A Specialization in Aging is offered in collaboration with the Faculty of Nursing and the Department of Human Ecology. Students focus their capping project or thesis on aging. The required course is NURS 604.

## Program Requirements

Students in the MN program with a specialization in Aging can select a thesis-based or course-based route.

#### MN Thesis-based

Students in the thesis-based MN are required to complete 10 courses ( $\star$ 3,  $\star$ 4 and/or  $\star$ 6) for a minimum total of  $\star$ 30 credits, plus a thesis focused on Aging.

#### MN Course-based

Students in the course-based MN program are required to complete 11 courses ( $\bigstar$ 3,  $\bigstar$ 4 and/or  $\bigstar$ 6) for a minimum total of  $\bigstar$ 33 credits, plus a  $\bigstar$ 3 capping exercise (NURS 900 Guided Scholarly Project) focused on Aging.

Course-based students should complete at least three courses per year.

All part-time course-based graduate students must register in a minimum of 3 units ( $\star$ 3) in course-work or in M REG 800 each September to August period to maintain their student status.

### Required courses ( $\star$ 15)

All MN students are required to take:

- NURS 502 Nature of Nursing Knowledge
- NURS 505 Transforming Practice

- NURS 506 Program Planning
- NURS 512 Quantitative Research
- NURS 513 Qualitative Research

### Specialization required course $(\bigstar 3)$

NURS 604 - Fundamentals of Aging

#### **Elective Courses**

Four (thesis-based programs) or five (course-based programs) electives are required.

## Clinical Requirements for Nursing Courses

Students are responsible for the health and safety requirements for all clinical practice courses in their graduate program. These requirements must be met prior to starting the clinical courses. If there is an associated fee, students are responsible for the costs incurred.

- Registration with College and Association of Registered Nurses of Alberta (CARNA)
- Cardiopulmonary Resuscitation Certification (CPR)
- Health Status Form
- Immunization Requirements: See University Infectious Disease Regulation.
- Criminal Record Check (Security Clearance Check)
- Professional Ethics/Code of Student Behaviour

Please see the Faculty of Nursing's website for further information regarding clinical requirements

# Length of Program

The Master's program can be completed within a two-year plus one term period.

The maximum time to complete the thesis-based MN program as set by the Faculty of Graduate Studies and Research is four years. The maximum time to complete the course-based MN program as set by the Faculty of Graduate Studies and Research is six years.

# The Degree of PhD (Nursing) [Graduate]

# **Program Mission**

Within a research-intensive context, the Faculty of Nursing's PhD Program exists to prepare for the 21st century nursing scholars who are able to generate new knowledge and facilitate change to advance healthcare outcomes and nursing within a global context.

## **Program Vision**

Students in the PhD Program are engaged in and educated for excellence in the development, organization and evaluation of new knowledge. The Program is characterized by rigour, flexibility and relevance: rigour in the quality of scholarship and flexibility within and relevance to the discipline of nursing and the student's career goals and research interests. See the Faculty of Nursing website for full description of Program and Principles underlying it.

The graduate will exhibit competencies in each of the following core qualities:

- Advancing nursing
- Enhancing scholarship
- Mobilizing knowledge
- Extending inquiry
- · Leading change

## **Program Requirements**

For each student, advancement of the core qualities described in the program vision, will occur through a combination of activities, learning experiences and skills derived from supervision, course participation, scholarly experiences, various other activities and outputs, engagement with faculty and colleagues and reflection. These activities will occur in and outside of the Faculty of Nursing.

All students take the following four courses in the first two years:

- NURS 600
- NURS 601
- NURS 609
- INT D 690

In consultation with the supervisor and based on program plans, students are additionally expected to take design/method/analysis courses and one three-credit dissertation seminar (NURS 699).

Typically students take a total of 7-10 doctoral level courses which could include nursing history, research methods, statistics and philosophy of science as well as courses in students' substantive areas. The number and type of courses will vary according to students' academic backgrounds, experiences and career goals. The majority of courses are offered face to face and a few are offered via e-learning.

The minimum period of residence on campus is one Fall or Winter Term, or two Spring or Summer Terms. However, the Faculty of Nursing may require that a student spend more than the stated minimum time on campus.

#### **Examinations**

There are three examinations during the PhD program: The Comprehensive Examination at the completion of the coursework, typically at the end of second year; The Doctoral Candidacy Exam which must be completed by the end of the third year; and the Doctoral Final Oral Exam. English is the language of study. All requirements for the degree must normally be completed within six years from the time a student first registers as a graduate student.

#### Financial Assistance and Scholarships

The Faculty of Nursing and Faculty of Graduate Studies and Research offer many opportunities for scholarships and assistance to qualified graduate students.

# The Graduate Certificate in Teaching and Learning in Nursing Education (Nursing) [Graduate]

Nursing education requires educators who are not only proficient in clinical knowledge and skill but who are also knowledgeable and informed about the process of teaching and learning. The completion of this certificate would reflect the acquisition of the relevant knowledge and skills required to teach in the discipline of nursing. At a glance, this certificate would thus allow for instant recognition of formal preparation in teaching and learning.

Students admitted to either the Master of Nursing or PhD (Nursing) Program may choose to focus on the practice of teaching and learning within the context of nursing education. Students who declare this choice at the beginning of their graduate program will be required to register in and successfully complete the three graduate level courses (NURS 546, NURS 556, NURS 586) focused on teaching and learning in higher education for nursing. Upon successful completion of the graduate program, inclusive of the designated teaching and learning courses, the student will be awarded the embedded Graduate Certificate in Teaching and Learning in Nursing Education in addition to their graduate degree. The embedded Graduate Certificate in Teaching and Learning in Nursing Education will be noted on the student's transcript.

# Obstetrics and Gynecology [Graduate]

Department of Obstetrics and Gynecology 227 HMRC University of Alberta Edmonton, Alberta T6G 2S2 E-mail: denise.hemmings@ualberta.ca

## **General Information**

The Department of Obstetrics and Gynecology offers programs leading to the degrees of Master of Science and Doctor of Philosophy in Medical Sciences-Obstetrics and Gynecology either as part of a post-MD residency training program or as an independent degree program for prospective students proceeding from an undergraduate degree. Research may be carried out in any of the department laboratories or clinical facilities in a variety of disciplines related to reproductive sciences. Current research activities are focused in the areas of: perinatal medicine. Areas of research include:

- Control of parturition/Preterm labour
- Hypertension/Preeclampsia
- Immunology of Pregnancy
- Placental development and function
- Role of bioactive lipids in pregnancy
- Prostaglandins in the control of birth in women
- Sex steroids receptors
- Vascular function
- Viral Infection and Pregnancy

Inquiries should be directed to the Graduate Coordinator at the above address.

### **Entrance Requirements**

The Department's normal requirements for admission of graduate students are those outlined under the Medical Sciences Graduate Program. In addition, the Department of Obstetrics and Gynecology requires a minimum of 3.2 or equivalent GPA during each of the previous two years of university.

### Financial Assistance

Students are encouraged to apply for studentships from external agencies. Students may also be eligible for awards from the Faculty of Graduate Studies and Research and the Faculty of Medicine and Dentistry. Students entering graduate studies through the Graduate Program in Maternal and Child Health (MatCH) will have a portion of their salary and the differential fee for foreign students covered for two years by MatCH.

# **Graduate Program Requirements**

- The Degree of MSc
- The Degree of PhD

# The Degree of MSc (Obstetrics and Gynecology) [Graduate]

# **Program Description**

The general description for the MSc in Medical Sciences-Obstetrics and Gynecology is as presented for all MSc programs in Medical Sciences (see The Degree of MSc).

# The Degree of PhD (Obstetrics and Gynecology) [Graduate]

# **Program Description**

The general description for the PhD in Medical Sciences-Obstetrics and Gynecology is as presented for all PhD programs in Medical Sciences [see The Degree of PhD [Medical Sciences]].

# Occupational Therapy [Graduate]

Department of Occupational Therapy 2-64 Corbett Hall University of Alberta Edmonton, Alberta T6G 2G4 mscot.info@rehabmed.ualberta.ca

#### **General Information**

The Department of Occupational Therapy offers graduate work leading to a Master of Science degree in Occupational Therapy (MScOT). The MScOT program is designed to address practice and theoretical issues within a broad range of settings. Upon completion of their degree, students will be able to evaluate programs, participate in research, and critically appraise current assessment and intervention options.

An MScOT postprofessional stream for occupational therapists with a bachelor's entry level degree in occupational therapy provides clinicians with the research and leadership skills to enhance their abilities in various settings. An MScOT entry-level stream for students who hold an undergraduate degree in a variety of fields other than occupational therapy provides the academic and fieldwork education required for certification by provincial and national professional associations.

An Interprovincial Agreement between the Province of Alberta and the Province of Saskatchewan exists for the Department of Occupational Therapy. Contact the Department for further information.

## **Entrance Requirements**

The deadline for receipt of applications for the entry-level stream is February 1 for September admission. Contact the Department for application deadline information on the postprofessional stream. Minimum requirements include a four-year baccalaureate degree (see Note) or equivalent from a recognized academic institution with a grade point average of at least 3.0 in the most recent  $\bigstar$ 60. Activity courses in Physical Education, studio courses in Fine Arts, and practicum courses are not considered part of the required  $\bigstar$ 60 admission requirements and are not included in the calculation of the admission GPA. One Statistics course ( $\bigstar$ 3) and one human anatomy course ( $\bigstar$ 3) are required prerequisites. Students may find it to their advantage to have taken a human physiology course prior to entering the program. Where applicable, applicants should refer to the English language requirement of the Faculty of Graduate Studies and Research (English Language Requirement of the University Calendar). Applicants who use the TOEFL examination to fulfill the English language proficiency requirement of the Faculty of Graduate Studies and Research must present a minimum score of 600 (paper-based) or 100 with a score of at least 25 on each of the individual skill areas (Internet-based). The International English Language Testing System (IELTS) requirements are a minimum overall band score of 6.5, with at least 5.5 on each band (Academic). The Pearson Test of English Academic (PTE Academic) requirements are an overall minimum score of 59.

Applicants are required to submit a curriculum vitae in a pre-set format (available for download with the Online Application for Graduate Admission), two letters of recommendation, and a description/evidence of suitability for this program and profession. In addition, applicants are required to complete an online situational judgement test as part of the application package.

The selection process is competitive and will be based on the GPA in the most recent  $\star$ 60 taken prior to January of the admission year. Applicants are initially rank ordered according to their Admission GPA. Applicants who have completed  $\star$ 30 over two consecutive terms will be ranked above those who have taken fewer than  $\star$ 30.

All components of the application package will be considered in the admission decision. Outstanding applicants will be recommended for early acceptance. The remaining applicants will be advised of their status by June 30 of the admission year.

#### Aboriginal Applicants

Two positions in the occupational therapy program are available to applicants of aboriginal identity as defined in the Constitution Act, 1982, Part II, Section 35(2). Applicants must meet all entrance requirements as specified below. If suitable Aboriginal applicants cannot be found, these positions will be filled by applicants from the general pool.

#### Financial Assistance

Financial assistance may be available in the form of teaching or research assistantships. Other sources of funding may be sought as described at www.gradstudies.ualberta.ca, from provincial bursaries, professional associations, private foundations, etc.

## **Graduate Program Requirements**

The Degree of MSc

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the following subject headings:

Occupational Therapy (OCCTH)
Rehabilitation Medicine (REHAB)

# The Degree of MSc (Occupational Therapy) [Graduate]

# **Program Requirements**

- 1. MSc postprofessional stream for students entering with an undergraduate degree in Occupational Therapy: in addition to the capping exercise consisting of OCCTH 900 (★6), requirements will normally consist of graduate courses equivalent to at least ★18 [including OCCTH 501 or OCCTH 507, OCCTH 562 or OCCTH 566, OCCTH 563 or OCCTH 567, OCCTH 564 and two (★3) credit electives]. Students choosing instead to complete a thesis with a formal defense must also complete REHAB 500 plus a ★3 research course and replace OCCTH 900 with THES 906. Additional coursework in research design, statistics, or specialized content may be recommended by the thesis supervisor and thesis committee.
- MSc course-based entry-level stream
   Orientation Program: The program requires that each student, after acceptance into the program, attend a department orientation program immediately before the beginning of the first term. Dates are confirmed on admission. Attendance at the orientation program is a prerequisite for first year courses. Normally students must complete all previous term/year courses to be eligible to proceed to the subsequent term/year.

#### Course requirements:

- INT D 410
- OCCTH 502 Assessment and Evaluation of Occupational Performance
- OCCTH 503 Professionalism and Supervision in Practice
- OCCTH 510 Theory, Evidence and Skills in Practice: Application

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- OCCTH 517 Foundations of Psychiatry and Mental Health Practice for Occupational Therapists
- OCCTH 518 Assessment and Interventions for Occupational Therapists in Mental Health Practice
- OCCTH 519 Enabling Occupation: Advanced Practices in Mental Health
- OCCTH 520 Theory, Evidence and Skills in Practice: Integration
- OCCTH 522 Enabling Occupation Through the Use of Assistive Technology
- OCCTH 525 Fieldwork-Learning in a Practice Context
- OCCTH 526 Fieldwork Learning in a Practice Context
- OCCTH 527 Fieldwork-Learning in a Practice Context
- OCCTH 528 Fieldwork Learning in a Practice Context
- OCCTH 530 Theory, Evidence and Skills in Practice: Synthesis
- OCCTH 540 Theory, Evidence and Skills in Practice Evaluation
- OCCTH 543 Student Selected Modules
- OCCTH 555 Enabling Occupation and Participation for Children and Youth
- OCCTH 556 Enabling Occupation and Participation for Older Adults
- OCCTH 558 Enabling Occupation: Community
- OCCTH 559 Enabling Occupation: Productivity
- OCCTH 564 Evaluation of Healthcare Systems and Occupational Therapy Services
- OCCTH 566 Evidence-Based Practice and Knowledge Translation in Occupational Therapy
- OCCTH 567 Research Design and Scholarly Practice
- OCCTH 583 Influences on Occupational Performance: Human Systems I: Structure, Function and Conditions
- OCCTH 584 Influences on Occupational Performance: Human Systems II: Conditions and Interventions
- OCCTH 585 Influences on Occupational Performance: Human Systems III: Theory and Practice in Neurology
- OCCTH 903 Directed Final Project

#### Note:

All students must complete and pass either a minimum of three distinct OCCTH 543 modules or one  $\star$ 3 Individual Study (OCCTH 599 or equivalent). The modules are designed to be intensive and interactive. It is imperative that registered students attend all listed hours of instruction. Students with absences will receive a grade of NC (failure, no grade point value assigned).

#### Costs:

All costs associated with obtaining a professional degree are the responsibility of the student and this includes costs associated with the project.

#### Fieldwork Courses:

Fieldwork courses are practical placements at approved facilities.

#### Policies and Procedures:

The procedures governing fieldwork placements are binding and will be provided in a procedures manual.

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# **GRADUATE STUDIES AND RESEARCH**

#### Fieldwork Placement Sites:

Students will attend required fieldwork placements at approved institutions and will follow the administrative procedures and regulations of the institutions. Placements may be located regionally and/or nationally. Opportunities for international placements will be determined on an individual basis. Students must travel in order to meet the fieldwork education component of the program. Students are responsible for the costs associated with fieldwork placements.

To be eligible for admission to fieldwork placements the students must meet the following requirements:

- 1. CPR Certification
- 2. Security Clearance Check
- Medical Examination and Immunization Requirements (See University Infectious Diseases Regulation)
- Fit testing for Respirator Mask, as required.

Details on these fieldwork requirements are available in the fieldwork procedures manual. Please refer to the manual for details. Note that all fees and costs for these fieldwork requirements are the student's responsibility.

A student who fails a fieldwork placement may appeal that decision. Information regarding appeal procedures is available in the fieldwork placement procedures manual.

#### Practicum Intervention Policy:

The Dean of the Faculty of Rehabilitation Medicine, or supervisor acting on behalf of the Dean, may immediately deny assignment of a student to, withdraw a student from, or vary terms, conditions, or site of fieldwork practicum if the Dean or supervisor has reasonable grounds to believe that this is necessary in order to protect the public interest. Refer to the University Calendar, Practicum Intervention Policy, for additional information.

## Length of Program

Normally a minimum of 26 months is required to complete the MSc programs. Students have a maximum of four calendar years to complete either route within this MSc program.

# Oncology [Graduate]

Department of Oncology
Faculty of Medicine and Dentistry
2239 Cross Cancer Institute
University of Alberta
Edmonton, Alberta T6G 122

E-mail: oncology.gradprogram@ualberta.ca

# UNIVERSITY OF ALBERTA

# GRADUATE STUDIES AND RESEARCH

### **General Information**

The Department of Oncology offers programs leading to the degrees of Master of Science and Doctor of Philosophy. Applicants with the MSc degree, or a strong undergraduate record, may be accepted directly into the PhD program.

As of July 1, 2013, students may be admitted through one of two specializations: Medical Physics or Cancer Sciences. Programs leading to the degrees of Master of Science and Doctor of Philosophy in Cancer Sciences are open to suitable graduates in biochemistry, cell biology, chemistry, genetics, physiology, immunology, medical sciences or nutrition. Programs leading to the degrees of Master of Science and Doctor of Philosophy in Medical Physics are open to suitable graduates in physics, or equivalent programs. Research programs and course selection will have a clear connection and relevance to the field of Oncology.

The Department of Oncology currently has more than 123 faculty with primary appointments and approximately 62 faculty from other departments holding adjunct appointments to its seven Divisions. The Department is located at the Cross Cancer Institute, a comprehensive cancer centre affiliated with the University of Alberta; as well as at the Katz Group Centre for Pharmacy and Health Research and the Medical Isotopes and Cyclotron Facility (MICF). The Department has state-of-the-art facilities in cell imaging, flow cytometry, gene analysis systems, computational drug design, small animal imaging, human imaging and radiation therapy facilities. Faculty are involved in medical education at both the undergraduate and postgraduate levels and they lead major research initiatives ranging from clinical studies to basic research into the diagnosis, treatment, and molecular causation of cancer. Information on the graduate research programs can be found at www.oncology.med.ualberta.ca. Address all inquiries to the Graduate Program Administrator or to oncology.gradprogram@ualberta.ca.

### **Entrance Requirements**

The Department's normal requirements are a minimum GPA of 3.3 or equivalent in the two most recent years (or last 60 credits) of postsecondary education at a recognized institution. Where applicable, a paper-based TOEFL score of at least 600 (or 100 Internet-based, with a minimum of 20 on each subtest), is required (see English Language Requirement). Medical Physics requires a score of 850 or above in GRE Physics.

# Financial Assistance

Students are funded by a combination of UAlberta awards, external awards, and supervisor research funding.

# <u>Graduate Program Requirements</u>

- The Degree of MSc
- The Degree of PhD

## **Graduate Courses**

Graduate courses can be found in Course Listings, under the following subject headings:

Oncology (ONCOL) Physics (PHYS)



# The Degree of MSc (Oncology) [Graduate]

## **Program Requirements**

Admission to the MSc is dependent on the recommendation of the Graduate Coordinating Committee. The requirements for this degree consist of course work, completion of a research project, and preparation of a thesis.

For students in Cancer Sciences, requirements are recommended by the supervisor and supervisory committee based on the background of the student and the area of research to be undertaken. A minimum of ★9 in graded graduate-level courses chosen from the approved course listing, or approved equivalent is required. Students are required to enrol in a lecture-based background course and a seminar style course – normally these are ONCOL 520 or ONCOL 524 and ONCOL 661/ONCOL 660 respectively, but in exceptional circumstances, ONCOL 320, ONCOL 425 or some other seminar course, may be substituted, with the approval of the Associate Chair, Graduate Studies. Students are also required to attend ONCOL 661/ONCOL 660 seminars during all years of their program.

The degree of MSc in Medical Physics: Students are required to complete ★33 in graduate-level courses (ONCOL 550, ONCOL 552, ONCOL 554, ONCOL 556, ONCOL 558, ONCOL 560, ONCOL 560, ONCOL 564, ONCOL 566, ONCOL 568, ONCOL 600[A], ONCOL 600 [B] and BME 564) in the first year of their program. An undergraduate course, either BME 320 or BME 321, must be completed any time during the program. Within the first year of registration in the program, the student's supervisory committee makes a formal recommendation on the candidate's potential for graduate work. At this time, students may in certain cases be permitted to transfer directly to a PhD program if their progress should warrant such a transfer. The minimum period of residence is two four-month terms of full-time attendance at the University of Alberta.

## Length of Program

The minimum length of program is two years, depending on the research undertaken. The maximum length is four years.

# The Degree of PhD (Oncology) [Graduate]

# Program Requirements

Admission to the PhD is dependent on the recommendation of the Graduate Coordinating Committee. The requirements for this degree consist of course work, completion of a research project, and preparation of a thesis.

For doctoral students in Cancer Sciences, course requirements are recommended by the supervisor and supervisory committee based on the background of the student and the area of research to be undertaken. For students entering the PhD program after a BSc degree, the minimum course requirement is ★12 in graded graduate-level courses chosen from the approved course listing, or approved equivalent. For students entering the PhD program after a MSc degree, in the same discipline the minimum course requirement is ★6 in graded graduate-level courses chosen from the approved course listing, or approved equivalent. As with the Master's program, students are required to enrol in a lecture based course and a seminar course – normally ONCOL 520 or ONCOL 524 and ONCOL 660/ONCOL 661, in the second year. Students are also required to attend ONCOL 661/ONCOL 660 during all years of their program and to give at least three seminars (usually one per year) through ONCOL 660.

Cancer Sciences PhD students are required to take a candidacy exam consisting of a written grant proposal and an oral defence of the proposal including peripheral areas. Students must prepare a thesis describing the results of their research, and be examined orally by a committee formed according to Faculty of Graduate Studies and Research regulations.

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# GRADUATE STUDIES AND RESEARCH

The minimum period of residence is two academic years of full-time attendance at the University of Alberta.

Doctoral students in Medical Physics are required to have completed a minimum of ★33 after an Honors BSc degree from the University of Alberta or equivalent. The ★33 are those courses required for the MSc program in Medical Physics listed in The Degree of MSc (Oncology) [Graduate]. An undergraduate course, either BME 320 or BME 321, must be completed any time during the program. PhD students must also complete additional courses depending on their subspecialty: Radiation Oncology Physics subspecialty, ONCOL 693; Radiological and Nuclear Medical Physics subspeciality, ONCOL 692; and Magnetic Resonance Physics subspecialty, ONCOL 690 and ONCOL 691.

Students must pass an oral candidacy examination consisting of a defence of the research proposal including general medical physics. Once these requirements are successfully completed, the student's research is presented in the form of a thesis which must be defended before a final examining committee. The minimum period of residence is two academic years of full-time attendance at the University of Alberta.

Students in Oncology are required to take a candidacy exam consisting of a written grant proposal and an oral defence of the proposal including peripheral areas. Students must prepare a thesis describing the results of their research, and be examined orally by a committee formed according to Faculty of Graduate Studies and Research regulations. The minimum period of residence is two academic years of full-time attendance at the University of Alberta.

## Length of Program

Doctoral students must complete all requirements within six years of the initial registration in the doctoral programs.

# Ophthalmology and Visual Sciences [Graduate]

Department of Ophthalmology and Visual Sciences
Faculty of Medicine and Dentistry
University of Alberta T6G 2H7
E-mail: ophthalm@ualberta.ca

#### **General Information**

The Department of Ophthalmology and Visual Sciences offers the MSc and PhD in Medical Sciences (Ophthalmology and Visual Sciences) degrees (see Medical Sciences) either as part of a postgraduate training program for post-MD applicants or as an independent degree program for those proceeding from a BSc. Research may be carried out in a variety of ophthalmology-related disciplines for which staff in the Department have active research programs. Major research initiatives are in the areas of electrophysiology of vision, models of retinal degeneration and therapies, ocular anatomy and ocular genetics. Inquiries should be directed to the Graduate Program Assistant in the Department of Ophthalmology and Visual Sciences.

### **Entrance Requirements**

The Department's normal requirements for admission of graduate students are those of the Faculty of Graduate Studies and Research but stipulating a minimum GPA of 3.3 or equivalent during each of the previous two years of university and proof of English language proficiency, where applicable (see English Language Requirement).

## Financial Assistance

Funding from fellowships and studentships is available from external agencies on a competitive basis. Supervisors may support students from operating grants, and limited financial assistance towards tuition costs is also available from the Department, but not guaranteed from year to year.

## **Graduate Program Requirements**

- The Degree of MSc
- The Degree of PhD

# The Degree of MSc (Ophthalmology and Visual Sciences) [Graduate]

## **Program Description**

The general description for the MSc in Medical Sciences (Ophthalmology and Visual Sciences) is as presented for all MSc programs in Medical Sciences (see The Degree of MSc).

# The Degree of PhD (Ophthalmology and Visual Sciences) [Graduate]

# **Program Description**

The general description for the PhD in Medical Sciences (Ophthalmology and Visual Sciences) is as presented for all PhD programs in Medical Sciences (see The Degree of PhD).

# Paediatrics [Graduate]

Department of Paediatrics Edmonton Clinic Health Academy University of Alberta, Edmonton, Alberta T6G 1C9 E-mail: pedsgred@ualberta.ca

#### **General Information**

Facilities exist within the Department of Paediatrics for students who wish to proceed to the Master of Science degree. Inquiries should be directed to the Graduate Coordinator in the Department of Paediatrics.

In addition, Paediatrics is one of several departments working jointly to offer a PhD in medical sciences (see Medical Sciences). Highly qualified candidates with an MSc or MD, who wish to proceed to a PhD will be considered. Inquiries about this program should be directed to the Graduate Coordinator in the Department of Paediatrics.

## **Entrance Requirements**

Candidates who wish to apply for either the MSc or PhD program must have a BSc, MSc or MD with an average of at least 3.3 in the last two years of undergraduate work (or graduate work) at the University of Alberta, or an equivalent qualification from a recognized institution. Where applicable (see English Language Requirement), proficiency in English must be demonstrated by one of the following: a minimum TOEFL score of 570 (paper-based) or 95 with at least 20 per section (Internet-based); MELAB minimum score of 91; CAEL minimum of 70 with at least 70 on each subtest; PTE (Academic) overall minimum score of 65; or IELTS minimum score of 7.5 with at least 6 on each band.

#### Financial Assistance

Financial assistance may be available through various University of Alberta awards or from studentships available from the Canadian Institutes of Health Research, the Alberta Innovates – Health Solutions, or other agencies.

## **Graduate Program Requirements**

- The Degree of MSc
- The Degree of PhD

## The Degree of MSc (Paediatrics) [Graduate]

## Program Requirements

Required courses depend on the area of specialization and the undergraduate background of the student; however, the MSc program normally consists of  $\star$ 9 and a thesis. Course requirements are based on recommendations from the graduate studies director, the supervisor, and the supervisory committee. A minimum of  $\star$ 9 in graded graduate-level courses listed in the Medical Sciences Graduate Program Approved Course Listing, or approved equivalent, is required.

Graduate students in the Department of Paediatrics must also maintain a minimum cumulative program grade point average of 3.0 or higher throughout their program.

If the cumulative grade point average falls between 2.3 and 3.0, the Department may recommend termination of the program or continuation in the program for a specified probationary period.

See Medical Sciences for additional information on the Paediatrics MSc program.



## The Degree of PhD (Paediatrics) [Graduate]

#### <u>Program Requirements</u>

For students entering the PhD program after a BSc degree, the minimum course requirement is ★12 of graded graduate level courses listed in the Medical Sciences Graduate Program Approved Course listing, or approved equivalent is required. For students entering the PhD program after a MSc degree, the minimum course requirement is ★6 of graded graduate level courses listed in the Medical Sciences Graduate Program Approved Course listing, or approved equivalent.

Graduate students in the Department of Paediatrics must also maintain a minimum cumulative program grade point average of 3.0 or higher throughout their program.

If the cumulative grade point average falls between 2.3 and 3.0, the Department may recommend termination of the program or continuation in the program for a specified probationary period.

See Medical Sciences for additional information on the Paediatrics PhD program.

## Pharmacology [Graduate]

Department of Pharmacology 9-70 Medical Sciences Building University of Alberta Edmonton, Alberta T6G 2H7 E-mail: pmcol.gradadmin@ualberta.ca

#### **General Information**

The Department of Pharmacology offers graduate programs leading to the degrees of Master of Science and Doctor of Philosophy in pharmacology.

The Department offers a wide range of opportunities to investigate problems in the physiological, biochemical and molecular aspects of pharmacology. Expertise is available in many state-of-the-art *in vivo* and *in vitro* methodologies.

Students are accepted into the graduate program with degrees in the biological sciences, physics, chemistry, pharmacology, biochemistry, physiology, pharmacy, neuroscience, medicine, and dentistry. The program is of particular interest to students with background in pharmacology, physiology, biochemistry, and neuroscience.

Inquiries should be directed to the Graduate Coordinator of the Department of Pharmacology.

## **Entrance Requirements**

The Department's minimum admission requirements are an undergraduate degree with an average GPA of 3.3 in the last two years of undergraduate work at the University of Alberta, or an equivalent qualification from a recognized institution. Applicants with degrees/qualifications in a language other than English may need to demonstrate English language proficiency through one of the following exam scores: TOEFL with a minimum score of 600 (paper-based) or a total score of 95 (Internet-based) with at

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## **GRADUATE STUDIES AND RESEARCH**

least 23 on each of the speaking and writing skill areas; MELAB with a minimum score of 85; or IELTS with a minimum overall band score of 7.0, with at least 6 on each band (see English Language Requirement).

#### Financial Assistance

The Department of Pharmacology offers financial support to students in the form of graduate research assistantships, scholarships and awards. The Department may contribute to payment of fees. Differential fees for international students are covered by the student's supervisor.

#### **Graduate Program Requirements**

- The Degree of MSc
- The Degree of PhD

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading Pharmacology (PMCOL).

## The Degree of MSc (Pharmacology) [Graduate]

### Program Requirements

Individual programs vary depending on the student's background, but are designed to provide students with an appropriate graduate education in pharmacology. At least ★6 in graduate pharmacology courses are normally required, in addition to the preparation and defence of a thesis on an approved research topic.

No language other than English is required for the degree.

The minimum period of residence is two four-month terms of full-time attendance at the University of Alberta.

## Length of Program

The time required to complete the MSc will vary with the individual candidate; however, a minimum of 24 months is normally required.

## The Degree of PhD (Pharmacology) [Graduate]

## Program Requirements

Individual programs vary according to the student's background, but are designed to provide students with an appropriate graduate education in pharmacology. At least  $\star$ 9 in graduate pharmacology courses are normally required, in addition to the preparation and defence of a thesis on an approved research topic.

No language other than English is required for the degree.

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The minimum period of residence is two academic years of full-time attendance at the University of Alberta.

### Length of Program

The time required to complete the PhD will vary according to the previous training of the applicant and the nature of the research undertaken; however, a minimum of 30 months is normally required.

## Pharmacy and Pharmaceutical Sciences [Graduate]

Faculty of Pharmacy and Pharmaceutical Sciences 2-35 Medical Sciences Building University of Alberta 8613 114 Street Edmonton, Alberta T6G 2H7 E-mail: joyce.johnson@ualberta.ca

## **General Information**

The Faculty of Pharmacy and Pharmaceutical Sciences offers graduate programs leading to the degrees of Master of Science and Doctor of Philosophy.

Research may be undertaken in the areas of pharmaceutical science and pharmacy practice. Prospective graduate students are encouraged to visit the Faculty of Pharmaceutical Sciences website to review the facilities available and specific research areas of our faculty.

## **Entrance Requirements**

The minimum admission requirements of the Faculty are an undergraduate degree in pharmacy with an average of 3.0 in the last two years of undergraduate (or graduate) work at the University of Alberta or an equivalent qualification from a recognized institution. Individuals with previous degrees in fields other than pharmacy will also be considered. Where applicable (see English Language Requirement), applicants must obtain a minimum score of 550 (paper-based) or a total score of 88 with a score of at least 20 on each of the individual skill areas (Internet-based) on the TOEFL test, or a minimum overall band score of 6.5, with at least 5.5 on each band on the International English Language Testing System (IELTS).

#### Financial Assistance

The Faculty of Pharmacy and Pharmaceutical Sciences offers financial support in the form of graduate assistantships, scholarships, and awards. Students are encouraged to apply for campus-wide scholarships and scholarships from other agencies, such as CIHR, NSERC, SSHRC, AIHS, etc. Support may be available for some students from research grants held by individual faculty members.

## **Graduate Program Requirements**

The Degree of MSc

The Degree of PhD

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading Pharmacy and Pharmaceutical Sciences (PHARM).

## The Degree of MSc (Pharmacy and Pharmaceutical Sciences) [Graduate]

#### **Program Requirements**

The minimum requirement for an MSc is ★6 of graduate level coursework; however, additional courses may be required, depending on the area of specialization, the undergraduate background of the student, and recommendation of the supervisor or supervisory committee. Students must have a cumulative GPA of 3.0 or greater in courses taken during the graduate program. Students must complete and successfully defend a thesis. All graduate students are expected to attend graduate seminars during their program and must register once for credit in PHARM 697.

The degree specialization is in Pharmaceutical Sciences or Pharmacy Practice.

There is no language requirement for the degree. The minimum period of residence is two four-month terms of full-time attendance at the University of Alberta.

#### Length of Program

The time required to complete the MSc will vary with the individual candidate; however, a minimum of two years is normally required.

## The Degree of PhD (Pharmacy and Pharmaceutical Sciences) [Graduate]

## Program Requirements

The minimum requirement for a PhD is ★12 of graduate level coursework. The Department may approve a reduction to ★6 of graduate level coursework for students entering the PhD program after completing a previous graduate degree. Departmental approval of the reduction will depend on the student's background and a recommendation from the supervisor and supervisory committee. Students must have a cumulative GPA of 3.0 or greater in courses taken during the graduate program. Students must pass a candidacy exam and successfully prepare and defend a thesis on an approved research topic. All graduate students are expected to attend graduate seminars during their program and must register once for credit in PHARM 697.

The degree specialization is in Pharmaceutical Sciences or Pharmacy Practice.

There is no language requirement for the degree.

The minimum period of residence is two academic years of full-time attendance at the University of Alberta.

## Length of Program

The time required to complete the PhD will vary according to the previous training of the applicant and the nature of the research undertaken; however, a minimum of two years is required.

## Philosophy [Graduate]

Department of Philosophy 2-40 Assiniboia Hall University of Alberta Edmonton, Alberta T6G 2E7 E-mail: philgrad@ualberta.ca

#### **General Information**

The Department offers programs leading to the Master of Arts and Doctor of Philosophy degrees.

The fields in which advanced study may be pursued include ethics; social and political philosophy; aesthetics; feminist philosophy; logic; decision theory; philosophy of science, including philosophy of physics, biology, and cognitive science; epistemology; philosophy of language; philosophy of mind; metaphysics; ancient philosophy; modern philosophy from the 17th to the 20th century; and contemporary European and Anglo-American philosophy. Inquiries concerning possible subjects for research should be directed to the Graduate Coordinator.

#### **Entrance Requirements**

The Department's minimum admission requirements are an undergraduate degree with an average of 3.3 in the last two years of undergraduate work (or graduate work) at the University of Alberta, or an equivalent qualification from a recognized institution, and a TOEFL score of 550 (paper-based) or 88 (Internet-based) where applicable (see English Language Requirement).

#### Financial Assistance

Graduate students in the Department are eligible to compete for the general graduate awards listed at www.gradstudies.ualberta.ca and are encouraged to do so. Graduate assistantships are available within the Department; inquiries should be addressed to the Graduate Coordinator.

## **Graduate Program Requirements**

- The Degree of MA
- The Degree of PhD

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading Philosophy (PHIL).

## The Degree of MA (Philosophy) [Graduate]

### **Program Requirements**

The MA in Philosophy can be completed as a thesis-based degree or as a course-based degree.

Students must declare whether they intend to follow the thesis-based or course-based program at the beginning of their graduate studies.

Students wishing to change their program must obtain the approval of the Department's Associate Chair, Graduate Studies.

#### Thesis-based MA

The thesis-based MA program requires the completion of ★18 in coursework taken in the first two semesters of study, and a thesis. Required coursework depends on the area of specialization and the undergraduate background of the student.

#### Course-based MA

The course-based MA program normally consists of the completion of  $\star$ 24 in coursework, including a capping project. Required coursework depends on the area of specialization and the undergraduate background of the student.

It normally includes six graduate-level courses ( $\star$ 18), taken in the first two semesters of study, one ( $\star$ 3) graduate-level Directed Reading course (which may be taken in the Fall, Winter, or Spring semester), and one ( $\star$ 3) capstone research project (PHIL 900).

There is no language requirement for the degree of MA.

There is no residency requirement for the degree of MA.

## Length of Program

The time required to complete the MA will vary with the degree-track selected and the preparation of the candidate for graduate course work.

Thesis-based MA degree candidates who have completed training equivalent to that of graduation with Honors in philosophy from this Department will normally require a minimum of four semesters to complete the requirements for the thesis-based degree. Many candidates take up to two years to complete the requirements for the degree. The maximum time permitted to complete the thesis-based MA program is four years.

Course-based MA degree candidates who have completed training equivalent to that of graduation with Honors in philosophy from this Department will normally require at least three semesters to complete the requirement. Others may require one full calendar year. The maximum time permitted to complete the coursebased MA is six years.

Students with very little background in philosophy may be required to enrol in a qualifying year, or as a special student before being considered eligible for admission to a graduate degree program.

## The Degree of PhD (Philosophy) [Graduate]

### **Program Requirements**

The PhD program normally consists of  $\star$ 27 and the preparation and defence of a thesis on an approved topic.

Before taking the oral candidacy examination a student in the PhD program must have passed comprehensive examinations in three areas of the student's choice

Students whose field of research involves primary-source material in a language other than English shall in addition be required to pass an appropriate language examination.

There is a residency requirement of one year of full-time attendance at the University of Alberta for the PhD program.

#### Length of Program

The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken; however, a minimum of three and a half years is normally required.

## Physical Therapy [Graduate]

Department of Physical Therapy 2-50 Corbett Hall University of Alberta Edmonton, Alberta T6G 2G4 E-mail: mscpt@ualberta.ca

#### **General Information**

The Department of Physical Therapy offers a program leading to the Master of Science degree in Physical Therapy (MScPT).

The course-based MScPT program is designed to provide students with the clinical and evaluative skills necessary for the practice of physical therapy. This course-based master's degree is for students who hold undergraduate degrees in a variety of fields.

The MScPT program is currently offered at three campus locations: Edmonton, Camrose and Calgary. Of the students admitted to the program, a portion are admitted to our Edmonton, Camrose and Calgary campuses based on student preference. All students begin the program with a one month residency in Edmonton to study anatomy and establish initial face-to-face connections with the colleagues they will be working with via technology throughout the remainder of their program. With the MScPT program's distributed education model, students at all campuses complete the same core program of required courses as their colleagues enrolled at the other campuses. Each campus will offer unique elective opportunities reflective of local expertise and community partnerships in addition to the online electives available to all.

### GRADUATE STUDIES AND RESEARCH

#### **Entrance Requirements**

The Department's minimum admission requirements are an undergraduate degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\bigstar$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Prerequisite courses are required and include the following: Human Anatomy ( $\bigstar$ 3), Human Physiology ( $\bigstar$ 6), Human Movement ( $\bigstar$ 3), English ( $\bigstar$ 3), Statistics ( $\bigstar$ 3), Human Psychology ( $\bigstar$ 3) and Humanities or Social Sciences ( $\bigstar$ 3) – for examples see Programs and Certificates.

#### Indigenous Canadian History:

All students admitted to the MSc PT program are required to complete a course focused on Indigenous history in Canada. This is considered 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 first term of registration. This requirement may be fulfilled through the certificate version of the University of Alberta Indigenous Canada MOOC. (https://www.ualberta.ca/admissions-programs/online-courses/indigenous-canada)

Alternatively, an academic equivalent ( $\star$ 3) will be accepted. Should students complete a ( $\star$ 3) course in Indigenous Canadian History this may also count as the Humanities or Social Sciences prerequisite requirement.

Applicants who do not possess a degree or its academic equivalent from an academic institution recognized by the University of Alberta, in which the language of instruction is English must have an IELTS score of 7.5 or higher with no less than 7.0 in each band, or TOEFL score of 92 (Internet-based) or higher (or an equivalent approved English language examination result).

Additional weight will be given to the anatomy pre-requisite course in the GPA calculation for admissions. Anatomy must be completed within the previous five years, and must be completed by February 1 in the year of admission. All other prerequisite courses may be completed in the Winter Term of the year of admission (registration by February 1 and completion by June 1).

Activity courses in Physical Education, studio courses in Fine Arts, and practicum courses are not considered part of the required  $\star$  60 credits admission requirements and are not included in the calculation of the academic score.

A minimum of 30 hours of volunteer or paid work is required. Work must include direct contact involving interaction with persons with cognitive or physical disabilities at no more than two facilities. Applicants are required to submit a letter from the primary work supervisor verifying the volunteer/paid work experience.

The selection process is competitive and will be based mainly on the GPA in the most recent ★60 taken prior to January of the admission year. The grade point average of the prerequisite courses may be included in the admissions evaluation process. In addition to academic requirements an interview will be required. While preference will be given to residents of Alberta, approximately 15% of the available seats will be offered to out-of-province and international applicants. A minimum of two seats each year will be designated and offered to qualified applicants of Aboriginal ancestry.

Provincial Licensing: In order to be a practising physical therapist in the Province of Alberta, graduates from the course-based MScPT program at the University of Alberta are required to take the Physiotherapy Competency Examination (PCE) which consists of both written (Qualifying Examination) and clinical (Physiotherapy National Examination) examinations. The fee for the examination is the responsibility of the student. Information on the cost of the examination can be obtained from Physiotherapy Alberta - College and Association. Successful completion of the PCE will enable graduating physical therapists to practice in Alberta. Contact (780) 438-0338 for more information.

The deadline date for submitting applications for admission (including a listing of prerequisites completed and/or in progress) is January 15 for international applications and February 1 for domestic applications. Please contact the Department of Physical Therapy for further admission information. Normally deferral of admission will not be allowed.

#### **General Academic Standing Requirements**

The Department of Physical Therapy requires that all students pursuing a Master of Science in Physical Therapy (MScPT) degree must maintain a minimum cumulative grade point average of 3.0. A student whose cumulative grade point average falls below 3.0 at any time will typically be placed on Academic Probation and may be required to withdraw. Additionally, students in the MScPT program may fail only one academic or clinical course. If the Department of Physical Therapy and Faculty of Graduate Studies and Research recommend that the student be allowed to repeat the course, the student will be required to repeat the failed course the next time it is offered. Students must pass all courses within a term/block to progress to the next term/block. Students who fail more than one academic or clinical course may be required to withdraw from the program.

Academic Standing: See Academic Standing for policies on Academic Standing in the Faculty of Graduate Studies and Research. The Department of Physical Therapy has established procedures governing academic standing which are available on admission in the MScPT Student Manual. The Department of Physical Therapy has established appeal procedures so that students who encounter special problems relating to academic standing, grade or course concerns and program requirements are reviewed in an equitable manner. Regulations regarding appeals are included in the MScPT Student Manual provided on admission. Deadlines exist for submission of appeals. Contact the Department for details.

#### Financial Assistance

Fellowships and scholarships may be obtained from a number of external sources (e.g., Alberta Government, CPA, IODE, Arthritis Society, and others). More detailed information on these and other awards can be obtained in Graduate Financial Support, Graduate Financial Aid.

#### **Graduate Program Requirements**

- The Degree of MSc in Physical Therapy (course-based)
- The MScPT/PhD Combined Program
- The MBA/MScPT Combined Program

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the following subject headings:

Physical Therapy (PTHER)
Rehabilitation Medicine (REHAB)

## The Degree of MSc in Physical Therapy (course-based) [Graduate]

## Program Requirements

Students must complete  $\star$  96 in coursework, including  $\star$  3 of approved interprofessional coursework,  $\star$  3 of elective coursework, clinical placements (31 weeks), and a major project.

### Required Courses, including clinical placements (31 weeks):

- PTHER 500 Movement Analysis
- PTHER 504 Clinical Therapeutic Exercise
- PTHER 516 Anatomy
- PTHER 517 Clinical Placement I
- PTHER 518 Clinical Placement II
- PTHER 520 Clinical Placement III
- PTHER 521 Clinical Placement IV
- PTHER 522 Clinical Placement V
- PTHER 523 Clinical Placement VI
- PTHER 524 Professional Issues I
- PTHER 525 Professional Issues II
- PTHER 526 Professional Issues III
- PTHER 527 Professional Issues IV
- PTHER 528 Foundations of Physical Therapy
- PTHER 538 Musculoskeletal I
- PTHER 544 Cardiorespiratory
- PTHER 546 Adult Neurology
- PTHER 548 Physical Therapy and Chronic Disease Management
- PTHER 549 Musculoskeletal II
- PTHER 555 Therapeutic Physical Agents
- PTHER 563 Gross Motor Development and Pediatric Physical Therapy
- PTHER 565 Aging and Physical Therapy
- PTHER 566 Introduction to Neuroanatomy
- PTHER 567 Neuroscience for Rehabilitation
- PTHER 572 Basic Concepts in Evidence-Based Practice
- PTHER 573 Applied Concepts in Evidence-Based Practice
- PTHER 574 Advanced Concepts in Evidence-Based Practice
- PTHER 577 Foundations of Primary Care
- PTHER 578 Advanced Clinical Topics

#### Interprofessional coursework:

- REHAB 501 Introduction to Interprofessional Practice (★1)
- REHAB 502 Indigenous Health Interprofessional Practice (★1)
- REHAB 503 Interprofessional Practice Elective (★1) or equivalent

#### **Elective Course:**

Approved elective course work totaling  $\bigstar$  3. Courses completed prior to the MScPT course-based program will not be considered for the  $\bigstar$ 3 elective requirement

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PTHER 554 - Elective or equivalent

#### Major Project:

- PTHER 900 Evidence Based Practice Capping Assessment. A practical examination of clinical skills within an Objective, Structured Competency Examination (OSCE), and
- PTHER 901 Evidence Based Practice Clinical Capping Assessment. A group written case study analysis with individual oral examination. Students must successfully complete both components to pass the major project.

Course-based MScPT courses are organized in blocks, with time periods different from the usual university terms. The start and finish dates for the blocks will vary from year to year. Normally, block classes will begin one week before the usual term. The last day of block classes may extend past the last day of classes for a term. These block dates are available annually from the Department Office.

Each block will include lecture, lab, and seminar time. Students are advised that self-directed learning is an expectation of graduate students and will maximize their learning.

#### Clinical Placements

To be eligible for clinical placements the students must meet the following requirements:

- CPR Certification
- Police Information Check (see Fieldwork/Clinical Practice Requirements).
- Immunization Requirements (see University Infectious Diseases Regulation).
- Fit Testing for Respirator Mask, as required
- For students requesting Student Accessibility Services (SAS) accommodation and for students returning to the program after a prolonged period of
  absence due to illness, a medical examination and relevant documentation may be required prior to clinical practice.

Details on these clinical requirements are available in the MScPT Student Manual. Note that all fees and costs for these clinical requirements are the student's responsibility (e.g., travel, visa, accommodation, health and travel insurance, course registration). Students must be prepared to travel throughout the province in order to obtain the placement experiences that are required for graduation. Students may choose to apply for a national or international placement at designated times.

Students must have completed an acceptable level of clinical performance over the course of the MScPT program in order to graduate. A student could fail a clinical placement and/or be required to do remedial work if there were evidence of:

- Unsafe clinical practice
- Unsatisfactory professional conduct
- Clinical/professional skills are not at a suitable level of performance for graduation

As per regulations, the student would have the right to appeal any conditions put on this remedial work (see Faculty of Rehabilitation Medicine's Appeals Procedures document). A student who fails a clinical placement may appeal that decision. Information regarding appeal procedures is available in the MScPT Student Manual.

The Dean, or supervisor acting on behalf of the Dean, may immediately deny assignment of a student to, withdraw a student from, or vary terms, conditions, or site of practicum/clinical placement if the Dean or supervisor has reasonable grounds to believe that this is necessary in order to protect the public interest.

Refer to Practicum Intervention Policy for additional information.

### GRADUATE STUDIES AND RESEARCH

Assistance/Accommodation: Students who may require assistance/accommodation due to personal circumstances and/or conditions affecting mobility, vision, hearing, learning and physical or mental health, should refer to the Faculty of Rehabilitation Medicine Student Accommodation Procedures document from the Faculty of Rehabilitation Medicine Office and to Student Accessibility Services.

To protect the public, students returning to the MScPT Program from a prolonged leave of absence will be required to successfully pass a screening examination (written and practical) to ensure knowledge and skills are at a proficient level prior to beginning a clinical placement. In the event that students do not successfully pass the screening exam after two attempts, the department's General Academic Standing Requirements will apply. (see Physical Therapy [Graduate] General Academic Standing Requirements).

#### Length of Program

A minimum of 28 calendar months will normally be required to complete the program. Dependent on clinical placement availability, completion of the program may be 31 months. Normally the MScPT program will be completed within a maximum of three consecutive academic years.

Students will move through the blocks sequentially as a cohort. In the event that a course is failed or deferred, there will be an impact on the time required to complete the program.

The maximum time to complete the course-based MScPT program as set by the Faculty of Graduate Studies and Research is six years.

## The MScPT/PhD Combined Program (Physical Therapy) [Graduate]

The Department of Physical Therapy and the Faculty of Rehabilitation Medicine offer a program of combined study which permits highly qualified students to earn both the MSc in Physical Therapy and the PhD in Rehabilitation Sciences after five years of fulltime study.

Prospective students will apply to the MScPT/PhD combined program and must meet the entrance requirements of both programs. Students have the option of starting in the clinical MScPT program or in the PhD program and the possible flow of the program is described on the Rehabilitation Medicine website.

Applications will be reviewed by both the MScPT Admissions committee and the Rehabilitation Science PhD Program Committee. Admission will be recommended only for those students judged to have the ability and motivation to handle the significant demands of the combined program. At the time of application, students should have an identified area of research study and a PhD supervisor who has agreed to supervise their program. In addition to new applicants, students already admitted to the MScPT or PhD program are eligible to apply for the combined program in the first year of study.

## **Entrance Requirements**

Applicants to the combined MScPT/PhD program must meet the entrance requirements of both the MScPT program and the PhD in Rehabilitation Science program (see Rehabilitation Science). They must have completed a four-year honors baccalaureate degree or a master's degree in a related field from a recognized academic institution. Interested students must have completed the required prerequisite courses for the MScPT program and show evidence of research potential as demonstrated by scholarly work. In addition, they must meet the GPA and English language proficiency requirements of each program.

## <u>Program Requirements</u>

Students in the combined program complete all academic and clinical requirements of both programs, with efficiencies proposed to integrate common content from each program. The Program requirements for the MScPT and the PhD in Rehabilitation Science can be found in the University Calendar. The PhD thesis will fulfill the research capping requirement (PTHER 900) for the MScPT. Content in the MScPT professional issues and evidence based practice courses fulfil

### GRADUATE STUDIES AND RESEARCH

the requirement for REHAB 603. PTHER 574, an advanced evidence based practice course may be used as a PhD elective by combined students if the content (program evaluation) is pertinent to their research area – otherwise combined students will be exempt from taking PTHER 574. The sequence of coursework and other requirements will be determined by the candidate's PhD supervisory committee in consultation with the Graduate Program Coordinator and Academic Coordinator of Clinical Education in the Department of Physical Therapy.

Students enrolled in the combined MScPT/PhD program will not have the option of transferring to the MScPT program or the PhD Rehabilitation Sciences program.

#### Length of Program

A minimum of five calendar years will normally be required to complete the combined MScPT/PhD program. The time required to complete the program may vary for individual candidates but cannot exceed the statutory limits of the Faculty of Graduate Studies and Research.

## The MBA/MScPT Combined Program (Physical Therapy) [Graduate]

The Department of Physical Therapy and the Faculty of Business offer a program of combined study which permits highly qualified students to earn both the MSc in Physical Therapy and the MBA degrees after three and a half years of fulltime study. Each student must first be admitted to the MScPT, Department of Physical Therapy. After completing the first 18 months of the MScPT, students are eligible to apply to the combined MBA/MScPT program.

Refer to The MBA/MScPT Combined Program (Business) [Graduate] under Business for program details.

## Physics [Graduate]

Department of Physics
4-183 CCIS
University of Alberta
Edmonton, Alberta T6G 2E!
E-mail: phys-gradprogram@ualberta.ca

#### **General Information**

Programs leading to the degrees of Master of Science and Doctor of Philosophy are open to suitable graduates in physics, engineering physics, geophysics, or equivalent programs. The Department of Earth and Atmospheric Sciences in conjunction with the Department of Physics also offers a one-year Master of Science (MSc) degree in Integrated Petroleum Geosciences (refer to The Degrees of MSc in Integrated Petroleum Geosciences (Earth and Atmospheric Sciences) [Graduate])

The Department's focus areas of research, each of which includes experimental, observational, computational and theoretical components, are the following:

- Astrophysical Sciences: astronomy, cosmology, general relativity and black hole physics, computational plasma physics, fusion, laboratory plasmas, magnetic
  confinement, auroral, magnetospheric and space physics, radiation belt physics.
- Condensed Matter Physics and Material Science: biophysics, dynamic processes at surfaces, electron and scanning probe microscopy, high Tc superconductivity, magnetism, nanoscale physics, phase transitions in porous media, ultrafast laser spectroscopy, ultrafast microscopy.

### GRADUATE STUDIES AND RESEARCH

- Particle Physics: high energy particle physics, particle astrophysics, nuclear astrophysics, string theory and supersymmetry, precision tests of the standard model. (Experimental work is conducted at CERN, Fermilab, Sandia, TRIUMF.)
- Geophysics: fluids in porous media, geodynamics, magneto-telluric methods, paleomagnetism, rock magnetism, rock physics, seismology.

Individual programs will be arranged in consultation with the Associate Chair of the Department of Physics and members of the Department. Information, including more detailed program requirements, may be obtained by contacting the Associate Chair of the Department of Physics.

#### **Entrance Requirements**

The Department's admission requirements are an undergraduate degree in physics, engineering physics, geophysics or an equivalent program, normally with an average of 3.2 in the last two years of undergraduate work (or graduate work) at the University of Alberta, or an equivalent qualification from a recognized institution. Where applicable (refer to English Language Requirement), candidates must pass the TOEFL test with a score of at least 550 (paper-based) or 88 (Internet-based, with a minimum of 20 on each subtest).

#### Financial Assistance

A number of graduate assistantships are available. Applicants are automatically considered for this assistance when they are accepted into the graduate program.

#### <u>Graduate Program Requirements</u>

- 1. The Degree of MSc
- 2. The Degree of PhD

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the following subject headings:

Geophysics (GEOPH)
Physics (PHYS)

## The Degree of MSc (Physics) [Graduate]

## Program Requirements

A minimum of ★12 is generally required of students in the MSc program. Of these, two courses (★6) must be taken in the Department of Physics, and two courses (★6) must be at the 500-level or above. Students in the Geophysics specialization must take GEOPH 521 Global Geodynamics . All other students must have credit in at least one of the following core physics courses: PHYS 511 Advanced Quantum Mechanics I, PHYS 524 Classical Electrodynamics , and PHYS 530 Statistical Mechanics . Specific course requirements are determined by the focus area in which the student is studying. The student's supervisory committee may also make additional requirements. A research project, the results of which are to be presented in a thesis and an oral examination, is also required.

## **GRADUATE STUDIES AND RESEARCH**

A supervisory committee of three faculty members is appointed for each graduate student. Within the first year of registration in the program, the committee makes a formal recommendation on the candidate's potential for graduate work. At this time students may in certain cases be permitted to transfer directly to a PhD program if their progress should warrant such a transfer.

There is no language requirement for the degree of MSc.

The minimum period of residence for the thesis MSc is two four-month terms of full-time attendance at the University of Alberta.

#### Length of Program

The time required will vary according to the previous training of the candidate and the nature of the research undertaken; however, an average of two years is normally required to complete the MSc program.

## The Degree of PhD (Physics) [Graduate]

#### Program Requirements

Students in the PhD program are required to take a minimum of \$\darksq24\$ after the equivalent of the Honors BSc degree from the University of Alberta. These include the courses required for the MSc program. Students in the Geophysics specialization must take GEOPH 521 Global Geodynamics. All other students must pass two of the following core physics courses: PHYS 511 Advanced Quantum Mechanics I, PHYS 524 Classical Electrodynamics, and PHYS 530 Statistical Mechanics, or equivalent courses. Specific course requirements may be determined by the focus area in which the student is studying. The student's supervisory committee may also make additional requirements. All students in the PhD program are advised to take at least \$\div 6\$ in fields of study different from their own research areas. When the course requirements are successfully completed, the student's research is presented orally and in written (thesis) form to an examining committee. No language other than English is required for the degree.

The minimum period of residence is two academic years of full-time attendance at the University of Alberta.

## Length of Program

The minimum time for completion of a PhD degree is three academic years of study and research after the Honors BSc degree or two academic years after the equivalent of the MSc degree at the University of Alberta. Normally the PhD degree is completed within five years of the BSc, or within four years of the MSc.

## Physiology [Graduate]

Department of Physiology
7-55 Medical Sciences Building
University of Alberta, Edmonton, Alberta T6G 2H7
E-mail: grad.physiology@med.ualberta.ca
www.physiology.ualberta.ca

#### **General Information**

Facilities are available for graduate training leading to the Master of Science and Doctor of Philosophy degrees. The Department is well equipped for most fields of physiological research, including various areas of endocrinology, cellular physiology, neurophysiology, and biophysics.

Information and requests for application forms for admission may be obtained from the Department. Students may also write to the Chair of the Department in regard to their special interests and related matters.

#### **Entrance Requirements**

The Department's minimum admission requirements are an undergraduate degree with an average of at least 3.0 in the last two years of undergraduate work (or graduate work) at the University of Alberta, or an equivalent qualification from a recognized institution, and a TOEFL score of 580 (paper-based) or 95 (Internet-based) where applicable (see English Language Requirement).

#### Financial Assistance

Financial assistance in the form of graduate assistantships is usually available for graduate students.

#### **Graduate Program Requirements**

- The Degree of MSc
- The Degree of PhD

#### **Graduate Courses**

Graduate Courses can be found in Course Listings, under the subject heading Physiology (PHYSL).

## The Degree of MSc (Physiology) [Graduate]

## Program Requirements

Required courses depend on the area of specialization and the undergraduate background of the student; however, the program generally consists of  $\star$ 9 (three single-term courses) and a thesis.

The minimum period of residence is two four-month terms of full-time attendance at the University of Alberta.

## Length of Program

The time required to complete the MSc will vary with the individual candidate; however, a minimum of 18 months is normally required.



## The Degree of PhD (Physiology) [Graduate]

#### **Program Requirements**

The PhD program generally consists of  $\bigstar$ 9 (three single-term courses) and the preparation and defence of a thesis on an approved topic. An oral candidacy examination in the student's area of research must also be passed, at least six months prior to the final defence.

The minimum period of residence is two academic years of full-time attendance at the University of Alberta.

#### Length of Program

The time required to complete the PhD will vary according to the previous training of the applicant and the nature of the research undertaken; however, a minimum of three years is normally required.

## Political Science [Graduate]

Department of Political Science 10-16 Tory Building University of Alberta Edmonton, Alberta T6G 2H4 E-mail: psgrad@ualberta.ca

#### **General Information**

The Department of Political Science offers programs leading to the Master of Arts and Doctor of Philosophy in Political Science, and the Master of Arts in Policy Studies.

The following fields of study are offered in the master's and doctoral programs: Canadian politics, comparative politics, gender and politics, international relations, and political philosophy/theory.

## **Entrance Requirements**

The Department's minimum admission requirements are an undergraduate degree with an average of 3.3 in the last two years of undergraduate work (or graduate work) at the University of Alberta, or an equivalent qualification from a recognized institution.

For all programs, an undergraduate degree in Political Science or close cognates such as International Relations or International Political Economy is strongly preferred. Applicants with other undergraduate majors should normally have at least equivalent to ★30 graded credits of coursework in Political Science.

For the MA in Policy Studies, an undergraduate degree in Public Policy is also acceptable. For the MA in Policy Studies course-based route, relevant work experience in the policy community is required.

A TOEFL score of 100 (Internet-based) or 600 (paper-based) or an equivalent score on a test acceptable to FGSR is required where applicable.

## **GRADUATE STUDIES AND RESEARCH**

A statement of intent, a writing sample, and a CV are also required.

For more information on the University's commitment to the recruitment, retention, and graduation of Aboriginal students see Aboriginal Applicants.

#### Financial Assistance

A number of graduate assistantships are available for qualified students.

#### **Graduate Program Requirements**

- The Degree of MA
- The Degree of MA in Policy Studies (Political Science)
- The Degree of PhD

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading Political Science (POL S).

## The Degree of MA (Political Science) [Graduate]

## **Program Requirements**

Two MA routes are available: a) a thesis-based MA and b) a course-based MA for both full- and part-time students.

For the thesis-based MA, normally  $\bigstar$ 18 of graduate-level courses and a thesis (registering in a minimum of  $\bigstar$ 6 of thesis registrations) are required. For the course-based MA,  $\bigstar$ 24 of graduate-level courses and a project (POL S 900) are required.

There is no language requirement for the MA degree.

The minimum period of residence for full-time programs is two four-month terms of full-time attendance at the University of Alberta.

## Length of Program

The time required to complete the MA will vary with the program and candidate. Full-time students in the MA thesis-based program will normally complete the program within 18 months. Full-time students in the MA coursebased program will normally complete the program within 12 months. A part-time MA student must maintain continuous registration and complete the program in four years.



## The Degree of MA in Policy Studies (Political Science) [Graduate]

### **Program Requirements**

Students are admitted to either the practicum-based MA route or the course-only MA and may register full-time or part-time.

For both routes  $\bigstar$  27 of graduate-level courses are required as follows:

#### Practicum-based route

#### Required courses ( $\bigstar$ 15):

- POL S 527 Power, Politics, and Policymaking in Canada
- POL S 532 Indigenous Engagement, Governance, and Policy
- POL S 803 Policy Studies Practicum I
- POL S 804 Policy Studies Practicum II
- POL S 902 Policy Studies Capstone Seminar

#### Electives (★12)

Students are permitted to take up to  $\star$ 6 (two  $\star$ 3 courses) from outside the department, subject to departmental approval.

#### Course-only route

#### Required courses $(\bigstar 9)$ :

- POL S 527 Power, Politics, and Policymaking in Canada
- POL S 532 Indigenous Engagement, Governance, and Policy
- POL S 902 Policy Studies Capstone Seminar

#### Electives (★18)

Students are permitted to take up to  $\bigstar$ 6 (two  $\bigstar$ 3 courses) from outside the department, subject to departmental approval.

## Language Requirement

There is no language requirement.

## Residency Requirement

The minimum period of residence for full-time programs is two four-month terms of full-time attendance at the University of Alberta.

#### Length of Program

The time required to complete the program will vary with the program and candidate. Full-time students in the program will normally complete the program within 20 months.

## The Degree of PhD (Political Science) [Graduate]

#### Program Requirements

A PhD student with an MA or equivalent in political science is normally required to complete a minimum of ★18 at the graduate level. Students will normally be required to complete the core courses in each of their two chosen fields of concentration. Students must take and pass written comprehensive examinations in any two of the following five fields: Canadian politics; comparative politics; gender and politics; international relations; political philosophy/theory. The student's supervisor or supervisory committee may also determine that a special skill or area is essential to the student's program and may require additional coursework. It is normally expected that all coursework will be complete within two terms and that students would take comprehensive exams and defend their dissertation proposals during the second year in the program.

Students will also be expected to prepare a thesis proposal for oral candidacy examination. This normally occurs within eight months of passing the comprehensive exams, i.e., within the third year of the program. The thesis proposal must be approved and the oral candidacy examination passed before students become full doctoral candidates.

Before defending the thesis each student must demonstrate proficiency in a language other than English. Students taking Canadian politics as a field will normally be required to take French.

All candidates for the PhD must prepare an acceptable thesis embodying the results of their research. Candidates will be examined orally on their thesis results

The minimum period of residence is two academic years of full-time attendance at the University of Alberta.

## Length of Program

A minimum of four years is normally required to complete the PhD.

## Psychiatry [Graduate]

Department of Psychiatry
1E1.01 Mackenzie Health Sciences Centre
University of Alberta
Edmonton, Alberta T6G 2B7
E-mail: psychiat@ualberta.ca
https://www.ualberta.ca/psychiatry

#### **General Information**

The Department of Psychiatry offers outstanding opportunities for students wishing to pursue graduate studies at both the master's and doctoral level. Faculty members are known internationally for their research, covering most areas relevant to psychiatry and neuropsychiatry.

The MSc and PhD programs may be taken with a specialization in Epidemiology, Forensic Psychiatry, Neurochemistry, Psychopharmacology, or Psychotherapy.

For further information contact the Department of Psychiatry.

#### **Entrance Requirements**

The Department's minimum admission requirements are an undergraduate degree with an admission GPA of at least 3.2 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\star$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Where applicable, applicants must have a minimum TOEFL score of at least 92 (Internet-based) or equivalent (refer to English Language Requirement).

Applicants are also required to submit three letters of reference, a current curriculum vitae, a brief description of the proposed research, and a letter from the prospective supervisor, detailing stipend amount and source. Prospective students are encouraged to contact directly the faculty members whose research is of interest to them.

For Canadian citizens, the application deadlines are July 1 for Fall term, November 1, for Winter term, March 1 for Spring term, and May 1 for Summer term.

For International students, the application deadlines are April 1 for Fall term, August 1 for Winter term, November 1 for Spring term and January 1 for Summer term.

#### Financial Assistance

All supervisors are responsible for financial support of full-time graduate students. Financial support will usually be provided from the supervisor's grants, awards/scholarships to the student, or a combination of the two.

## **Graduate Program Requirements**

- The Degree of MSc
- The Degree of PhD



#### **Graduate Courses**

Graduate courses can be found in Course Listings under the subject heading Psychiatry (PSYCI).

## The Degree of MSc (Psychiatry) [Graduate]

### **Program Requirements**

Students are required to complete a minimum of ★6 in coursework and a thesis.

#### Coursework

- PSYCI 511 unless exempt.
- Coursework will be specified by the Supervisory Committee.
- Courses may be taken from the Department of Psychiatry or from outside the department, with permission.
- Additional coursework may be required.

#### Thesis

Registration in 900-level THES.
 Students are required to prepare and defend a thesis based on research conducted.

#### **Grand Rounds**

Students are required to participate in Grand Rounds, and must make one oral presentation per academic year.

#### Research Day

Students are required to participate in the annual Psychiatry Research Day.

#### Ethics Requirement

Students may complete the ethics requirement by

- Participating in the bi-annual Ethics and Scientific Integrity day with department approval, and
- Participating in the Graduate Ethics Training (GET) course offered by FGSR.

There is no second language requirement for the MSc.

#### Length of Program

The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken; however, a minimum of 12 months is normally required.

The maximum time to complete the thesis-based MSc program as set by the Faculty of Graduate Studies and Research is four years.

## The Degree of PhD (Psychiatry) [Graduate]

#### **Program Requirements**

Students are required to complete a minimum of  $\bigstar 9$  in coursework and a thesis.

#### Coursework

- PSYCI 511 unless explicitly exempt
- Coursework will be specified by the Supervisory Committee.
- Courses may be taken from the Department of Psychiatry or from outside the department, with permission.
- Additional coursework may be required.

#### Thesis

Registration in 900-level THES.
 Students are required to prepare and defend a thesis based on research conducted

#### **Grand Rounds**

Students are required to participate in Grand Rounds, and must make one oral presentation per academic year.

#### Research Day

Students are required to participate in the annual Psychiatry Research Day.

#### Thesis Proposal and Candidacy Exam

Within the first two years of the PhD program, students must submit a written thesis proposal document which will be evaluated by the Student's Supervisory Committee.

The candidacy examination is to be held within three years of the commencement of the PhD program when most, if not all, of the course work is completed and the research project is started or well defined.

#### **Ethics Requirement**

Students may complete the ethics requirement by

- Participating in the bi-annual Ethics and Scientific Integrity day with department approval, and
- Participating in the Graduate Ethics Training (GET) course offered by FGSR.

There is no second language requirement for the PhD.

#### Length of Program

The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken; however, a minimum of three years is normally required.

The maximum time to complete the PhD program as set by the Faculty of Graduate Studies and Research is six years.

## Psychology [Graduate]

Department of Psychology P217 Biological Sciences Building University of Alberta Edmonton, Alberta T6G 2E9 Attn.: Graduate Program Assistant E-mail: psygrad@ualberta.ca

## General Information

The Department of Psychology offers graduate work leading to the degrees of MA, MSc, and PhD in a variety of areas of psychology, including: behaviour, systems, and cognitive neuroscience; cognition; comparative cognition and behaviour; developmental science; and social and cultural psychology.

## **Entrance Requirements**

The Department's minimum admission requirements are an undergraduate degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\bigstar$ 60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Applicants are required to submit scores on the Graduate Record Exam General Test. This requirement can be waived with the explicit written consent of the applicant's potential supervisor(s).

Where applicable, applicants must have a minimum TOEFL score of 88 with a score of at least 20 on each individual skill area (Internet-based). An acceptable score on another approved English language proficiency exam will suffice where the Internet-based TOEFL is not available (see English Language Requirement).

All applicants are also required to submit a statement of their research interests and three letters of recommendation, and must identify a potential supervisor.

## ALBERTA

## **GRADUATE STUDIES AND RESEARCH**

The deadline for submitting applications for admission is January 15 for the following September.

#### Financial Assistance

Graduate assistantships for research and teaching are normally available for students who maintain satisfactory performance in their assistantship duties and progress toward a degree within expected time limits. In addition, a certain number of assistantships are available during the summer.

#### **Graduate Program Requirements**

- The Degree of MA (Psychology) [Graduate]
- The Degree of MSc (Psychology) [Graduate]
- The Degree of PhD (Psychology) [Graduate]

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading Psychology (PSYCO).

## The Degree of MA (Psychology) [Graduate]

### **Program Requirements**

Normally, students are admitted into the master's program with a bachelor's degree. It is expected that students will generally continue in the PhD program after completing their master's.

Students are required to complete a minimum of  $\bigstar$ 17 in coursework and a thesis.

#### Required courses $(\bigstar 8)$

- PSYCO 502 Professional and Ethical Issues (★2)
- PSYCO 531 Design and Analysis in Psychological Research I (★3)
- PSYCO 532 Design and Analysis in Psychological Research II (★3)

#### Elective courses $(\bigstar 9)$

- one  $\bigstar 3$  500- or 600-level course in the student's research focus
- two ★3 500- or 600-level courses in related areas of psychology
- Focal and related courses are determined by the student's supervisory committee
- PSYCO 600 Individual Studies may be used only once to satisfy either requirement
- Courses from outside of the Department of Psychology may be taken with approval of the supervisor committee
- Additional coursework may be required

#### **Thesis**

Registration in 900-level THES

#### First-Year Research Project

Master's students are required to complete a first-year research project by August 31 of the first year of their program

#### Ethics requirement

The graduate ethics training requirement is met with PSYCO 502.

#### Language Requirement

No language other than English is required for the master's degree.

#### Residence Requirement

The minimum period of residence is two four-month terms of full-time attendance at the University of Alberta.

## Length of Program

Students are normally expected to complete the program in two years. However, the time required to complete the program will vary with the individual candidate. Students are evaluated annually with respect to progress in the program.

The maximum time to complete the thesis-based MA program as set by the Faculty of Graduate Studies and Research is four years.

## The Degree of MSc (Psychology) [Graduate]

## Program Requirements

Normally, students are admitted into the master's program with a bachelor's degree. It is expected that students will generally continue in the PhD program after completing their master's.

Students are required to complete a minimum of  $\bigstar$ 17 in coursework and a thesis.

#### Required courses (★8)

- PSYCO 502 Professional and Ethical Issues
- PSYCO 531 Design and Analysis in Psychological Research I

PSYCO 532 - Design and Analysis in Psychological Research II

#### Elective courses $(\bigstar 9)$

- one 500- or 600-level course  $(\pm 3)$  in the student's research focus
- two 500- or 600-level courses (★3 each) in related areas of psychology
- Focal and related courses are determined by the student's supervisory committee
- PSYCO 600 Individual Studies may be used only once to satisfy either requirement
- Courses from outside of the Department of Psychology may be taken with approval of the supervisor committee
- Additional coursework may be required

#### Thesis

Registration in 900-level THES

#### First-Year Research Project

Master's students are required to complete a first-year research project by August 31 of the first year of their program

#### Ethics requirement

The graduate ethics training requirement is met with PSYCO 502.

#### Language Requirement

No language other than English is required for the master's degree.

#### Residence Requirement

The minimum period of residence is two four-month terms of full-time attendance at the University of Alberta.

## Length of Program

Students are normally expected to complete the program in two years. However, the time required to complete the program will vary with the individual candidate. Students are evaluated annually with respect to progress in the program.

The maximum time to complete the thesis-based MSc program as set by the Faculty of Graduate Studies and Research is four years.

## The Degree of PhD (Psychology) [Graduate]

Normally, students are admitted into the PhD program after completing either a bachelor's or a master's degree program.

#### Program Requirements

#### Coursework

- Students entering the PhD program with a bachelor's degree are normally required to complete a minimum of ★17 of graduate-level coursework as defined in the master's programs in Psychology
- Students entering the PhD program with a master's degree from another university are required to take PSYCO 502 (★2)
- Additional course work may be required by the supervisory committee, in consultation with the Associate Chair for Graduate Studies, to ensure
  that a student is adequately prepared for research in the student's areas of concentration

#### Thesis

Registration in 900-level THES. Students must complete a written dissertation proposal, due after successful completion of the candidacy exam.

#### First-Year and Second-Year Research Projects

Students entering the PhD program with a bachelor's degree are required to complete a first-year research project by August 31 of the first year of their program, and a second-year research project during the second year in the PhD program.

#### Qualifying Exam

A written qualifying exam must be completed satisfactorily prior to scheduling the candidacy exam. The structure and format of the qualifying exam is determined by the supervisory committee.

#### Candidacy Exam

Students entering the PhD program with a master's degree are normally expected to take their candidacy exam and to submit their dissertation proposal no later than the end of their first year in the PhD program. Students entering the PhD program with a bachelor's degree are required to complete their candidacy exam by the end of the third year of their program.

#### Ethics requirement

The graduate ethics training requirement is met with PSYCO 502. Students who met this requirement in their master's program do not need to take it again.

## Language Requirement

No language other than English is required for the degree.

### Residence Requirement

For students entering the PhD program with a bachelor's degree the minimum period of residence is three academic years of full-time attendance at the University of Alberta.

For students entering the PhD program with a master's degree the minimum period of residence is two academic years of full-time attendance at the University of Alberta.

#### Length of Program

Students are normally expected to complete the program in four years when entering with a bachelor's, three years when entering with a master's from another institution, and two years when entering with a master's from the University of Alberta. However, the time required to complete the program will vary with the individual candidate. Students are evaluated annually with respect to progress in the program.

The maximum time to complete the PhD program as set by the Faculty of Graduate Studies and Research is six years.

## Public Health [Graduate]

School of Public Health
3-300 Edmonton Clinic Health Academy
11405-87 Avenue
University of Alberta
Edmonton, Alberta T66 1C9
E-mail: sph.programs@ualberta.ca
www.publichealth.ualberta.ca

#### **General Information**

The School of Public Health offers a course-based degree of Master of Public Health (MPH) with several specializations, a thesis-based degree of Master of Science (MSc) with several specializations, a PhD with several specializations.

## **Entrance Requirements**

The School's minimum GPA requirements for the Master's degrees (MPH and MSc) are those set out as minimum acceptable standards by the Faculty of Graduate Studies and Research. These include a baccalaureate degree or its academic equivalent in a relevant field from an academic institution recognized by the University of Alberta, with

### GRADUATE STUDIES AND RESEARCH

a grade point average of at least 3.0 on the 4-point scale over the last  $\star$  60; at least one year of relevant experience is required for the MPH degree; and preference will be given for those applicants that have some relevant experience for the MSc degree.

The School's minimum GPA requirements for the Doctoral degree (PhD) are higher than those set out as acceptable standards by the Faculty of Graduate Studies and Research. These include a master's (thesis- or course-based) degree, or its academic equivalent in a relevant field from an academic institution recognized by the University of Alberta, with a grade point average of at least 3.4 on the 4 point scale over the last  $\star 60$ ; preference will be given to applicants who have demonstrated high-level research aptitude and competence in the application of their discipline to research. The evidence for aptitude and competence includes previous engagement with in-depth public health research/practice, research scholarships or fellowships, and/or a research publication track record.

If required (see English Language Requirement), a minimum overall score on an approved English language examination as described below: PTE Academic score of 59; a minimum acceptable TOEFL score of 580 (paper-based) or a total score of 92 with a score of at least 20 on each of the individual skill areas (Internet-based); or a minimum overall band score of 7.0, with at least 6 on each test band on the IELTS. Applicants should arrange for their English language test results to be sent directly to the School.

Applicants are also required to provide

- A current curriculum vitae
- Three letters of reference
- At least one year of relevant experience or significant volunteer experience is preferred.
- a. Course-based applicants A letter of not more than 800 words that outlines a synthesis of the applicant's background (scholastic/academic training and work/research experience), motivation for applying to this degree and career goals.
  - b. Thesis-based applicants A letter of not more than 800 words that outlines the anticipated research topic(s) or areas of thesis research. The applicant should also identify appropriate faculty members from the School of Public Health as a potential supervisor.

#### Financial Assistance

All students admitted to the School of Public Health must establish their own funding prior to their admission.

Graduate students can finance their studies at the University of Alberta in several ways. Some financial programs are administered by the Faculty of Graduate Studies and Research, and others are administered by other campus offices or outside organizations.

Students in public health are eligible to compete for the general graduate awards listed at www.gradstudies.ualberta.ca.

Students are urged to seek awards from other agencies, such as SSHRC, NSERC, CIHR, AHFMR, etc.

Support may be available to some students from research grants held by individual staff members. The amount of support will vary with the nature of the research grant and the regulations of the granting agency.

## **Graduate Program Requirements**

- 1. The Degree of Master of Public Health (course-based)
- 2. The Degree of Master of Public Health in Applied Biostatistics (course-based)
- 3. The Degree of Master of Public Health in Environmental and Occupational Health (course-based)
- 4. The Degree of Master of Public Health in Epidemiology (course-based)
- 5. The Degree of Master of Public Health in Food Safety (course-based)
- 6. The Degree of Master of Public Health in Global Health (course-based)
- 7. The Degree of Master of Public Health in Health Policy and Management (course-based)

## **GRADUATE STUDIES AND RESEARCH**

- 8. The Degree of Master of Public Health in Health Promotion (course-based)
- 9. The Degree of MSc in Public Health in Clinical Epidemiology (thesis-based)
- 10. The Degree of MSc in Public Health in Environmental Health Sciences (thesis-based)
- 11. The Degree of MSc in Public Health in Epidemiology (thesis-based)
- 12. The Degree of MSc in Public Health in General Public Health (thesis-based)
- 13. The Degree of MSc in Public Health in Global Health (thesis-based)
- 14. The Degree of MSc in Public Health in Health Policy Research (thesis-based)
- 15. The Degree of MSc in Health Promotion and Socio-behavioural Sciences (thesis-based)
- 16. The Degree of MSc in Public Health in Health Technology Assessment
- 17. The Degree of MSc in Public Health in Occupational Health
- 18. The Degree of PhD in Public Health in the research area of Epidemiology (thesis-based)
- 19. The Degree of PhD in Public Health in the research area of Health Promotion and Socio-behavioural Sciences (thesis-based)
- 20. The Degree of PhD in Public Health in the research area of Health Services and Policy Research (thesis-based)
- 21. The Degree of PhD in Public Health in the research area of Public Health (thesis-based)
- 22. Embedded Graduate Certificate in Communicable Diseases

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading School of Public Health (SPH).

## The Degree of Master of Public Health (course-based) [Graduate]

## **Program Requirements**

All Master of Public Health students must complete the following:

#### Core Courses ( $\bigstar$ 24):

- SPH 530 This is Public Health
- SPH 535 Using and Creating Evidence in Public Health Practice
- SPH 536 Engagement for Public Health Action
- SPH 541 Leadership and Professional Practice I
- SPH 546 Leadership and Professional Practice II
- SPH 547 Leadership and Professional Practice III and Capping Project
- SPH 598 Field Practicum

#### Note:

Students must also declare a Specialization and complete the Specialization and Elective courses, outlined below according to Specialization.

## Length of Program

The minimum time to complete the Master of Public Health degree is 20 months. The maximum time permitted for completion of the program is six years (part- or full-time) from the date of first registration.

# The Degree of Master of Public Health in Applied Biostatistics (course-based) [Graduate]

### **Program Requirements**

In addition to the Master of Public Health Core Courses ( $\star$ 24), students must complete the following for a total of ( $\star$ 45):

### Specialization Courses ( $\bigstar$ 18):

- SPH 519 Biostatistics I
- SPH 596 Epidemiology Methods I
- SPH 619 Biostatistics II
- SPH 692 OR
- SPH 693 Critical Appraisal of Health Science Literature in Epidemiology
- SPH 696 Epidemiology Methods II
- SPH 719 Biostatistics III

#### Approved Elective Courses $(\bigstar 3)$ :

 $(\bigstar 3)$  of graduate-level courses approved by the student's Academic Advisor.

## Length of Program

The minimum time to complete the Master of Public Health degree is 20 months. The maximum time permitted for completion of the program is six years (part- or full-time) from the date of first registration.



# The Degree of Master of Public Health in Environmental and Occupational Health (course-based) [Graduate]

#### **Program Requirements**

In addition to the Master of Public Health Core Courses ( $\star$ 24), students must complete the following for a total of ( $\star$ 45):

#### Specialization Courses ( $\star$ 15):

- SPH 506 Public Health Biology
- SPH 511 Environmental Contaminant Exposure Assessment
- SPH 512 Environmental Risk Assessment and Management
- SPH 514 Introduction to Environmental Health
- SPH 522 Principles of Toxicology

#### Approved Elective Courses $(\bigstar 6)$ :

 $(\bigstar 6)$  of graduate-level courses approved by the student's Academic Advisor.

#### Length of Program

The minimum time to complete the Master of Public Health degree is 20 months. The maximum time permitted for completion of the program is six years (part- or full-time) from the date of first registration.

## The Degree of Master of Public Health in Epidemiology (course-based) [Graduate]

## **Program Requirements**

In addition to the Master of Public Health Core Courses ( $\star$ 24), students must complete the following for a total of ( $\star$ 45):

## Specialization Courses ( $\bigstar$ 15):

- SPH 519 Biostatistics I
- SPH 596 Epidemiology Methods I
- SPH 619 Biostatistics II
- SPH 696 Epidemiology Methods II
- SPH 693 Critical Appraisal of Health Science Literature in Epidemiology OR
- SPH 697 Epidemiology and Control of Infectious Diseases OR

• SPH 699 - Use and Analysis of Linked Administrative Health Data

#### Approved Elective Courses $(\bigstar 6)$ :

 $(\bigstar 6)$  of graduate-level courses approved by the student's Academic Advisor.

#### Length of Program

The minimum time to complete the Master of Public Health degree is 20 months. The maximum time permitted for completion of the program is six years (part- or full-time) from the date of first registration.

## The Degree of Master of Public Health in Food Safety (course-based) [Graduate]

## **Program Requirements**

In addition to the Master of Public Health Core Courses ( $\star$ 24), students must complete the following for a total of ( $\star$ 45):

#### Specialization Courses ( $\star$ 18):

- AFNS 580 Advanced Study of Microbial Food Safety
- AFNS 581 Advanced Foods
- SPH 512 Environmental Risk Assessment and Management
- SPH 514 Introduction to Environmental Health
- SPH 522 Principles of Toxicology
- SPH 527 Food Safety

#### Approved Elective Courses: $(\bigstar 3)$

 $(\bigstar 3)$  of graduate-level courses approved by the student's Academic Advisor.

### Length of Program

The minimum time to complete the Master of Public Health degree is 20 months. The maximum time permitted for completion of the program is six years (part- or full-time) from the date of first registration..



## The Degree of Master of Public Health in Global Health (course-based) [Graduate]

## **Program Requirements**

In addition to the Master of Public Health Core Courses ( $\star$ 24), students must complete the following for a total of ( $\star$ 45):

#### Specialization Courses ( $\star$ 12):

- SPH 542 Case Studies in International Primary Health Care
- SPH 631 Health Program Evaluation
- SPH 640 Introduction to Global Health
- SPH 641 Global Health Project Development

#### Approved Elective Courses $(\bigstar 9)$ :

 $(\bigstar 9)$  of graduate-level courses approved by the student's Academic Advisor.

#### Length of Program

The minimum time to complete the Master of Public Health degree is 20 months. The maximum time permitted for completion of the program is six years (part- or full-time) from the date of first registration.

# The Degree of Master of Public Health in Health Policy and Management (course-based) [Graduate]

## Program Requirements

In addition to the Master of Public Health Core Courses ( $\pm$ 24), students must complete the following for a total of ( $\pm$ 51):

#### Specialization Courses ( $\star$ 18):

- SPH 550 Introduction to Health Care Finance
- SPH 570 Introduction to Health Care Economics
- SPH 580 Management and Design of Health Care Organizations
- SPH 581 Basics of Public Health Leadership
- SPH 600 Health Policy Development
- SPH 605 Health Law and Administration

## Approved Elective Courses $(\bigstar 9)$ :

 $(\bigstar 9)$  of graduate-level courses approved by the student's Academic Advisor.

# Length of Program

The minimum time to complete the Master of Public Health degree is 20 months. The maximum time permitted for completion of the program is six years (part- or full-time) from the date of first registration.

# The Degree of Master of Public Health in Health Promotion (course-based) [Graduate]

# **Program Requirements**

In addition to the Master of Public Health Core Courses ( $\star$ 24), students must complete the following for a total of ( $\star$ 42):

#### Specialization Courses ( $\bigstar$ 12):

- SPH 501 Determinants of Health
- SPH 517 Strategies in Health Promotion Practice
- SPH 518 Psychosocial Perspectives on Health
- SPH 504 Health Promotion Planning and Evaluation OR
- SPH 631 Health Program Evaluation

#### Approved Elective Courses $(\bigstar 6)$ :

 $(\bigstar 6)$  of graduate-level courses approved by the student's Academic Advisor.

### Length of Program

The minimum time to complete the Master of Public Health degree is 20 months. The maximum time permitted for completion of the program is six years (part- or full-time) from the date of first registration.



# The Degree of MSc in Public Health in Clinical Epidemiology (thesis-based) [Graduate]

# **Program Requirements**

Students must complete the following:

### 1. Required courses (★15):

- SPH 519 Biostatistics I
- SPH 555 Foundations of Public Health Research
- SPH 596 Epidemiology Methods I
- SPH 619 Biostatistics II
- SPH 696 Epidemiology Methods II

#### 2. Elective courses:

(★3) of graduate-level courses approved by the student's Supervisor.

#### 3. Thesis:

Successfully complete and defend a thesis on a research topic in the area, defined in consultation with the student's supervisory committee. The scope and quality of the thesis should be appropriate to form the basis for a refereed journal publication.

Students are required to present the results of their thesis at a student seminar prior to the defense.

# Residence Requirement

The minimum period of residence is one academic year of full-time registration at the University of Alberta.

# Length of Program

The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken. The maximum time permitted for completion of the program is four years (part- or full-time) from the date of first registration.



# The Degree of MSc in Public Health in Environmental Health Sciences (thesis-based) [Graduate]

#### **Program Requirements**

Students must complete the following:

#### 1. Required courses ( $\star$ 12):

- SPH 555 Foundations of Public Health Research
- SPH 596 Epidemiology Methods I
- $(\bigstar 6)$  of graduate-level courses approved by student's Supervisor

#### 2. Thesis:

Successfully complete and defend a thesis on a research topic in the area, defined in consultation with the student's supervisory committee. The scope and quality of the thesis should be appropriate to form the basis for a refereed journal publication.

Students are required to present the results of their thesis at a student seminar prior to the defense.

# Residence Requirement

The minimum period of residence is one academic year of full-time registration at the University of Alberta.

# Length of Program

The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken. The maximum time permitted for completion of the program is four years (part- or full-time) from the date of first registration.

# The Degree of MSc in Public Health in Epidemiology (thesis-based) [Graduate]

# **Program Requirements**

Students must complete the following:

#### 1. Required courses ( $\star$ 15):

- SPH 519 Biostatistics I
- SPH 555 Foundations of Public Health Research

- SPH 596 Epidemiology Methods I
- SPH 619 Biostatistics II
- SPH 696 Epidemiology Methods II

#### 2. Elective courses:

•  $(\bigstar 6)$  of graduate-level courses approved by the student's Supervisor.

#### 3. Thesis:

Successfully complete and defend a thesis on a research topic in the area defined in consultation with the student's supervisory committee. The scope and quality of the thesis should be appropriate to form the basis for a refereed journal publication.

Students are required to present the results of their thesis at a student seminar prior to the defense.

### Residence Requirement

The minimum period of residence is one academic year of full-time registration at the University of Alberta.

### Length of Program

The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken. The maximum time permitted for completion of the program is four years (part- or full-time) from the date of first registration.

# The Degree of MSc in Public Health in General Public Health (thesis-based)

# **Program Requirements**

Students must complete the following:

#### 1. Required courses $(\bigstar 6)$ :

- SPH 555 Foundations of Public Health Research
- SPH 596 Epidemiology Methods I

#### 2. Elective courses:

•  $(\star 12)$  of graduate-level courses approved by the student's Supervisor.

#### 3. Thesis:

Successfully complete and defend a thesis on a research topic in the area, defined in consultation with the student's supervisory committee. The scope and quality of the thesis should be appropriate to form the basis for a refereed journal publication.

Students are required to present the results of their thesis at a student seminar prior to the defense.

#### Residence Requirement

The minimum period of residence is one academic year of full-time registration at the University of Alberta.

#### Length of Program

The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken. The maximum time permitted for completion of the program is four years (part- or full-time) from the date of first registration.

# The Degree of MSc in Public Health in Global Health (thesis-based) [Graduate]

# **Program Requirements**

Students must complete the following:

### 1. Required courses (★12):

- SPH 542 Case Studies in International Primary Health Care
- SPH 555 Foundations of Public Health Research
- SPH 596 Epidemiology Methods I
- SPH 640 Introduction to Global Health

#### 2. Elective courses:

 $(\pm 12)$  of graduate-level courses approved from the following:

- SPH 519 Biostatistics I
- SPH 619 Biostatistics II
- SPH 696 Epidemiology Methods II
- (★3) of graduate-level courses as approved by the student's Supervisor;
   OR
- (★6) of graduate-level qualitative methods courses
- $(\bigstar 6)$  of graduate-level courses as approved by the student's Supervisor

#### 3. Thesis:

Successfully complete and defend a thesis on a research topic in the area, defined in consultation with the student's supervisory committee. The scope and quality of the thesis should be appropriate to form the basis for a refereed journal publication.

Students are required to present the results of their thesis at a student seminar prior to the defense.

#### Residence Requirement

The minimum period of residence is one academic year of full-time registration at the University of Alberta.

#### Length of Program

The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken. The maximum time permitted for completion of the program is four years (part- or full-time) from the date of first registration.

# The Degree of MSc in Public Health in Health Policy Research (thesis-based) [Graduate]

# **Program Requirements**

Students must complete the following:

#### 1. Required courses ( $\star$ 12):

- SPH 500 Health Policy and Systems Research
- SPH 555 Foundations of Public Health Research
- SPH 596 Epidemiology Methods I
- ( $\star$ 3) of graduate-level qualitative or quantitative methods courses as approved by the student's Supervisor.

#### 2. Elective courses:

•  $(\bigstar 6)$  of graduate-level courses approved by the student's Supervisor.

#### 3. Thesis:

Successfully complete and defend a thesis on a research topic in the area, defined in consultation with the student's supervisory committee. The scope and quality of the thesis should be appropriate to form the basis for a refereed journal publication.

Students are required to present the results of their thesis at a student seminar prior to the defense.

# Residence Requirement

The minimum period of residence is one academic year of full-time registration at the University of Alberta.

## Length of Program

The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken. The maximum time permitted for completion of the program is four years (part- or full-time) from the date of first registration.

# The Degree of MSc in Health Promotion and Socio-behavioural Sciences (thesis-based) [Graduate]

#### **Program Requirements**

Students must complete the following:

#### 1. Required courses (★12):

- SPH 503 Introduction to Health Promotion Research
- SPH 555 Foundations of Public Health Research
- SPH 596 Epidemiology Methods I
- $(\bigstar 3)$  of graduate-level qualitative methods courses as approved by the student's Supervisor.

#### 2. Electives:

•  $(\bigstar 3)$  of graduate-level courses approved by the student's Supervisor.

#### 3. Thesis:

Successfully complete and defend a thesis on a research topic in the area defined in consultation with the student's supervisory committee. The scope and quality of the thesis should be appropriate to form the basis for a refereed journal publication.

Students are required to present the results of their thesis at a student seminar prior to the defense.

# Residence Requirement

The minimum period of residence is one academic year of full-time registration at the University of Alberta.

# Length of Program

The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken. The maximum time permitted for completion of the program is four years (part- or full-time) from the date of first registration.

# The Degree of MSc in Public Health in Health Technology Assessment

Admission to this program has been suspended as of September 1, 2017.

#### **Program Requirements**

Students must complete the following:

#### 1. Required courses ( $\star$ 18):

- SPH 505
- SPH 531 Statistical Methods in Health Research
- SPH 596 Epidemiology Methods I
- SPH 671 The Economic Evaluation of Health Care
- SPH 673 Technology Assessment for Health Care

#### 2. Elective courses:

Two of:

- SPH 570 Introduction to Health Care Economics
- SPH 685 Methods for the Assessment of Health-Related Quality of Life
- SPH 693 Critical Appraisal of Health Science Literature in Epidemiology
- or a graduate-level course approved by the student's Supervisor.

#### 3. Thesis:

Successfully complete and defend a thesis on a research topic in the area, defined in consultation with the student's supervisory committee. The scope and quality of the thesis should be appropriate to form the basis for a refereed journal publication.

The minimum period of residence is two four-month terms of full-time registration at the University of Alberta.

Students are required to present the results of their thesis at a student seminar prior to the defense.

# Length of Program

The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken; a minimum of two years is normally required. The maximum time permitted for completion of the program is four years (part- or full-time) from the date of first registration.

# The Degree of MSc in Public Health in Occupational Health [Graduate]

Admission to this program has been suspended as of September 1, 2017.

# **Program Requirements**

Students must complete the following:

#### 1. Required courses ( $\star$ 18):

- SPH 520 Occupational and Environmental Diseases
- SPH 521 Occupational Hygiene
- SPH 522 Principles of Toxicology
- SPH 531 Statistical Methods in Health Research
- SPH 555 Foundations of Public Health Research
- SPH 561 Topics in Public Health
- SPH 596 Epidemiology Methods I

#### 2. Elective courses:

•  $(\bigstar 6)$  of graduate-level courses approved by the student's Supervisor.

#### 3. Thesis:

Successfully complete and defend a thesis on a research topic in the area, defined in consultation with the student's supervisory committee. The scope and quality of the thesis should be appropriate to form the basis for a refereed journal publication.

The minimum period of residence is two four-month terms of full-time registration at the University of Alberta.

Students are required to present the results of their thesis at a student seminar prior to the defense.

# Length of Program

The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken; a minimum of two years is normally required. The maximum time permitted for completion of the program is four years (part- or full-time) from the date of first registration.

# The Degree of PhD in Public Health in the research area of Epidemiology (thesisbased) [Graduate]

# **Program Requirements**

Students must complete the following:

#### 1. Required courses ( $\bigstar$ 12):

- SPH 602 Engaged Scholarship for Health
- SPH 603 Scientific Communication in Public Health
- SPH 604 Advanced Theory and Research Methods in Public Health
- SPH 719 Biostatistics III
- SPH 766 Advanced Epidemiology Methods

#### 2. Elective courses:

Additional courses as approved by the student's Supervisor.

#### 3. Comprehensive Examination:

The Comprehensive Examination is a written examination that will occur following the completion of coursework, and is normally completed within the first two years of the PhD program. The Comprehensive Examination is primarily intended to examine the student to determine whether they have achieved competency in contextualization of the thesis within public health, specific content area of thesis, and specific methodological issues relating to the proposed thesis.

#### 4. Candidacy Examination:

The Candidacy Examination occurs once all course work and comprehensive exam are completed, and within three years of the start of the PhD program. The Candidacy Examination is an Oral Examination, which is primarily intended to assess the student's ability to conduct independent research.

#### 5. Thesis:

Successfully complete and defend a thesis on a research topic in the program area defined in consultation with the student's supervisory committee. The scope and quality of the thesis must represent an advance in knowledge of the candidate's field of study and should be appropriate to form the basis for at least one refereed journal publication describing the methodology and results of the research.

# Residence Requirement

The minimum period of residence is two academic years of full-time registration.

#### Length of Program

The time required to complete the PhD will vary according to the previous training of the applicant and the nature of the research undertaken. The maximum time permitted for completion of the program is six years (part- or full-time) from the date of first registration.

# The Degree of PhD in Public Health in the research area of Health Promotion and Socio-behavioural Sciences (thesis-based) [Graduate]

## Program Requirements

Students must complete the following:

#### 1. Required courses ( $\star$ 12):

- SPH 602 Engaged Scholarship for Health
- SPH 603 Scientific Communication in Public Health
- SPH 604 Advanced Theory and Research Methods in Public Health
- SPH 608 Psychosocial Perspectives on Health
- SPH 622 Theory and Practice of Health Promotion Interventions

#### 2. Elective courses:

• additional courses as approved by the student's Supervisor.

#### 3. Comprehensive Examination:

The Comprehensive Examination is a written examination that will occur following the completion of coursework, and is normally completed within the first two years of the PhD program. The Comprehensive Examination is primarily intended to examine the student to determine whether they have achieved competency in contextualization of the thesis within public health, specific content area of thesis, and specific methodological issues relating to the proposed thesis.

# 4. Candidacy Examination:

The Candidacy Examination occurs once all course work and comprehensive exam are completed, and within three years of the start of the PhD program. The Candidacy Examination is an Oral Examination, which is primarily intended to assess the student's ability to conduct independent research.

#### 5. Thesis:

Successfully complete and defend a thesis on a research topic in the program area defined in consultation with the student's supervisory committee. The scope and quality of the thesis must represent an advance in knowledge of the candidate's field of study and should be appropriate to form the basis for at least one refereed journal publication describing the methodology and results of the research.

## Residence Requirement

The minimum period of residence is two academic years of full-time registration.

#### Length of Program

The time required to complete the PhD will vary according to the previous training of the applicant and the nature of the research undertaken. The maximum time permitted for completion of the program is six years (part- or full-time) from the date of first registration.

# The Degree of PhD in Public Health in the research area of Health Services and Policy Research (thesis-based) [Graduate]

# **Program Requirements**

Students must complete the following:

# 1. Required courses ( $\star$ 9):

- SPH 600 Health Policy Development
- SPH 602 Engaged Scholarship for Health
- SPH 603 Scientific Communication in Public Health
- SPH 604 Advanced Theory and Research Methods in Public Health

#### 2. Elective courses:

additional courses as approved by the student's Supervisor.

#### 3. Comprehensive Examination:

The Comprehensive Examination is a written examination that will occur following the completion of coursework, and is normally completed within the first two years of the PhD program. The Comprehensive Examination is primarily intended to examine the student to determine whether they have achieved competency in contextualization of the thesis within public health, specific content area of thesis, and specific methodological issues relating to the proposed thesis.

#### 4. Candidacy Examination:

The Candidacy Examination occurs once all course work and comprehensive exam are completed, and within three years of the start of the PhD program. The Candidacy Examination is an Oral Examination, which is primarily intended to assess the student's ability to conduct independent research.

#### 5. Thesis:

Successfully complete and defend a thesis on a research topic in the program area defined in consultation with the student's supervisory committee. The scope and quality of the thesis must represent an advance in knowledge of the candidate's field of study and should be appropriate to form the basis for at least one refereed journal publication describing the methodology and results of the research.

#### Residence Requirement

The minimum period of residence is two academic years of full-time registration.

# Length of Program

The time required to complete the PhD will vary according to the previous training of the applicant and the nature of the research undertaken. The maximum time permitted for completion of the program is six years (part- or full-time) from the date of first registration.

# The Degree of PhD in Public Health in the research area of Public Health (thesisbased) [Graduate]

# Program Requirements

Students must complete the following:

#### 1. Required courses $(\bigstar 6)$ :

- SPH 602 Engaged Scholarship for Health
- SPH 603 Scientific Communication in Public Health
- SPH 604 Advanced Theory and Research Methods in Public Health

#### 2. Elective courses:

• additional courses as approved by the student's Supervisor.

#### 3. Comprehensive Examination:

The Comprehensive Examination is a written examination that will occur following the completion of coursework, and is normally completed within the first two years of the PhD program. The Comprehensive Examination is primarily intended to examine the student to determine whether they have achieved competency in contextualization of the thesis within public health, specific content area of thesis, and specific methodological issues relating to the proposed thesis.

#### 4. Candidacy Examination:

The Candidacy Examination occurs once all course work and comprehensive exam are completed, and within three years of the start of the PhD program. The Candidacy Examination is an Oral Examination, which is primarily intended to assess the student's ability to conduct independent research.

#### 5. Thesis:

Successfully complete and defend a thesis on a research topic in the program area defined in consultation with the student's supervisory committee. The scope and quality of the thesis must represent an advance in knowledge of the candidate's field of study and should be appropriate to form the basis for at least one refereed journal publication describing the methodology and results of the research.

# Residence Requirement

The minimum period of residence is two academic years of full-time registration.

# Length of Program

The time required to complete the PhD will vary according to the previous training of the applicant and the nature of the research undertaken. The maximum time permitted for completion of the program is six years (part- or full-time) from the date of first registration.

# Embedded Graduate Certificate in Communicable Diseases (Public Health) [Graduate]

#### **General Information**

The embedded Graduate Certificate in Communicable Diseases will provide courses to learn: 1) the characteristics of specific communicable diseases; 2) how to control communicable diseases, and; 3) about methods to monitor and study communicable diseases. Students pursue the Certificate in Communicable Diseases by fulfilling their degree requirements and by completing the following course requirements ( $\star$ 9) as part of their electives.

# ALBERTA

# **GRADUATE STUDIES AND RESEARCH**

# **Entrance Requirements**

The certificate is open to students enrolled in an MSc degree in the School of Public Health (SPH), with a particular interest in Communicable Diseases. This certificate will also be available to students in other graduate degrees in the SPH, as well as other Faculties.

Students must be in good academic standing at the time of application for the certificate.

Students in the SPH MSc programs will be required to register for the certificate no later than September 30 of their second year, or at completion of  $\pm$ 12 if studying part-time.

For information on the application process for the certificate, refer to the School of Public Health at www.ualberta.ca/public-health.

#### **Program Requirements**

Students must complete the following:

#### Required courses $(\bigstar 9)$ :

SPH 697 - Epidemiology and Control of Infectious Diseases

#### One of:

- SPH 696 Epidemiology Methods II
- MDCH 646 Introduction to Public Health Surveillance (University of Calgary: accessible through Western Dean's Agreement);
- Another graduate level (★3) course relevant to communicable diseases approved by student's Supervisory Committee or Academic Advisor.

#### Any Three Topics in Public Health:

Any 3 (★1) courses relevant to communicable diseases approved by student's Supervisory Committee or Academic Advisor.

#### Note:

The certificate will be awarded at the time the students earn their degree.

# Radiology and Diagnostic Imaging [Graduate]

Department of Radiology and Diagnostic Imaging 2A2 42 Mackenzie Health Sciences Centre Edmonton, Alberta T6G 2B7 E-mail:radiolog@ualberta.ca

# ALBERTA

# GRADUATE STUDIES AND RESEARCH

#### **General Information**

Facilities exist within the Department of Radiology and Diagnostic Imaging, University of Alberta, for students who wish to obtain either a Master of Science or a PhD degree.

Research may be carried out in medical imaging, radiological and health physics, or radiation biology and biophysics.

The Department of Radiology and Diagnostic Imaging participates with other departments of the Faculty of Medicine and Dentistry in offering these interdisciplinary programs in medical sciences. Details of the entrance requirements and terms of the MSc and PhD programs are defined in Medical Sciences of this Calendar.

Inquiries regarding graduate work in the Department of Radiology and Diagnostic Imaging should be directed to the Department Chair or to the Graduate Coordinator, Department of Radiology and Diagnostic Imaging, 2A242 Mackenzie Health Sciences Centre.

# **Entrance Requirements**

The Department's minimum entrance requirements are graduation in medicine for the clinical research areas, and in the appropriate scientific disciplines for the other research studies, with an average of 3.0 (or equivalent) in the last two years of undergraduate (or graduate) work at the University of Alberta. Applicants with an equivalent qualification from a recognized institution will be considered for graduate studies. Where applicable (see University Calendar English Language Requirement), applicants must obtain a minimum score of 550 (paper-based) or 88 (Internet-based) on the TOEFL test.

#### Financial Assistance

Support may be obtained from several grant-awarding agencies for work in these areas.

# **Graduate Program Requirements**

- The Degree of MSc
- The Degree of PhD

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading Radiology and Diagnostic Imaging (RADDI).

# The Degree of MSc (Radiology and Diagnostic Imaging) [Graduate]

# **Program Requirements**

Appropriate coursework will be decided upon in conjunction with the Chair of the Department, the Graduate Coordinator, or the Medical Sciences Graduate Program Committee. Under normal circumstances candidates for the master's degree would be expected to complete  $\star 9$  at the graduate-level and to prepare and defend a thesis on an approved topic. Additional courses may be required depending on the student's background.

The minimum period of residence is three four-month terms of full-time attendance at the University of Alberta.

Note: This program does not lead to speciality (fellowship) qualifications in Diagnostic Radiology, Radiation Oncology or Nuclear Medicine.

# Length of Program

The length of the program is two to three years.

# The Degree of PhD (Radiology and Diagnostic Imaging) [Graduate]

# **Program Requirements**

Appropriate coursework will be decided upon in conjunction with the Chair of the Department, the Graduate Coordinator or the Medical Sciences Graduate Program Committee. Under normal circumstances candidates for the degree would be expected to complete ★12 at the graduate-level and to prepare and defend a thesis on an approved topic. Additional courses may be required depending on the student's background.

The minimum period of residence is four four-month terms of full-time attendance at the University of Alberta.

#### Note:

This program does not lead to speciality (fellowship) qualifications in Diagnostic Radiology, Radiation Oncology or Nuclear Medicine.

# Length of Program

The length of the program is three to four years.

# Rehabilitation Medicine [Graduate]

Faculty of Rehabilitation Medicine 3-48 Corbett Hall University of Alberta Edmonton, Alberta T6G 2G4 E-mail: angela.libutti@ualberta.ca

#### **General Information**

#### Degree Programs

The Faculty of Rehabilitation Medicine offers entry to professional practice programs in Occupational Therapy, Physical Therapy, and Speech-Language

Pathology. Information on these programs can be found under graduate programs. The Faculty offers interdisciplinary programs leading to the degrees of Master of Science and Doctor of Philosophy in Rehabilitation Science. The programs are designed to prepare students for research in Rehabilitation Science and the systematic study of

# ALBERTA

# GRADUATE STUDIES AND RESEARCH

psychosocial, communication, neurological, and musculoskeletal disorders in humans of all ages. Students will specialize in one of those four general content areas which represent broad interdisciplinary bodies of knowledge.

Inquiries concerning the MSc and PhD programs in Rehabilitation Science should be directed to:

Associate Dean for Graduate Studies Faculty of Rehabilitation Medicine 3-48 Corbett Hall University of Alberta Edmonton, Alberta Canada T6G 2G4

#### Continuing Professional Education

The Faculty of Rehabilitation Medicine offers a number of credit certificate programs which formally acknowledge the study of particular themes within the rehabilitation discipline. The programs are designed to build on existing expertise of practicing clinicians and current students. The certificate programs provide both profession-specific as well as interdisciplinary evidence-based content and are offered in various formats which may include distance technologies and face-to-face learning. A graduate certificate will be granted upon successful completion (minimum grade of C+) of at least three required graduate-level courses.

Inquiries concerning the certificate programs in the Faculty of Rehabilitation Medicine should be directed to:

Certificate Programs Coordinator Faculty of Rehabilitation Medicine 3-48 Corbett Hall University of Alberta Edmonton, Alberta Canada T6G 2G4

# **Entrance Requirements (Degree Programs)**

The minimum requirements for admission into the degree programs are:

- For the MSc, a bachelor's degree or equivalent or a previous graduate degree in a rehabilitation discipline or related field from a recognized postsecondary institution. For the PhD, a master's degree in a rehabilitation discipline or a related field from a recognized academic institution or an Honors BSc degree (or equivalent) in rehabilitation or a related field from a recognized academic institution;
- A minimum grade point average of 3.0 on a 4-point scale (or equivalent) in the most recent two years of study;
- For the PhD, evidence of research potential as demonstrated by scholarly work;
- Proof of English language proficiency, where applicable (see English Language Requirement);
- References from members of an academic community who are knowledgeable about the applicant's academic and research capabilities.

# Financial Assistance

Master's and doctoral students who are accepted are encouraged to apply for internally available studentships or fellowships and for externally available awards from the Canadian Institutes of Health Research (CIHR), the Natural Sciences and Engineering Research Council (NSERC), the Social Sciences and Humanities Research Council

# UNIVERSITY OF ALBERTA

# GRADUATE STUDIES AND RESEARCH

(SSHRC), and Alberta Innovates. Information about these awards and others is available at www.gradstudies.ualberta.ca, in the Faculty office of the Associate Dean for Graduate Studies, and through the Faculty of Graduate Studies and Research.

#### **Graduate Program Requirements**

- 1. The Degree of MSc
- 2. The Degree of PhD
- 3. The MSc-SLP/PhD Combined Program
- 4. The MScPT/PhD Combine Program
- 5. The Graduate Certificate in Francophone Practice for Speech-Language Pathologists
- 6. Certificat d'études supérieures spécialisées en pratique orthophonique en milieu francophone
- 7. The Graduate Certificate in Pain Management
- 8. The Graduate Certificate in Stroke Rehabilitation
- 9. The Graduate Certificate in Sexual Health
- 10. Graduate Certificate Bridging to Canadian Physical Therapy Practice

#### **Graduate Courses**

Graduate courses for Rehabilitation Science degrees and certificate programs can be found in Course Listings, under the subject heading Rehabilitation Medicine (REHAB).

# The Degree of MSc (Rehabilitation Medicine) [Graduate]

# **Program Requirements**

Normally, a student's plan of study will be interdisciplinary in focus (i.e., not department-based). However, there may be instances in which the plan of study is focused primarily within one of the departments in the Faculty (Occupational Therapy, Physical Therapy, or Speech-Language Pathology and Audiology). Admission to the MSc in Rehabilitation Science program is dependent on the recommendation of the Graduate Programs Committee which is composed of representatives of each department and the non-departmentalized staff in the Faculty and chaired by the Associate Dean for Graduate Studies.

Students will be required to complete at least five graduate-level  $\star$ 3 courses ( $\star$ 15) or the equivalent plus thesis and successfully propose, implement, and report their master's thesis research according to Faculty standards. Required courses will include REHAB 500 Conducting Rehabilitation Research, REHAB 512 Issues in Rehabilitation Science, and at least one graduate-level course in statistics or research design. Elective courses will be different for each student and will be determined by individual students in consultation with their supervisors and based in part on the student's research interests. Students and their supervisors will develop a plan of study for the entire program and submit that plan of study for approval by the Graduate Programs Committee.

Students who possess a recognized clinical practice credential at the time of entry or who, after admission and prior to graduation, acquire such a credential on the basis of their work in a previous degree program will be able to denote their area of emphasis on their MSc Rehabilitation Science degree with the following specific designations under field of specialization: Aging, Audiology, Occupational Therapy, Physical Therapy, or Speech-Language Pathology. Except in Aging, students who have not earned the appropriate clinical practice credential as described above will have no designation under field of specialization. The specialization in Aging is tailored to the needs of students who are interested in leadership, management or research positions with an aging-related focus in Rehabilitation Science.

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#### Length of Program

The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken. Normally two years of study and research are needed to complete the degree program. There is a four-year time limit.

# The Degree of PhD (Rehabilitation Medicine) [Graduate]

## Program Requirements

Normally, a student's plan of study will be interdisciplinary in focus (i.e., not department-based). However, there may be instances in which the plan of study is focused primarily within one of the departments in the Faculty (Occupational Therapy, Physical Therapy, or Speech-Language Pathology and Audiology).

Admission to the PhD in Rehabilitation Science program is dependent on the recommendation of the Graduate Programs Committee which is composed of representatives of each department and the non-departmentalized staff in the Faculty and chaired by the Associate Dean for Graduate Studies.

The PhD program consists of ★9 in required courses (REHAB 600, REHAB 601, and 603), ★3 in graduate-level statistics coursework and normally, ★6 to ★12 in elective graduate-level course weights that pertain to the area of specialization as determined by the candidate's needs and interests and in consultation with the supervisory committee. In cases where a student has not written a master's thesis before entering the PhD program, REHAB 899 (★3) is required, as an in-lieu-of thesis project. (This requirement will normally be waived for students who are transferring from a professional master's degree in a rehabilitation discipline if (a) their final/capstone project is considered by the Graduate Program Advisory Committee to be an "equivalent piece of publishable research to offer in lieu" or (b) they have received prior approval from the Graduate Program Advisory Committee by following the procedures outlined in the Rehabilitation Medicine Graduate Program Manual.) Students also will need to successfully complete a two-part candidacy examination and complete and defend a thesis.

The minimum period of residence is the equivalent of two academic years of full-time attendance at the University of Alberta. No language other than English is required for the degree.

# Length of Program

The time required to complete the PhD program will vary according to the previous training of the applicant and the nature of the research undertaken. In general, the PhD program will take a minimum of three years to complete, with the first 1.5 years devoted largely to coursework, preliminary research endeavours, and preparation for the candidacy examination which normally will be held within two years of a student's entry into the doctoral program.

# The MSc-SLP/PhD Combined Program (Rehabilitation Medicine) [Graduate]

The Faculty of Rehabilitation Medicine and the Department of Communication Sciences and Disorders offer a program of combined study which permits highly qualified students to earn both the MSc in Speech-Language Pathology and the PhD in Rehabilitation Sciences after five years of full-time study.

Refer to The MSc-SLP/PhD Combined Program under Communication Sciences and Disorders for program details.

The minimum period of residence is the equivalent of two academic years of full-time attendance at the University of Alberta. No language other than English is required for the degree.

# Length of Program

The time required to complete the PhD program will vary according to the previous training of the applicant and the nature of the research undertaken. In general, the PhD program will take a minimum of three years to complete, with the first 1.5 years devoted largely to coursework, preliminary research endeavours, and preparation for the candidacy examination which normally will be held within two years of a student's entry into the doctoral program.

# The MScPT/PhD Combined Program (Rehabilitation Medicine) [Graduate]

The Faculty of Rehabilitation Medicine and the Department of Physical Therapy offer a program of combined study which permits highly qualified students to earn both the MSc in Physical Therapy and the PhD in Rehabilitation Sciences after five years of full-time study. Refer to the Physical Therapy section of the calendar for details of the combined program.

# The Graduate Certificate in Francophone Practice for Speech-Language Pathologists (Rehabilitation Medicine) [Graduate]

The Graduate Certificate in Francophone Practice for Speech-Language Pathologists is a collaborative effort between the Faculty of Rehabilitation Medicine and the Faculté Saint-Jean. The program is designed to respond to a need expressed by the Francophone community for speech-language pathologists who are trained in the linguistic and cultural issues associated with practice in a context of linguistic and cultural plurality; and to develop skills specific to working with clients who need to communicate and/or learn in French. The intent of the program is to provide post-professional continuing education opportunities that prepare speech-language pathologists to understand dual-language and dual-cultural issues unique to the Francophone/English dual-lingual population. In addition, students will acquire knowledge about normal and disordered speech and language in French, and become familiar with assessment and intervention materials.

# **Entrance Requirements**

The minimum admission requirements are 1) a master's degree in Speech-Language Pathology or an equivalent qualification from a recognized institution and eligibility for registration in ACSLPA (or equivalent in the province of residence); or 2) be enrolled in a Speech-Language Pathology training program from a recognized institution and have permission from the student's home department to register in the Certificate program. In addition, because all instruction is in French, students must be proficient in oral and written French. It is the responsibility of each student to determine whether his/her level of proficiency in French is adequate. Students can access a self-assessment tool through the Association of Language Testers in Europe (ALTE) (www.alte.org/attachments/files/framework\_french.pdf)) to help determine their level of French proficiency. This tool provides a framework for understanding the level of French abilities required for different functions. It is recommended that students will need to at least meet levels in the range of B2 to C1 for all parts of the test. Formal French language testing is available through Faculté Saint-Jean for those students wishing to have more specific determinations of their proficiency in French. The cost of this testing may be covered as part of a bursary provided through Faculté Saint-Jean.

# <u>Program Requirements</u>

The Graduate Certificate in Francophone Practice for Speech-Language Pathologists consists of three graduate courses. The first one, REHAB 560 is offered every spring on the Internet and presents the foundations required for the other courses. REHAB 561, REHAB 562 and REHAB 563 are offered in alternating years and all include a ten-hour clinical laboratory. All certificate courses are offered in French.



# Certificat d'études supérieures spécialisées en pratique orthophonique en milieu francophone (Rehabilitation Medicine) [Graduate]

Le certificat d'études supérieures spécialisées en pratique orthophonique en milieu francophone est le fruit d'une collaboration entre la Faculty of Rehabilitation Medicine et la Faculté Saint-Jean. Le programme est conçu de sorte à répondre aux besoins exprimés par la communauté francophone pour des orthophonistes ayant reçu une formation pour travailler dans un contexte caractérisé par le pluralisme linguistique et culturel, et conscients des enjeux linguistiques et culturels qui en découlent. Il vise également le développement d'habiletés nécessaires pour travailler avec des clients qui doivent communiquer ou apprendre en français. L'objectif du programme est d'offrir des occasions de formation continue qui aideront les orthophonistes à comprendre les enjeux bilingues et biculturels uniques à la population bilingue francophone/anglophone. De plus, les étudiants acquerront des connaissances sur la parole et le langage normaux en français ainsi que les troubles qui les touchent et se familiariseront avec le matériel d'évaluation et d'intervention.

#### Critères d'admission

Pour être admis vous devez présenter au moins 1) une maîtrise en Speech Language Pathology ou un diplôme équivalent provenant d'une institution d'enseignement reconnue et être éligible pour s'inscrire au ACSLPA (ou l'équivalent dans votre province de résidence); ou 2) être inscrits dans un programme d'apprentissage de Speech-Language Pathology d'une institution d'enseignement reconnue et avoir l'autorisation de votre département pour vous inscrire dans ce programme de certificat. De plus, tous les cours étant offerts en français, les étudiants doivent démontrer leur compétence en français autant à l'oral qu'à l'écrit. C'est la responsabilité de chacun des étudiants de déterminer si leur niveau de compétence en français est adéquat. Par l'entremise de l'Association of Language Testers in Europe (ALTE), les étudiants peuvent avoir accès à un test en ligne sur le site www.alte.org/attachments/files/framework\_french.pdf) pour les aider à évaluer leur niveau de compétence en français. Cet outil comporte un gabarit expliquant le niveau de compétence exigé pour différents aspects de la langue. Il est recommandé que les étudiants soient au minimum entre le niveau B2 et C1pour toutes les sections du test. Pour les étudiants qui désireraient connaître de façon plus précise leur compétence en français, un test officiel est offert par l'entremise de la Faculté Saint-Jean. Les frais de ce test pourront être couverts par une bourse offerte par la Faculté Saint-Jean.

#### <u>Programme</u>

Le programme de certificat d'études supérieures spécialisées en pratique orthophonique en milieu francophone est composé de trois cours gradués. Le premier, REHAB 560, est offert à tous les printemps par Internet et présente les fondements nécessaires à la compréhension des autres. Les autres cours, REHAB 561, REHAB 562, et REHAB 563 sont offerts en alternance et comportent chacun un laboratoire clinique de 10 heures. Tous les cours du certificat sont offerts en français.

Les étudiants intéressés peuvent obtenir de plus amples informations en s'adressant à la Faculty of Rehabilitation Medicine de l'Université de l'Alberta.

# The Graduate Certificate in Pain Management (Rehabilitation Medicine) [Graduate]

Pain is a condition that is undertreated, mistreated and misunderstood. To further complicate the problem, health professionals are ill-equipped to treat people with chronic pain because they receive little training about it during their health education careers. The certificate in pain management represents a unique opportunity to address current issues and gaps in the education of health care professionals about chronic pain management.

Designed for an inter-professional audience and using the latest in online learning technologies this program will: 1) increase the understanding and importance of an interdisciplinary approach to managing pain through an understanding of the unique and shared roles and responsibilities of various health care professionals on an interdisciplinary team in the assessment and management of chronic pain; 2) enable clinicians to use critical thinking and evidence-

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based approaches to develop assessment and treatment plans across the pain continuum with the emphasis on complex/chronic pain; and 3) make use of a bio-psycho-social clinical reasoning framework that integrates information across models in the assessment and treatment of pain. The intent of the program is to provide a postprofessional continuing education opportunity that prepares health care professionals to understand and improve their techniques in treating chronic pain.

#### **Entrance Requirements**

The minimum admission requirements are 1) a baccalaureate degree from a recognized institution; or 2) be enrolled in a graduate program from a recognized institution and have permission from the student's home department to register in the Certificate program; 3) ability to communicate in English.

If the above degree requirements cannot be met (e.g., diploma) admission based on life achievement may be considered.

#### **Program Requirements**

The graduate certificate will be granted upon successful completion of three required graduate-level courses:

- REHAB 535 The Nature of Pain (★3)
- REHAB 536 Assessment and Management of Pain (★3)
- REHAB 537 Integrating and Implementing Pain Management Models (★3)

#### Note:

See Course Listings for a description of the courses.

# The Graduate Certificate in Stroke Rehabilitation (Rehabilitation Medicine) [Graduate]

Designed for an inter-professional audience this program provides high quality postprofessional education on best-practices and evidence-based guidelines in stroke rehabilitation which will help to increase effectiveness and efficiency in helping stroke survivors to regain function and reintegrate into their home and community lives. The courses are designed for members of a professional team who work in stroke rehabilitation at any point across the continuum of care from prevention to community re-integration.

This Certificate provides an opportunity for practicing clinicians to learn with- from- and about each other. Each course incorporates adult and interprofessional education learning strategies, and uses the latest in online learning technologies.

# **Entrance Requirements**

The minimum admission requirements are 1) a baccalaureate degree from a recognized institution; or 2) be enrolled in a graduate program from a recognized institution and have permission from the student's home department to register in the Certificate program; 3) ability to communicate in English.

If the above degree requirements cannot be met (e.g. diploma) admission based on life achievement may be considered.

# **Program Requirements**

The graduate certificate will be granted upon successful completion of three required graduate-level courses:

- REHAB 540 Stroke Rehabilitation: Best Practice and Critical Review of the Evidence (★3)
- REHAB 541 The Stroke Survivor: Assessment and Rehabilitation across the Continuum of Care (★3)
- REHAB 542 Advancing Practice in Stroke Rehabilitation (★3)

#### Note:

See Course Listings for a description of the courses.

# The Graduate Certificate in Sexual Health (Rehabilitation Medicine) [Graduate]

This program provides participants with the knowledge, skills, and attributes necessary to succeed in the emerging field of sexual health. Drawing on theory and the best practices through case studies, simulations, and group projects, participants will critically apply the conceptual, theoretical, and practical frameworks necessary to address the common challenges associated with comprehensive sexual health education. The impact of personal bias will be explored with respect to different cultures, lifestyles, and values.

# **Entrance Requirements**

The minimum admission requirements are 1) a baccalaureate degree from a recognized institution; OR enrollment in a graduate program from a recognized institution and permission from the student's home department to register in the Certificate program; and 2) ability to communicate in English.

If the baccalaureate requirement cannot be met admission based on life achievement may be considered.

# **Program Requirements**

The graduate certificate will be granted upon successful completion of four required graduate-level courses:

- REHAB 543 Sexual Health: Issues and Perspectives
- REHAB 544 Sexual Health Education
- REHAB 545 Sexuality: Illness and Disability
- REHAB 546 Sex Positivity: In Theory and Practice

#### Note:

See Course Listings for a description of the courses.



# Graduate Certificate Bridging to Canadian Physical Therapy Practice (Rehabilitation Medicine) [Graduate]

Physical Therapists who have completed their professional entry-level education outside of Canada may find it difficult to transition and integrate into the healthcare workplace in Canada. This certificate offers an opportunity for internationally educated physical therapists to address gaps in academic and clinical knowledge, to update clinical skills and competencies, and to be introduced to the Canadian physical therapy context through clinical mentorship and supervised practice in a clinical placement. Canadian trained physical therapists who have been out of the workforce for an extended period of time may also find the certificate courses to be of benefit as a professional update.

### **Entrance Requirements**

The minimum admission requirements are: 1) a baccalaureate degree in physical therapy from a recognized institution or equivalent (as assessed by the Canadian Alliance of Physical Therapy Regulators) and 2) English language proficiency with a Test of English as a Foreign Language (TOEFL iBT) minimum score of 92/120 overall and no subtest lower than 21 or an International English Language Testing System (IELTS) minimum score of 7.0 overall and for all subtests.

### Program Requirements

The graduate certificate will be granted upon successful completion of five required graduate-level courses:

• REHAB 520, REHAB 521, REHAB 522, REHAB 523, REHAB 524
See Course Listings for a description of the courses.

# Religious Studies [Graduate]

Office of Interdisciplinary Studies
400 Arts and Convocation Hall
Faculty of Arts
University of Alberta
Edmonton, Alberta T66 2E6
E-mail: oisiQualberta.ca
https://uofa.ualberta.ca/interdisciplinary-studies

#### **General Information**

The Religious Studies program is an interdisciplinary program within the Office of Interdisciplinary Studies and offers programs leading to the degrees of Master of Arts and Doctor of Philosophy.

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#### **Entrance Requirements**

For the MA program, the minimum admission requirements are an undergraduate degree in Religious Studies or a related area with an admission GPA of at least 3.3 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\star$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Applicants whose degree is not in Religious Studies must have at least ★30 credits in Religious Studies courses at the senior level, or the equivalent. Applicants may be admitted as qualifying graduate students.

For the PhD program, the minimum admission requirements are an MA in Religious Studies or the equivalent with an admission GPA of at least 3.3 on the 4- point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last ★60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Applicants may be admissible if they have completed an MA in a field other than Religious Studies if their thesis and/or course work had Religious Studies content relevant to their proposed thesis topic and if they have earned substantial Religious Studies credits at the BA level. Applicants may be admitted as qualifying graduate students.

Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:

- a minimum TOEFL score of 92 (Internet-based),
- the equivalent as defined by the Faculty of Graduate Studies and Research.

All applicants are required to submit a CV, statement of research intent, a writing sample, and three letters of reference. Applicants must also have designated a supervisor by the time of application.

Applicants to the PhD program must contact the Religious Studies Graduate Coordinator, or a potential doctoral supervisor, to determine if the applicant's research goals appropriately match the Program's profile and supervisory resources.

The deadline to apply for the Religious Studies PhD and MA programs is February 1.

#### Financial Assistance

Religious Studies annually awards a number of scholarships or graduate research and teaching assistantships. Graduate students may apply for various University Fellowships and Bursaries depending on eligibility. For details see www.gradstudies.ualberta.ca.

# **Graduate Program Requirements**

- The Degree of MA in Religious Studies
- The Degree of PhD in Religious Studies

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading Religious Studies (RELIG).



# The Degree of MA in Religious Studies (Religious Studies) [Graduate]

# **Program Requirements**

Students are required to complete a minimum of  $\pm 18$  in graduate coursework, and a thesis.

#### Required Course $(\bigstar 3)$

RELIG 575 - Contemporary Theories of Religion

#### Elective Courses (★15)

- Courses will be determined in consultation with the supervisor.
- Courses may include Religious Studies (RELIG) courses, courses offered by other departments and programs with Religious Studies content or
  courses offered by other departments and programs with a theoretical or intellectual bearing on the student's particular area of research

#### **Thesis**

• Registration in 900-level THES. Students must write and defend a thesis in the area of Religious Studies.

#### Professional Development and Ethics Requirements

All students must complete a mandatory ethics requirement (see Academic Integrity and Ethics Training Requirement) and a mandatory Professional Development requirement.

Attendance at the monthly doctoral seminar, RELIG 675, is expected of MA students in residence.

# Language Requirement

• Students are required to demonstrate reading competence in a language other than English relevant to their proposed area of research. This requirement may be met through passing one of the language examinations administered by an Arts department, or through completing ★6 of a 200-level language with a B+ or better. Exemptions will be considered on a case by case basis. Normally this requirement is to be met during the first year of registration, and in all cases prior to graduation. Language courses will not normally count as graduate credits for the program.

# Residence Requirement

The minimum period of residence is one academic year of full-time attendance at the University of Alberta.

# Length of Program

The normal time for completion of course work is one year, with a further year for completion of the thesis.

The maximum time to complete the thesis-based MA program as set by the Faculty of Graduate Studies and Research is four years.

# The Degree of PhD in Religious Studies (Religious Studies) [Graduate]

#### **Program Requirements**

Students are required to complete a minimum of  $\pm 7$  and a thesis.

#### Required Courses (★7)

- RELIG 575 (★3) Contemporary Theories of Religion
- One ★3 graduate course in the student's area of specialization as determined by the supervisory committee.
- RELIG 675 (★1) Graduate Seminar. Each PhD student will present a research paper in this seminar one time prior to candidacy, usually during the
  second year in the program. All PhD students in residency are expected to attend it on an ongoing basis. The Seminar's aim is to provide a regular
  opportunity for graduate students to submit their research to peer review and discussion.
- Additional courses (up to a maximum of ★15 in addition to the required courses above) will be determined by the supervisory committee in
  consultation with the student.
- Language courses may be required (see Language Requirement below). Language courses will not normally count as graduate credits for the
  program.
- Courses may include Religious Studies (RELIG) courses, courses offered by other departments and programs with Religious Studies content or
  courses offered by other departments and programs with a theoretical or intellectual bearing on the student's particular area of research.

#### Thesis

Registration in 900-level THES. All doctoral candidates must prepare and defend a thesis of high calibre on an approved topic.

#### Candidacy Examination

- Due to the interdisciplinary nature of the program, the path to candidacy may take different forms. It may include, for example, written examinations on different aspects of the discipline, a series of position papers, or a long thesis proposal.
- The candidacy examination will be scheduled once the qualifying requirements are complete, usually before or during the third year of registration in the degree program. The examination will be based on a thesis proposal of not more than thirty pages plus bibliography. The student must demonstrate appropriate mastery of the scholarly fields and research skills relevant to the preparation of the dissertation.
- A provisional path to the candidacy examination is to be determined by the supervisory committee in consultation with the student, and submitted
  to the Graduate Coordinator for review and approval before April 30 of the first year of registration.

## Language Requirement

- Students must demonstrate reading competency in at least one language other than English, including any language(s) relevant to their specialized research, as determined by the supervisory committee in consultation with the student, and submitted for review and approval to the Graduate Coordinator. This competency may be demonstrated by completing an appropriate level of courses in a particular language with a grade of B+ or better, or by passing a suitable language examination, such as those administered by some Arts departments.
- The specific requirement for each language may differ depending on the language and its role in the student's intended research. Students should
  discuss this matter with the supervisory committee early in their program. A written summary of the language requirements for each student and
  how they will be met must be submitted to the Graduate Coordinator for review and approval before April 30 of the first year of registration.
   Normally all language requirements are to be met prior to the candidacy examination.

### Residence Requirement

The minimum period of residence is two academic years of full-time attendance at the University of Alberta.

#### Length of Program

The time required to complete the PhD will vary according to the candidate's background and progress; however a minimum of four years should be expected.

The maximum time to complete the PhD program as set by the Faculty of Graduate Studies and Research is six years.

# Renewable Resources [Graduate]

Department of Renewable Resources 751 General Services Building University of Alberta Edmonton, Alberta T6G 2H1 E-mail: rrgrads.inquiry@ualberta.ca www.rr.ualberta.ca

#### **General Information**

The Department of Renewable Resources offers programs leading to the course-based degrees of Master of Agriculture, Master of Forestry, and thesis-based degrees of Master of Science, and Doctor of Philosophy.

The Faculty of Agricultural, Life and Environmental Sciences and the Faculty of Business offer two course-based programs of joint study that enable students to earn both the Master of Business Administration and Master of Forestry degrees, after two calendar years of full-time study.

Graduate studies in the Department of Renewable Resources encompass a broad spectrum of scientific and management applications in natural and managed landscapes.

Graduate studies in the Department of Renewable Resources fall within the four major research themes of the Department briefly defined as:

Biodiversity Conservation, which aims at understanding how biological diversity is affected by land use practices and human actions;

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- Enhanced Forest Management, which focuses on intensive and ecological management practices to promote wood production and other non-timber values from forests;
- Environmentally Sustainable Agriculture, which evaluates and develops agricultural and forestry practices that ensure the sustainability of soil and water resources:
- Land Reclamation, Remediation, and Restoration, which focuses on the impact of a variety of land use activities on ecosystem function and techniques to return landscapes to a functional use. Details are provided in the Department website.

Thesis research is conducted within the four major research themes, however, the following eight fields of study are the approved specializations for the thesis-based programs: 1) Agroforestry 2) Conservation Biology 3) Forest Biology and Management 4) Land Reclamation and Remediation 5) Protected Areas and Wildland Management 6) Soil Science 7) Water and Land Resources 8) Wildlife Ecology and Management. Inquiries should be directed to the Associate Chair (Graduate Programs), Department of Renewable Resources.

Prospective students should note that the Renewable Resources program is integrated within the Faculty of Agricultural, Life and Environmental Sciences. Opportunities for graduate study are also available in such fields as agroforestry, agronomy, and forest economics in cooperation with the Departments of Resource Economics and Environmental Sociology and Agricultural, Food, and Nutritional Science. Courses and programs of study offered through these departments are listed under their respective headings in this Calendar. General inquiries should be sent to the appropriate department.

#### **Entrance Requirements**

The Department of Renewable Resources' minimum admission requirements are an appropriate undergraduate degree with a GPA of 3.0 in the last two years ( $\star$ 60) of undergraduate work (or graduate work) at the University of Alberta, or an equivalent qualification from a recognized institution. Where applicable, a TOEFL score of 550 (paper-based) or 88 (Internet-based) or an equivalent score on an approved English language examination is required (see English Language Requirement).

Note: To remain in a graduate program in the Department of Renewable Resources students are expected to maintain a minimum GPA of 3.0 with no grade less than C+.

#### Financial Assistance

Most students are either on scholarships or funded by research grants obtained by professors in the Department. A limited number of graduate teaching and research assistantships, administered by the Department, are available to well-qualified candidates. Exceptional applicants will be nominated by the Department for MSc and PhD recruitment scholarships offered by the Faculty of Graduate Studies and Research.

# **Graduate Program Requirements**

- 1. The Degree of MSc
- 2. The Degree of MF
- 3. The Degree of MAg
- 4. The MBA/MF Joint Program
- 5. The MBA/MAg Joint Program
- 6. The Degree of PhD

#### **Graduate Courses**

Graduate courses can be found in Course Listings. Courses offered by the Department of Renewable Resources include those under the following subject headings:

Environmental and Conservation Science (ENCS)
Forest Science (FOR)
Forest Engineering (FOREN)
Renewable Resources (REN R)
Soil Science (SOILS)

# The Degree of MSc (Renewable Resources) [Graduate]

#### **Program Requirements**

Course requirements for the MSc are based on the student's previous training and the anticipated needs in the student's area of specialization. Requirements are REN R 603 and REN R 604 plus a minimum of  $\bigstar$ 6 of courses at the 500- or 600-level. Additional courses may be required at the discretion of the student's supervisor. Course work should include at least  $\bigstar$ 2 in research methods, statistics, and/or experimental design. Courses may be drawn from those listed for the Department of Renewable Resources, and from other Departments within the University.

In addition, candidates for the degree of MSc must prepare an acceptable thesis presenting results of research conducted. Candidates will be examined orally on their thesis results by committees formed according to Supervision and Examinations of this Calendar.

There is no language requirement other than English for the degree of MSc.

The minimum period of residence is two, four-month terms of full-time attendance at the University of Alberta.

# Length of Program

Normally, at least two academic years of research are required to complete the MSc.

# The Degree of MF (Renewable Resources) [Graduate]

# Program Requirements

The Master of Forestry program is a course-based program for students wishing to obtain a post-graduate education in forestry. The normal admission requirement is a BSc in Forestry or a BSc in an allied discipline such as Geography, Biological Sciences, Agriculture or Environmental and Conservation Sciences. The program consists of  $\bigstar$ 30 at the graduate level (500 number or higher). Each student's program will include REN R 906 (a project equivalent to  $\bigstar$ 6) or REN R 912 (a project equivalent to  $\bigstar$ 12), and courses chosen in consultation with the supervisor and the Associate Chair (Graduate Programs) relevant to the topic of the project and within the realm of forestry.

# Length of Program

The program is designed to be completed in 16 to 20 months. However, with a heavier than normal course load, the program can be completed in 10 months, or it may be completed on a part-time basis over a maximum period of 6 years.



# The Degree of MAg (Renewable Resources) [Graduate]

#### Program Requirements

The Master of Agriculture program is a course-based program for students wishing to obtain a post-graduate education in agriculture. The normal admission requirement is a BSc in Agriculture or a BSc in an allied discipline such as Geology, Biological Sciences, Forestry or Environmental and Conservation Sciences. The program consists of  $\star$ 30 at the graduate level (500 number or higher). Each student's program will include REN R 906 (a project equivalent to  $\star$ 6) or REN R 912 (a project equivalent to  $\star$ 12), and courses chosen in consultation with the supervisor and the Associate Chair (Graduate Programs) relevant to the topic of the project and within the realm of agriculture.

#### Length of Program

The program is designed to be completed in 16 to 20 months. However, with a heavier than normal course load, the program can be completed in 10 months, or it may be completed on a part-time basis over a maximum period of 6 years.

# The MBA/MF Joint Program (Renewable Resources) [Graduate]

The Faculty of Agricultural, Life and Environmental Sciences and the Faculty of Business offer a program of joint study that permits students to earn both the MBA and MF degrees in two years of full-time study. Students in the first year of either the regular MBA program or the MF regular program, as well as new entrants, are eligible to apply for the joint program. Applicants are expected to have completed two years of professional forestry-related experience. Refer to The MBA/MF Combined Program under Business for program details.

# The MBA/MAg Joint Program (Renewable Resources) [Graduate]

The Faculty of Agricultural, Life and Environmental Sciences and the Faculty of Business offer a program of joint study that permits students to earn both the MBA and MAg degrees in two years of full-time study. Students in the first year of either the regular MBA program or the regular MAg program, as well as new entrants, are eligible to apply for the joint program. Applicants are normally expected to have completed three years of relevant professional experience. Refer to The MBA/MAg Combined Program under Business for program details.

# The Degree of PhD (Renewable Resources) [Graduate]

# <u>Program Requirements</u>

Course requirements for the PhD will be based on the student's previous training and anticipated needs in the student's area of specialization, the total course load being at the discretion of the student's supervisory committee. All students in the PhD program must take REN R 603 and either REN R 604 or REN R 605. Otherwise there is no fixed minimum course requirement for students who hold a master's degree. Students entering the PhD program, who do not have a master's degree, will be expected to fulfil the MSc coursework requirement (see above), in addition to REN R 603 and either REN R 604 or REN R 605.

Students in the PhD program must pass an oral candidacy exam, supervised by a committee formed according to Faculty of Graduate Studies and Research regulations within two years of initial registration.

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All candidates for the PhD must prepare an acceptable thesis presenting the results of their research. Candidates will be examined orally on their thesis results by committees formed according to Supervision and Examination.

There is no language requirement other than English for the PhD.

The minimum residence requirements are three academic years of study and research for a student with a bachelor's degree, and two academic years of study and research for those with a master's degree.

#### Length of Program

The time required to complete the PhD will vary according to the previous training of the applicant and the nature of the research undertaken; however, a minimum of three years is normally required.

# Resource Economics and Environmental Sociology [Graduate]

Department of Resource Economics and Environmental Sociology 515 General Services Building University of Alberta Edmonton, Alberta T6G 2H1 E-mail: reesgrad@ualberta.ca

#### **General Information**

The Department of Resource Economics and Environmental Sociology offers graduate programs leading to the Master of Agriculture in Agricultural and Resource Economics/Rural Sociology, Master of Science in Agricultural and Resource Economics, Forest Economics, Rural Sociology, and Risk and Community Resilience, and Doctor of Philosophy degrees in Agricultural and Resource Economics, Forest Economics, and Rural Sociology. A joint program leading to dual degrees of Master of Business Administration and Master of Agriculture is also offered. Areas of emphasis in graduate programs include: the economics of agricultural markets and price behavior; production economics and agricultural business management; economics of agricultural and rural development; economics of policy intervention; environmental and natural resource economics, forest economics, rural sociology, environmental and resource sociology, community-based resource management, indigenous knowledge systems, resource policy analysis, and agroforestry. Department program guidelines are contained in the REES Graduate Studies Handbook.

# **Entrance Requirements**

For master's programs, the Department's minimum admission requirements are an undergraduate degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\star$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

For doctoral programs, the Department's minimum admission requirements are an approved master's degree with an admission GPA of at least 3.3 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\star$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Where applicable, applicants must meet the minimum English Language Requirement.

Applicants to the PhD program are required to submit a test score for a Graduate Record Examination (verbal, quantitative, and analytical sections).

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# **GRADUATE STUDIES AND RESEARCH**

Applicants to the MAg/MBA program are required to submit a test score for a Graduate Management Admission Test.

Applicants are also required to submit a CV, statement of interests, and three letters of reference.

#### **Application Deadlines**

In order to be considered for funding, applications must be submitted by February 15. The final application deadline is May 1.

All applications are for entry in the Fall term

#### <u>Financial Assistance</u>

The Department automatically considers all applicants for graduate teaching and research assistantships. To ensure consideration the candidate's application and supporting documents must be received by the Department before February 15. Applications received after that date will be considered for assistantships only if funds are still available. Details of scholarships and other sources of financial assistance are included on the FGSR website at www.gradstudies.ualberta.ca

### **Graduate Program Requirements**

- The Degree of MAg
- The MBA/MAg Joint Program
- The Degree of MSc
- The Degree of PhD

### **Graduate Courses**

Graduate courses can be found in Course Listings, under the following subject headings:

Agricultural and Resource Economics (AREC)
Forest Economics (FOREC)
Interdisciplinary (INT D)
Rural Sociology (R SOC)

# The Degree of MAg (Resource Economics and Environmental Sociology) [Graduate]

# **Program Requirements**

Students are required to complete a minimum of  $\pm 27$  in coursework including a  $\pm 3$  project course.

#### Coursework

Eight ★3 graduate-level courses approved by the department

At least two courses must be at the 500-level

#### Project course

- AREC 900 Directed Research Project OR
- R SOC 900 Directed Research Project

#### Professional Development and Ethics Requirements

Students are expected to participate in department and University professional development and ethics activities to comply with the University requirement of 8 hours of professional development and 8 hours of ethics activities. Students are also expected to participate in the department seminar series.

## Language Requirement

No language other than English is required for the degree.

#### Residence Requirement

Candidates must spend a minimum of one single term (four months) in fulltime attendance at the University of Alberta to meet the residence requirement.

# Length of Program

A candidate with adequate undergraduate prerequisites and appropriate professional experience should complete the program in one academic year (12 months).

The maximum time to complete the course-based MAg program as set by the Faculty of Graduate Studies and Research is six years.

# The MBA/MAg Joint Program (Resource Economics and Environmental Sociology) [Graduate]

The Faculty of Business and the Faculty of Agricultural, Life and Environmental Sciences offer a program of joint study which permits students to earn both the MBA and the MAg degrees in two years.

Students in the first year of the regular MBA program and/or eligible students enrolled in graduate programs in the Faculty of Agricultural, Life and Environmental Sciences, as well as new entrants, are eligible to apply for the joint program. Refer to The MBA/MAg Combined Program under Business for details.



# The Degree of MSc (Resource Economics and Environmental Sociology) [Graduate]

# **Program Requirements**

Students are required to complete a minimum of  $\pm 18$  in coursework and a thesis.

#### Coursework

- Six ★3 courses approved by the department
  - Students in agriculture and resource economics are required to take microeconomic theory, applied economics and econometrics.
  - Students in environmental and rural sociology are required to take courses in sociological theory, qualitative methods and quantitative methods.
  - Students in risk and community resilience are required to take qualitative methods and quantitative methods.
- Four ★3 courses must be at the graduate level

#### **Thesis**

Registration in 900-level THES

### Professional Development and Ethics Requirements

Students are expected to participate in department and University professional development and ethics activities to comply with the University requirement of 8 hours of professional development and 8 hours of ethics activities. Students are also expected to participate in the department seminar series.

# Language Requirement

No language other than English is required for the degree.

# Residence Requirement

Candidates must spend a minimum of two single terms (eight months) in full-time attendance at the University of Alberta to meet the residence requirement.

# Length of Program

The time required to complete the MSc will vary with the individual candidate; qualified candidates should be able to complete the program in 24 months.

The maximum time to complete the thesis-based MSc program as set by the Faculty of Graduate Studies and Research is four years.



# The Degree of PhD (Resource Economics and Environmental Sociology) [Graduate]

The Department offers programs leading to the Doctor of Philosophy degree in Agricultural and Resource Economics, Forest Economics, and Rural Sociology. A joint specialization in Environmental and Natural Resource Economics is offered collaboratively by the Department of Resource Economics and Environmental Sociology, and Economics (see The Degree of PhD with a specialization in Environmental and Natural Resource Economics (Economics) [Graduate])

#### **Program Requirements**

Students are required to complete a minimum of  $\pm 18$  in coursework and a thesis.

#### Coursework

#### Agricultural/Resource and Forest Economics

- Six ★3 graduate-level courses from the Department of Resource Economics and Environmental Sociology, approved by the department
- Programs will depend on the student's academic background
- Students are required to take microeconomic and macro-economic theory, graduate-level applied econometrics.
- Additional coursework may be required.

#### **Rural Sociology**

- Six ★3 graduate-level courses approved by the department
- Programs will depend on the student's academic background
- Students are required to take courses in social theory, quantitative methods, and qualitative methods, plus two courses that are directly or
  indirectly related to the student's field of research
- Additional coursework may be required.

#### **Thesis**

Registration in 900-level THES. All candidates for the PhD must prepare and defend a dissertation on an approved topic

#### Professional Development and Ethics Requirements

All REES PhD students are expected to participate in department and University professional development and ethics activities to comply with the University requirement of 8 hours of professional development and 8 hours of ethics activities. Students are also expected to participate in the department seminar series.

#### Comprehensive Exams

To prepare for their candidacy examinations, students in Agricultural/Resource and Forest Economics are required to take preliminary examinations in theory, a field of specialization and a supporting field.

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Students in Rural Sociology are required to complete two comprehensive examinations: a preliminary examination (based on a pre-established reading list) and a specialization examination.

#### Candidacy Examination

Candidacy requires an oral examination to defend the student's dissertation proposal.

#### Academic Standing Requirement

To remain in a REES PhD program students are required to maintain a minimum GPA of 3.0 with no grade less than C+.

# Language Requirement

No language other than English is required for the degree.

#### Length of Program

The time required to complete the PhD will vary according to the academic background of the applicant and the nature of the research undertaken; however, a minimum of 36 months is normally required.

The maximum time to complete the PhD program as set by the Faculty of Graduate Studies and Research is six years.

# Secondary Education [Graduate]

Department of Secondary Education 551 Education South University of Alberta Edmonton, Alberta T6G 2G5 E-mail: edsegrad@ualberta.ca uab.ca/secondary

### **General Information**

The Department of Secondary Education offers programs leading to the Master of Education, Master of Education with a Specialization in Technology in Education, Doctor of Philosophy and Doctor of Education degrees. Graduate instruction in these programs is designed to develop competencies as master teachers, educators in the specific disciplines, curriculum and instruction specialists, and curriculum and instruction scholars.

Graduate programs in the Department normally include advanced studies in the following areas: curriculum studies, curriculum perspectives, modes of inquiry, aboriginal and indigenous studies, career and technology studies (CTS), English language arts education, fine arts and media education, mathematics education, physical and health

# GRADUATE STUDIES AND RESEARCH

education, research methodologies, science education, second language and ESL, social studies education, teacher education, and technology in education (interdepartmental MEd). Programs of an interdisciplinary nature are possible. Programs for each student are designed in consultation with an advisor or supervisor.

Before applying for admission, it is strongly recommended that applicants ascertain whether the intended area of study is congruent with those of the department. It is also recommended that prospective students contact professors in their area of interest to determine availability and interest. This information may be found at the Department of Secondary Education's web page (uab.ca/secondary).

Applications for admission are conducted on line through the Faculty of Graduate Studies and Research web page (www.gradstudies.ualberta.ca)

Additional information about graduate programs, policies, and procedures can be found in the Department of Secondary Education's Graduate Student Handbook.

#### **Entrance Requirements**

For master's programs, the Department's minimum admission requirements are an undergraduate degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\star$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

It is recommended that applicants identify an academic advisor at the time of application. Two years teaching experience or equivalent are also required.

For doctoral programs, the Department's minimum admission requirements are a master's degree with an admission GPA of at least 3.5 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\star$ 60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Applicants are required to identify a potential supervisor at the time of application. It is highly recommended that applicants have two years teaching experience or equivalent experience in a formal or informal educational context.

Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:

- a minimum TOEFL score of 93 with a score of at least 24 on speaking and writing and 20 on reading and listening (internet-based), or equivalent;
- IELTS with a minimum overall band score of 7.0, with at least 6.5 on each band;
- MELAB with a minimum score of 90:
- CAEL with an overall minimum score of 70, with at least 60 on each subtest;
- PTE (Academic) with an overall minimum score of 64

A current curriculum vitae, a statement of intent, and three letters of reference are also required. Further details about applying for programs can be found on the Department of Secondary Education website.

#### Application Deadlines

For Fall (September) or Summer (July) admissions, the following deadlines apply:

PhD and EdD: November 1 for funding and scholarship consideration

PhD and EdD: February 1 without funding

MEd (course-based): March 1

MEd (thesis-based): March 1

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# **GRADUATE STUDIES AND RESEARCH**

#### Financial Assistance

A number of graduate assistantships are available to qualified candidates for the EdD or PhD in Secondary Education for services rendered in the Department's research and teaching programs. These assistantships do not provide full support.

There are a number of financial supports available to students through fellowships, scholarships, and awards through the Faculty of Education, the Faculty of Graduate Studies and Research (FGSR), and the Graduate Students Association.

#### **Graduate Program Requirements**

- The Degree of MEd
- The Degree of MEd with Specialization in Technology in Education
- The Degrees of EdD and PhD

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading Secondary Education (EDSE, EDES, and EDCT).

# The Degree of MEd (Secondary Education) [Graduate]

Both thesis-based and course-based Master of Education programs are available through the Department.

# Program Requirements

#### Course-based MEd

Students in the course-based MEd program normally must successfully complete  $\bigstar 27$  of graduate-level courses and a final research/capping exercise (equivalent to  $\bigstar 3$ ) for a total of  $\bigstar 30$ .

#### Required Courses $(\bigstar 9)$ :

- EDSE 503 Curriculum Foundations
- EDSE 504 Curriculum Inquiry
- EDSE 510 Research Methods in Secondary Education

#### Elective Courses $(\pm 18)$ :

- Students will take six ★3 Elective Courses. Elective Courses in the course-based MEd program will be determined in consultation with the academic advisor with consideration for student's academic background and requirements for the proposed capping exercise.
- The number of Individual Study (EDSE 502) courses that can be taken is limited to ★3 per semester and ★6 per program.

#### Capping Exercise

• EDSE 900 - Research/Capping Exercise

#### Ethics requirement for course-based MEd

Completion of ethics training hours. Department Ethics component (equivalent to 8 hours) through successful completion of EDSE 510 and EDSE 900 plus FGSR component.

#### Thesis-based MEd

Students in the thesis-based MEd program normally must successfully complete \*21 of graduate-level courses, as well as preparing and defending a thesis.

#### Required Courses (★12):

- EDSE 503 Curriculum Foundations
- EDSE 504 Curriculum Inquiry
- EDSE 510 Research Methods in Secondary Education
- EDSE 511 Research Design in Secondary Education

#### Elective Courses $(\bigstar 9)$ :

- Students will take three ★3 Elective Courses. Elective Courses in the thesis-based MEd program will be determined in consultation with the supervisor with consideration for the student's academic background and proposed thesis.
- The number of Individual Study (EDSE 502) courses that can be taken is limited to ★3 per semester and ★6 per program

#### **Thesis**

Registration in 900-level THES.

#### Ethics requirement for thesis-based MEd

Completion of ethics training hours. Department Ethics component (equivalent to 8 hours) through successful completion of EDSE 510 and EDSE 511 plus FGSR component.

# Residence Requirement

There is no formal residency requirement for the course-based MEd. A period of residence of one academic year (fall and winter terms) is recommended for the thesis-based program.

### Length of Program

The time taken to complete the program will vary according to the education and experience of the applicant and the nature of the research undertaken. A minimum of two years is usually required.

The maximum time to complete the course-based MEd program as set by the Faculty of Graduate Studies and Research is six years.

The maximum time to complete the thesis-based MEd program as set by the Faculty of Graduate Studies and Research is four years.

The maximum time to complete the course-based MEng program as set by the Faculty of Graduate Studies and Research is six years.

# The Degree of MEd with Specialization in Technology in Education (Secondary Education) [Graduate]

Both thesis-based and course-based Master of Education programs with a Specialization in Technology in Education are available through the Department

#### **Program Requirements**

#### Course-based MFd

Students in the course-based MEd program normally must successfully complete  $\bigstar$ 27 of graduate-level courses and a final research/capping exercise (equivalent to  $\bigstar$ 3) for a total of  $\bigstar$ 30.

#### Required Courses ( $\star$ 12):

- EDSE 503 Curriculum Foundations
- EDSE 504 Curriculum Inquiry
- EDSE 510 Research Methods in Secondary Education
- EDU 575 Theory and Practice in Educational Technology

#### Elective Courses ( $\star$ 15):

- Students will take two ★3 Technology Elective Courses, at least one of which must be an EDSE 5XX course. Students will also take another three
   ★3 Elective Courses. Courses will be determined in consultation with the academic advisor with consideration for student's academic background and requirements for the proposed capping exercise.
- The number of Individual Study (EDSE 502) courses that can be taken is limited to ★3 per semester and ★6 per program

#### Capping Exercise

• EDSE 900 - Research/Capping Exercise

#### Ethics requirement for course-based MEd

Completion of ethics training hours. Department Ethics component (equivalent to 8 hours) through successful completion of EDSE 510 and EDSE 900 plus FGSR component.

#### Thesis-based MEd

Students in the thesis-based MEd program normally must successfully complete  $\star$ 21 of graduate-level courses, as well as preparing and defending a thesis.

#### Required Courses (★15):

- EDSE 503 Curriculum Foundations
- EDSE 504 Curriculum Inquiry
- EDSE 510 Research Methods in Secondary Education
- EDSE 511 Research Design in Secondary Education
- EDU 575 Theory and Practice in Educational Technology

#### Elective Courses $(\bigstar 6)$ :

- Students will take two ★3 Technology Elective Courses, at least one of which must be an EDSE 5XX course. Courses will be determined in consultation with the supervisor with consideration for the student's academic background and proposed thesis.
- The number of Individual Study (EDSE 502) courses that can be taken is limited to ★3 per semester and ★6 per program

#### **Thesis**

• Registration in 900-level THES.

#### Ethics requirement for thesis-based MEd

Completion of ethics training hours. Department Ethics component (equivalent to 8 hours) through successful completion of EDSE 510 and EDSE 511 plus FGSR component.

# Residence Requirement

There is no formal residency requirement for the course-based MEd. A period of residence of one academic year (fall and winter terms) is recommended for the thesis-based program.

# Length of Program

The time taken to complete the program will vary according to the education and experience of the applicant and the nature of the research undertaken. A minimum of two years is usually required.

The maximum time to complete the course-based MEd program as set by the Faculty of Graduate Studies and Research is six years.

The maximum time to complete the thesis-based MEd program as set by the Faculty of Graduate Studies and Research is four years.

# The Degrees of EdD and PhD (Secondary Education) [Graduate]

### Program Requirements

The EdD and PhD programs normally consist of a minimum of ★21 of graduate-level courses and the preparation and defense of a dissertation on an approved topic.

#### Required courses $(\bigstar 6)$ :

- EDSE 610 Advanced Research Seminar in Secondary Education I
- EDSE 620 Advanced Research Seminar in Secondary Education II
- In addition, students who have not completed EDSE 503 and EDSE 504 (or equivalent) prior to admission are expected to take these courses as a component of their doctoral program.

# Elective courses ( $\bigstar$ 15):

- Five additional  $\bigstar 3$  courses are selected by the student in consultation with the program supervisor.
- The number of Individual Study (EDSE 602) courses that can be taken is limited to ★3 per semester and ★6 per program.

#### **Thesis**

Registration in 900-level THES

#### Doctoral candidacy examination:

Students must prepare and orally defend a written candidacy paper outlining the proposed study and reviewing the relevant research and theory.

Final Doctoral Examination: Doctoral students must complete a thesis and this thesis must be successfully defended. See the Faculty of Graduate Studies and Research's website for information on required components and formatting of the thesis.

#### **Ethics Requirement**

Completion of Ethics training hours. Department ethics component (equivalent to 8 hours) through successful completion of EDSE 610 and EDSE 620, plus FGSR component.

#### Residence Requirement

The minimum period of residency for the EdD program is 12 continuous months of full-time study at the University of Alberta. The PhD program requires two academic years of full-time attendance to meet the residence requirement.

### Length of Program

The time taken to complete the EdD or PhD program will vary with the individual candidate. A minimum of two years of full-time study and research is usually required.

The maximum time to complete doctoral programs as set by the Faculty of Graduate Studies and Research is six years.

# Sociology [Graduate]

Department of Sociology 5-21 Tory Building University of Alberta Edmonton, Alberta T6G 2H4 E-mail: socgrad2@ualberta.ca

#### **General Information**

The Department of Sociology offers programs leading to the degrees of Master of Arts and Doctor of Philosophy. Four MA programs are available: (1) a course-based MA; (2) a thesis-based MA; (3) a course-based MA in criminal justice; and (4) a thesis-based MA in population and life course dynamics.

The PhD in Sociology strives to educate scholars with a breadth of knowledge of the discipline and specialized in-depth knowledge of particular fields within the discipline.

The Department of Sociology encourages all outstanding applicants to submit a completed application by December 15 in order to be considered for recruitment scholarships and other university awards. Furthermore, all applications completed before January 15 will be considered for admission, awards and graduate assistantship funding.

Application forms for admission are available online at www.gradstudies.ualberta.ca. Detailed graduate program information is available on the Department's home page at www.sociology.ualberta.ca.

# **Entrance Requirements**

The Department's minimum admission requirements for the course-based and thesis-based MA programs in sociology and population and life course dynamics are a four-year undergraduate degree with a major in Sociology (honors preferred), or a related discipline, and a minimum grade-point average of 3.5 in the last two years of undergraduate study at the University of Alberta (20 single-term courses), or equivalent qualifications from a recognized institution. The Department requires as part of the application package a clearly defined statement of research interests that will be developed into a research proposal as partial fulfilment of the MA degree.

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Minimum admission requirements for the MA in criminal justice (course-based) are a four-year BA (Criminology), or equivalent, or a four-year undergraduate degree in sociology or a related discipline and a minimum of one year of full-time work experience in the criminal justice system. Students must have completed introductory courses in criminology, criminal justice administration, statistics and research methodology prior to admission. The minimum average is 3.2 (on the 4-point letter grading system), or equivalent, in the last two years of undergraduate study.

For admission to the PhD program, the minimum requirements are a master's degree with an average of 3.5 on all graduate courses and undergraduate coursework taken in the final two years (20 single-term courses) at the University of Alberta, or equivalent qualifications from a recognized institution.

Where applicable (refer to English Language Requirement), applicants require a TOEFL score of 100 (Internet-based) or 600 (paper-based) or higher to be considered for admission.

#### Financial Assistance

Graduate assistantships are available on a highly competitive basis for students in full-time study who make satisfactory progress toward a degree. Students will be expected to apply for competitive awards. Exceptionally qualified applicants may be nominated by the Department for a University of Alberta recruitment scholarships (see www.gradstudies.ualberta.ca). Support for dissertation research is available on a competitive basis through internally administered Sociology Doctoral Research Grants.

### **Graduate Program Requirements**

- The Degree of MA
- The Degree of PhD

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading Sociology (SOC).

# The Degree of MA (Sociology) [Graduate]

# **Program Requirements**

Required courses (normally at the 500-level) depend on the area of specialization and the undergraduate background of the student.

The course-based MA program in sociology is an intensive year of study. Required coursework consists of  $\star$  24, including core courses in classical and contemporary theory, research design, research methods and statistics, SOC 900 (research project Parts 1 and 2), and completion of the mandatory ethics training requirement.

The Department assigns, or students may select, a Supervisor who will direct their work over two terms of SOC 900 during the Fall and Winter Terms. The project includes a critical appraisal of the literature and formulation of a research topic in the subject area of interest. During the Winter Term, and concurrent with a course in research design (SOC 533), the topic is developed into a research project which demonstrates the student's ability to work in a scholarly manner. The capping exercise consists of an oral examination in which the student successfully defends the research project (SOC 900).

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Thesis MA programs require registration in a combination of coursework and thesis research comprising a minimum of  $\star$  24, and completion of the mandatory ethics training requirement. For the thesis MA in sociology, coursework consists of at least  $\star$  18, including core courses in theory, research design, methods and statistics.

For the thesis MA in demography, coursework consists of at least ★18, including core courses in statistics, methods, theory, demographic analysis, and two of fertility, mortality, and migration. Candidates will be examined orally on their completed thesis.

The MA in criminal justice program is designed for students who are pursuing a career in one of the components of the criminal justice system. The program requires  $\bigstar$ 24 at the graduate-level, plus a project equivalent to  $\bigstar$ 3, and completion of the mandatory ethics training requirement. Depending on the student's background, two full-time field placements of four months each may be required. Coursework must include SOC 525 and an additional  $\bigstar$ 9 in criminology. Coursework in related disciplines is encouraged.

There is no language requirement for the MA degrees.

The minimum period of residence for the MA course-based degree in sociology is two four-month terms of full-time attendance at the University of Alberta. The other MA programs do not have a residence requirement.

# Length of Program

The time required to complete an MA program will vary according to the previous education of the applicant and the nature of the research undertaken.

Normally, the course-based MA degree will be completed in one academic year, the thesis MA (normally through full-time study) in four terms and the MA in criminal justice (normally through part-time study) within four years.

# The Degree of PhD (Sociology) [Graduate]

# Program Requirements

The PhD requires registration in a combination of coursework and thesis research comprising a minimum of ★36, and completion of the mandatory ethics training requirement. PhD candidates are required to complete ★18 beyond the foundational courses of the course-based MA at the University of Alberta, or equivalent. At least ★15 of the required coursework (normally taken in the first year) consists of graded 500- and 600-level courses: ★12 sociology courses and a ★3 course or equivalent taken outside the Department. The 'outside' course may be approved at the 500- or 600-level. At least ★3 of ungraded sociology seminars at the 600-level are normally required (★1.5 each) in the second year. Students must also complete a Seminar in Teaching and Professional Skills. Specific courses taken to meet the requirements are chosen in consultation with the Associate Chair (Graduate) and the student's supervisor. In addition to coursework, candidates must: demonstrate reading proficiency in a second language through prior credit on the transcript, or completion of a course or standard test approved by the Department; pass a specialization area examination in an area distinct from the thesis; and pass an oral candidacy examination taken in the subject field of the thesis research. Depending on the supervisory committee or student preference, a written examination may also be taken in the thesis subject, prior to the oral candidacy examination. The above requirements are normally completed within the first two years.

Candidates proceed to the completion of the degree, normally within two years, by conducting thesis research and related scholarly activity leading to conference presentations and publication. Candidates may present their thesis research to the Department in the form of a public seminar prior to the thesis defence. Finally, the thesis is defended at an oral examination (see Final Doctoral Examination).

The normal period of residence is two academic years of full-time attendance at the University of Alberta.

# Length of Program

The time required to complete the PhD degree will vary according to the previous education of the applicant and the nature of the thesis research; however, four years is normally required. Candidates must complete their degree program within six years of the time they first register.

# Surgery [Graduate]

Department of Surgery 3-002 Li Ka Shing Centre University of Alberta Edmonton, Alberta T6G 2E1 E-mail: surggrad@ualberta.ca www.surgery.ualberta.ca

#### **General Information**

The Department offers research facilities in the Surgical-Medical Research Institute (SMRI), the Alberta Diabetes Institute, the Heritage Medical Research Centre [HMRC Li Ka Shing Centre for Health Research Innovation (LKS)], Medical Sciences Building (MSB), Katz Building, and the Cross Cancer Institute for graduate students who wish to register for the degree of MSc or PhD in Surgery.

The Department has several core facilities including surgical suites, simulation facilities, an electron microscopy unit, clinical biochemistry and histology laboratory, and computer graphics and photography with technical staff in these laboratories who are able to assist graduate students who wish to carry out research projects. These facilities are well equipped to meet all the requirements of both the basic and clinical investigators from the Department of Surgery.

Facilities are available for the following projects which are presently being carried out: islet transplantation, the immunology of diabetes, perinatal physiology, burns/wound healing, xenotransplantation, stem cells, tolerance induction and immunoregulation, virology, neurological oncology, orthopaedics, surgical education, urological oncology, ischemia-reperfusion and organ preservation/transplantation, surgical simulation and surgical education.

Inquiries should be directed to the department prior to admission into the MSc or PhD program.

# **Entrance Requirements**

Normally, an MD or BSc degree will be considered an entrance requirement for the MSc program. Applicants for the PhD program must be medical graduates or hold a master's degree. The minimum requirements include a grade-point average of 3.0 in the last two years of undergraduate work (or graduate work) at the University of Alberta, or an equivalent qualification from a recognized institution, and a minimum TOEFL score of 550 (paper-based) or 88 (Internet-based) where applicable (see English Language Requirement). Applicants who are graduates of programs, including MD programs, where grades are not assigned will be assessed on an individual basis.

#### Financial Assistance

Funding is typically from supervisors' operating grants. Candidates are encouraged and fully supported in applying to major granting agencies for financial assistance.

### **Graduate Program Requirements**

- The Degree of MSc
- The Degree of MSc in Surgery with a specialization in Surgical Education
- The Degree of PhD

#### **Graduate Courses**

Graduate courses can be found in Course Listings, under the heading Surgery (SURG).

# The Degree of MSc (Surgery) [Graduate]

#### **Program Requirements**

Requirements for the MSc degree include preparation and defence of a thesis based on research performed by the candidate; in addition, all candidates must include some coursework specified by their supervisory committee in the program. A minimum of  $\pm 24$  are required for the MSc, of which  $\pm 9$  will be graduate level courses.

Students are encouraged to take graduate-level courses in other departments that complement their specific research area; courses are approved in consultation with their supervisory committee and the departmental graduate coordinator.

#### Required Courses

- MED 650 Fundamentals for Clinical Investigators
- SURG 530 Directed Reading in Biology and Medicine
- SURG 600 Research Seminar

# Length of Program

The time required to complete the MSc will vary according to the candidate's previous training and the nature of the research undertaken; however, a minimum of 24 months is normally required.

# The Degree of MSc in Surgery with a specialization in Surgical Education

The purpose of this degree is to provide graduate students in advanced training in surgical education, with a specific focus on how surgeons are trained for their roles as expert practitioners.

A minimum of  $\pm 24$  are required for the MSc. In addition to the three courses required for the MSc in Surgery. The student must also take:

- one course  $(\bigstar 3)$  on educational research methodology from the approved list:
  - O EDEL 665

- O EDPY 501
- O EDPY 505
- o EDPY 597
- O EDPY 604
- EDPY 605
- two elective courses (★6) in an area of education relevant to their thesis project from the approved list of courses that includes:
  - EDPS 521
  - O EDPY 510
  - O EDPY 524
  - o EDPY 597
  - o EDPY 615
  - SURG 520

Additional courses that are deemed relevant to the research project may be approved on an individual basis.

# The Degree of PhD (Surgery) [Graduate]

#### **Program Requirements**

Requirements for the PhD degree include preparation and defence of a thesis and successful completion of courses taken for graduate credit, as specified by the supervisory committee. Students in the doctoral program must register in and be assessed fees for a minimum of  $\bigstar 36$ , which may consist of a combination of courses and thesis research. Students are encouraged to take graduate-level courses in other departments that complement their specific research area; courses are approved in consultation with their supervisory committee and the departmental graduate coordinator.

# Length of Program

The time required to complete the PhD will vary according to the previous training of the applicant and the nature of the research undertaken; however, a minimum of 36 months of study and research is normally required.

# Women's and Gender Studies [Graduate]

Department of Women's and Gender Studies 1-17 Assiniboia Hall University of Alberta Edmonton, Alberta T6G 2E7 www.wgs.ualberta.ca

#### **General Information**

The Department of Women's and Gender Studies offers a program in Gender and Social Justice Studies (GSJ) leading to the degree of Master of Arts. The Department of Women's and Gender Studies is a well-established, interdisciplinary unit housed in the Faculty of Arts. It draws from a strong, broad-based community of feminist and

# GRADUATE STUDIES AND RESEARCH

gender studies scholars in one of Canada's top research universities. Core faculty conduct research in the areas of feminist legal studies, gendered violence, gender and development, gender and immigration, sexuality and queer studies, feminist theory, feminist visual culture, feminist cultural studies, feminist philosophy, feminist history, religious studies and trauma and cultural memory studies.

The course-based Master of Arts in Gender and Social Justice is offered by itself or in conjunction with a specialization within the Digital Humanities Program.

Detailed graduate program information is available on the Department's homepage at www.wgs.ualberta.ca

### **Entrance Requirements**

Normally, the Department's minimum admission requirements are a BA in Women's Studies or a related discipline with an admission GPA of at least 3.3 on the 4- point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last  $\star$  60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Where applicable, a minimum TOEFL score of 92 (internet-based) or equivalent is required (see English Language Requirement).

Applicants are also required to submit a CV, statement of research interest, a writing sample, and to arrange for three letters of reference.

Potential applicants, including non-traditional students, are encouraged to contact the Graduate Coordinator of the department at gsj@ualberta.ca to discuss their qualifications.

Applicants considering a specialization in Digital Humanities must meet both the minimum entrance requirements for the MA program in Gender and Social Justice and for the Digital Humanities (DH) Program. Applications are first reviewed by the Graduate Committee in Gender and Social Justice, and, if successful at that stage, are forwarded to DH for its review process.

The Department of Women's and Gender Studies encourages applicants to submit their applications by January 15 to be considered for admission, awards, and graduate assistantship funding.

# Financial Assistance

Financial assistance in the form of graduate assistantships (normally teaching assistantships or research assistantships) for full-time MA students may be available.

Scholarships and bursaries may also be available, and some supervisors may support students from operating funds.

For further information about awards, scholarships, and financial assistance, please contact the Graduate Coordinator of the department and consult uofa.ualberta.ca/graduate-studies.

# **Graduate Program Requirements**

MA in Gender and Social Justice Studies

### **Graduate Courses**

Graduate courses can be found in Course Listings, under the subject heading Gender and Social Justice Studies (GSJ).

# MA in Gender and Social Justice Studies [Graduate]

# **Program requirements**

The MA in Gender and Social Justice Studies can be completed as a thesis-based degree, or as a course-based degree.

#### Thesis-based MA

Students are required to complete a minimum of ★18 in coursework and a thesis

#### Coursework:

- GSJ 501 (★3) Praxis Workshop, which includes a mandatory Community Service-Learning component and
- GSJ 502 (★3) Research Workshop
- Four ★3 graduate-level courses
- Additional coursework may be required
  - Students who have not already taken a course in Feminist Research Methodologies (or the equivalent) will normally be required to audit WGS 302 in addition to their other courses.
  - Students also may be required to take a theory course, if adequate coverage was not obtained in the student's first degree.
- Students must complete minimum of ★12 courses in GSJ
- Graduate courses offered by other departments may be taken with the consent of the Graduate Coordinator; thesis-based students may only take
   ★6 in courses outside of GSJ.

#### Thesis

Registration in 900-level THES

#### Course-based MA

The course based MA can be taken in Gender and Social Justice Studies or with a specialization in Digital Humanities.

Students are required to complete a minimum of  $\bigstar 24$  in coursework, including a  $\bigstar 3$  capping project.

#### Coursework

- GSJ 501 (★3) Praxis Workshop, which includes a mandatory Community Service-Learning component and
- GSJ 502 (★3) Research Workshop
- Five ★3 graduate-level courses
- Additional coursework may be required
  - Students who have not already taken a course in Feminist Research Methodologies (or the equivalent) will normally be required to audit WGS 302 in addition to their other courses.

- Students also may be required to take a theory course, if adequate coverage was not obtained in the student's first degree.
- Students must complete minimum of ★12 courses in GSJ
- Students admitted to the course-based MA with a specialization in Digital Humanities are required to complete ★9 courses in DH.

#### Capping Project

GSJ 900 (★3) – Directed Research Project. The required capping project is a portfolio – a synthesizing document that highlights students'
 learning in the program and that will include a major research paper, a field statement, a creative project or a policy/program/legal analysis.

#### Ethics and Professional Development Requirements

All students must complete a mandatory ethics training requirement (see Academic Integrity and Ethics Training Requirement) and a mandatory Professional Development requirement.

### Residence Requirement

There is no residence requirement.

# Length of Program

The time required to complete the MA will vary with the program (thesis- or course-based) and the candidate. Full-time students in the course-based MA program will normally complete the program within 12 months, while those enrolled in the thesis-based program will normally complete within 24 months. However, the Department of Women's and Gender Studies recognizes that many of its students are non-traditional and that part-time registration may be their preferred option.

The maximum time to complete the thesis-based MA program as set by the Faculty of Graduate Studies and Research is four years.

The maximum time to complete the course-based MA program as set by the Faculty of Graduate Studies and Research is six years