St. Francis Xavier University

Academic Calendar

2019-2020
Quaecumque Sunt Vera

Whatsoever things are true

The St. Francis Xavier University motto is taken from the letter of Paul to the Philippians. The following is an excerpt from the epistle.

*I want you to be happy, always happy in the Lord; I repeat, what I want is your happiness. Let your tolerance be evident to everyone: the Lord is very near. There is no need to worry; but if there is anything you need, pray for it, asking God for it with prayer and thanksgiving, and that peace of God, which is so much greater than we can understand, will guard your hearts and your thoughts, in Christ Jesus. Finally, brothers and sisters, fill your minds with everything that is true, everything that is noble, everything that is good and pure, everything that we love and honour, and everything that can be thought virtuous or worthy of praise.*

Phil. 4: 4-9
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Students and other readers will appreciate that matters dealt with in this Academic Calendar are subject to continuing review. The university reserves the right to alter anything described herein without notice other than through the regular process of the university. The university cannot accept responsibility or liability to any person or persons who may suffer loss or who may be otherwise adversely affected by such changes. The Academic Calendar takes precedence over all other publications.

In the interpretation of academic regulations, the University Senate is the final authority. The registrar will assist students in interpreting academic regulations; however, it is the responsibility of students to see that their academic programs meet university regulations.

The Board of Governors has final authority on all financial matters. The financial policies will be enforced through the Financial Services, under the direction of the Director of Finance. Notwithstanding any other provision of this calendar, St. Francis Xavier University accepts no responsibility to provide any course of instruction, program or class, residential or other services including the normal range of academic, residential and other services in circumstances of utility interruptions, fire, flood, strikes, work stoppages, labour disputes, war, insurrection, the operation of law or acts of God or any other cause (whether similar or dissimilar to those enumerated) that reasonably prevent their provision. Published March 2019.

St. Francis Xavier University is a member of Association of Universities and Colleges of Canada
Association of Atlantic Universities
Association of Commonwealth Universities
International Association of Universities

Mailing Address
St. Francis Xavier University
PO Box 5000
Antigonish, Nova Scotia, Canada
B2G 2W5

Civic Address
2329 Notre Dame Avenue

Admissions Office
Toll free 1-877-867-StFX(7839)
Phone: 902-867-2219
Fax: 902-867-2329
Email: admit@stfx.ca

Registrar’s Office
Toll free 1-888-Reg-StFX(734-7839)
Phone: 902-867-2160
Fax: 902-867-5458
Email: registrar@stfx.ca

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**CALENDAR OF EVENTS 2019 - 2020**

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<th>JUNE 2019</th>
<th>DECEMBER</th>
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<tbody>
<tr>
<td>Thu. 13</td>
<td>Sun. 1</td>
</tr>
<tr>
<td>2019-2020 Course timetable posted</td>
<td>Fall Convocation</td>
</tr>
<tr>
<td>Mon. 17</td>
<td>Mon. 2</td>
</tr>
<tr>
<td>Registration start times available on Banner Self-service</td>
<td>Last day of classes for first term</td>
</tr>
<tr>
<td>Mon. 24</td>
<td>Tue. 3</td>
</tr>
<tr>
<td>Course registration for the 2019-2020 academic year begins for continuing students</td>
<td>Feast Day of St. Francis Xavier, Alumni Memorial Mass</td>
</tr>
<tr>
<td>JULY</td>
<td>Thu. 5</td>
</tr>
<tr>
<td>Mon. 1</td>
<td>Term examinations begin</td>
</tr>
<tr>
<td>Final day for partial tuition refunds for full-year courses, when applicable</td>
<td>Mon. 16 Christmas recess begins after last examination</td>
</tr>
<tr>
<td>Fri. 5</td>
<td>Fri. 20</td>
</tr>
<tr>
<td>Final date to apply for degree or diploma to be conferred at Fall Convocation</td>
<td>Professors to submit term grades by 9:00 a.m.</td>
</tr>
<tr>
<td>Tue. 9</td>
<td>Mon. 23</td>
</tr>
<tr>
<td>Course registration for the 2019-2020 academic year begins for first-year students</td>
<td>Offices closed for holidays</td>
</tr>
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<table>
<thead>
<tr>
<th>AUGUST</th>
<th>JANUARY 2020</th>
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<tbody>
<tr>
<td>Mon. 5</td>
<td>Thu. 2</td>
</tr>
<tr>
<td>Civic Holiday, offices closed</td>
<td>Offices re-open</td>
</tr>
<tr>
<td>Wed. 28</td>
<td>Sun. 5</td>
</tr>
<tr>
<td>International students - arrival services (day 1)</td>
<td>Residences re-open</td>
</tr>
<tr>
<td>Thu. 29</td>
<td>Mon. 6</td>
</tr>
<tr>
<td>International students - arrival services (day 2)</td>
<td>Second term classes begin</td>
</tr>
<tr>
<td>Fri. 30</td>
<td>Mon. 13</td>
</tr>
<tr>
<td>International Student Orientation (attendance mandatory)</td>
<td>Last day to drop full-year courses or change second-term courses</td>
</tr>
<tr>
<td>Sat. 31</td>
<td>Wed. 15</td>
</tr>
<tr>
<td>Welcome Day. New students arrive. Orientation program begins. Students will receive first week schedule of events, times and locations. New students only may check into residence after 9:00 a.m.</td>
<td>Student Account - Balance due in full</td>
</tr>
<tr>
<td>Fri. 13</td>
<td>Tue. 21</td>
</tr>
<tr>
<td>Faculty Meeting, 9:15am-11:15am</td>
<td>Faculty Meeting, 3:15pm-5:15pm</td>
</tr>
<tr>
<td>Sun. 15</td>
<td>Fri. 24</td>
</tr>
<tr>
<td>Student Account - First term payment due</td>
<td>Final date for submission of application to the B.Ed. program</td>
</tr>
<tr>
<td>Thu. 19</td>
<td>Fri. 31</td>
</tr>
<tr>
<td>Last date for approval of senior honours and advanced major thesis topics and supervisors</td>
<td>April exam schedule available</td>
</tr>
<tr>
<td>Fri. 20</td>
<td>FEBRUARY</td>
</tr>
<tr>
<td>HKIN Outdoor Camp session 1 begins</td>
<td></td>
</tr>
<tr>
<td>Fri. 27</td>
<td>Mon. 2</td>
</tr>
<tr>
<td>December exam schedule available</td>
<td>University Senate Meeting, 7:00pm</td>
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<table>
<thead>
<tr>
<th>SEPTEMBER</th>
<th>MARCH</th>
</tr>
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<tbody>
<tr>
<td>Mon. 2</td>
<td>Mon. 2</td>
</tr>
<tr>
<td>Academic Day</td>
<td>University Senate Meeting, 7:00pm</td>
</tr>
<tr>
<td>Orientation program continues</td>
<td></td>
</tr>
<tr>
<td>Returning students may check into residence after 9:00 a.m.</td>
<td></td>
</tr>
<tr>
<td>Xaverian Welcome ceremony for new students in the evening</td>
<td></td>
</tr>
<tr>
<td>Tue. 3</td>
<td>Tue. 3</td>
</tr>
<tr>
<td>Classes begin</td>
<td>University Senate Meeting, 7:00pm</td>
</tr>
<tr>
<td>Sun. 8</td>
<td>Mon. 13</td>
</tr>
<tr>
<td>Opening Mass of the Holy Spirit 5:00 p.m.</td>
<td>Last day to drop full-year courses or change second-term courses</td>
</tr>
<tr>
<td>Tue. 10</td>
<td>Wed. 25</td>
</tr>
<tr>
<td>Last day to change first-term or full-year courses</td>
<td>Final date for:</td>
</tr>
<tr>
<td>Last day to receive full tuition refund for full-year or first-term courses, when applicable</td>
<td>• BA and B.Sc. first-year students to declare majors</td>
</tr>
<tr>
<td>Fri. 13</td>
<td>Thu. 25</td>
</tr>
<tr>
<td>Faculty Meeting, 9:15am-11:15am</td>
<td>Last day to receive full tuition refund for second-term courses, when applicable</td>
</tr>
<tr>
<td>Sun. 15</td>
<td>Fri. 28</td>
</tr>
<tr>
<td>Student Account - First term payment due</td>
<td>Second-term, three-credit mid-term grades available to students</td>
</tr>
<tr>
<td>Thu. 19</td>
<td>Mon. 23</td>
</tr>
<tr>
<td>Last date for approval of senior honours and advanced major thesis topics and supervisors</td>
<td>For Spring Convocation, final date for:</td>
</tr>
<tr>
<td>For Fall Convocation, final date for:</td>
<td>• seniors to submit senior theses</td>
</tr>
<tr>
<td>• seniors to submit senior theses</td>
<td>• graduate students to submit theses</td>
</tr>
<tr>
<td>• graduate students to submit theses</td>
<td></td>
</tr>
<tr>
<td>Fri. 20</td>
<td>Wed. 25</td>
</tr>
<tr>
<td>HKIN Outdoor Camp session 1 begins</td>
<td>Final date for:</td>
</tr>
<tr>
<td>Fri. 27</td>
<td>Fri. 27</td>
</tr>
<tr>
<td>December exam schedule available</td>
<td>Spring Convocation list published</td>
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<tr>
<th>OCTOBER</th>
<th>APRIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tue. 1</td>
<td>Fri. 3</td>
</tr>
<tr>
<td>University Senate Meeting, 3:45pm</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>Mon. 14</td>
<td>Tue. 7</td>
</tr>
<tr>
<td>Thanksgiving Day, offices closed</td>
<td>Final examinations begin</td>
</tr>
<tr>
<td>Mon. 15</td>
<td>Fri. 10</td>
</tr>
<tr>
<td>Fall Study Break begins</td>
<td>Good Friday, no exams, offices closed</td>
</tr>
<tr>
<td>Mon. 21</td>
<td>Tue. 21</td>
</tr>
<tr>
<td>Classes resume after break</td>
<td>Last day of examinations</td>
</tr>
<tr>
<td>Wed. 23</td>
<td>Mon. 27</td>
</tr>
<tr>
<td>Final day for partial tuition refunds for first-term courses, when applicable</td>
<td>Professors to submit final grades by 9:00 a.m. for graduation candidates</td>
</tr>
<tr>
<td></td>
<td>Spring term classes begin</td>
</tr>
<tr>
<td>Fri. 25</td>
<td>Fri. 27</td>
</tr>
<tr>
<td>Professors to submit October mid-term grades by 9:00 a.m.</td>
<td>University Senate Meeting, 3:45pm</td>
</tr>
<tr>
<td>HKIN Outdoor Camp session 2 begins</td>
<td></td>
</tr>
<tr>
<td>Thu. 31</td>
<td>Sun. 3</td>
</tr>
<tr>
<td>Final date to apply for degree or diploma to be conferred at Spring Convocation</td>
<td>Spring Convocation</td>
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<table>
<thead>
<tr>
<th>NOVEMBER</th>
<th>MAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fri. 1</td>
<td>Fri. 1</td>
</tr>
<tr>
<td>Last day to drop first-term three-credit courses</td>
<td>Spring Convocation list published</td>
</tr>
<tr>
<td>Mon. 4</td>
<td>Sun. 3</td>
</tr>
<tr>
<td>University Senate Meeting, 7:00pm</td>
<td>Spring Convocation</td>
</tr>
<tr>
<td>Mon. 11</td>
<td>Mon. 4</td>
</tr>
<tr>
<td>Remembrance Day, offices closed</td>
<td>Professors to submit final grades for continuing students by 9:00 a.m.</td>
</tr>
<tr>
<td>Wed. 20</td>
<td></td>
</tr>
<tr>
<td>Final day for partial tuition refunds for full year courses, when applicable</td>
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</tbody>
</table>
St. Francis Xavier University is widely recognized as one of the top post-secondary institutions in Canada. From its halls and classrooms have come prime ministers, provincial premiers, Rhodes scholars, scientists and religious and business leaders. Since its founding in 1853, StFX has helped shape the communities in which we live.

Today, StFX continues to offer what so many of Canada’s top students want: a high quality education focused primarily on the undergraduate, in a vibrant residential setting. StFX continues to meet the needs of its students through outstanding teaching, exceptional hands-on research experience, the very best in residential living, and unique opportunities to make a contribution to communities at home and abroad.

Home to over 4,500 full and part-time students from across Canada and around the world, StFX students have the opportunity to excel in an intimate learning environment that nurtures the development of the whole person. Our professors rank among Canada’s top teachers and researchers. These exceptional faculty members, almost all holding doctorates and many with teaching awards, inspire students to achieve their academic and personal potential. The unique StFX brand of education offers innovative teaching methods and exceptional opportunities for personal growth in a close-knit campus community. The result is individual attention, lively classroom discussions, and the opportunity for students to reach their personal best.

In addition to the teaching and learning process, our holistic approach to the educational experience requires a commitment to the quality of the cultural, spiritual, social, and recreational life of our students. The very nature of a StFX education inherently encourages students and faculty to be engaged with the world around them. Through internships, service learning experiences, international research and learning partnerships and community outreach initiatives, our students and professors make meaningful contributions as socially engaged citizens to communities at home and abroad.

It’s all part of an educational experience built on StFX’s long and honorable commitment to social justice and equality. As more evidence to its commitment to community and social development, StFX established the Coady International Institute in 1959, a world-renowned centre of excellent in community-based development, educating leaders from around the world to address global challenges and opportunities.

St. Francis Xavier University’s Strategic Plan, which represents the ideals for which the university strives and reflects its proud traditions, emphasizes commitment to the highest standards for its faculty and students. Unlike mega-universities, StFX measures its success on excellence in its teaching and research programs rather than the size of the institution. Our niche is to be Canada’s premiere residential university, steeped in a liberal arts tradition, with high academic standards and a character attractive to those who hold and respect social values. The university takes pride in the Catholic heritage and character that have formed a vital part in its history and mission, and is dedicated to providing its students with a post-secondary education that is intellectually stimulating and personally enriching within an atmosphere of inclusiveness for students, faculty and staff of diverse backgrounds.

Today, StFX is in the midst of the most ambitious academic and facilities renewal program for StFX in its history. We continue to enhance teaching and research facilities and strengthen the residential campus experience. This investment is further evidence of our commitment to create a university experience as it’s meant to be.

**Arts**
The Arts Faculty includes programs in the social sciences and humanities. Through their teaching and research, faculty members lead our students on a journey that is intellectually broadening, socially awakening and culturally rich. StFX Arts graduates have an understanding of the world, an appetite for learning and an ability to solve problems. They are prepared to assume leadership roles in our rapidly changing society.

**Business**
The Faculty of Business is the home of the Gerald Schwartz School of Business. StFX keeps pace with the changing way the world does business by connecting theory with practice as a vital component of the learning process. This is why the Schwartz School offers a variety of hands-on learning experiences, international exchanges and a co-op option. The business program is uniquely integrated in the liberal arts tradition. Graduates of the BBA program are consistently sought out by major firms and corporations.

**Education**
StFX’s Faculty of Education believes that learning is a lifelong endeavour. Faculty work hard in building collegial, professional relationships with their students, practicing teachers and those in a variety of educational organizations. A distinguishing feature of the school is that it educates teachers in priority needs areas through specialized cohort programs such as French language, math, and Aboriginal studies. It is consistently understood to be one of the very best education faculties in Canada.

**Science**
The Science Faculty includes both the theoretical and applied sciences and professional programs in Engineering, Human Kinetics, Human Nutrition, and in the School of Nursing. The Faculty includes accomplished scientists who conduct teaching and research of the highest standard. In doing so, they provide a solid academic foundation for bright minds that go on to award-winning research, further study and exciting scientific careers. They also make important contributions to scientific discovery in Canada.
History of StFX

StFX StFX traces its origin to a small school of higher studies established by Most Rev. Dr. Colin F. MacKinnon at Arichat, Nova Scotia, in 1853. The previous year, on his consecration to the See of Arichat, Bishop MacKinnon was placed in charge of an extensive diocese with a relatively large but widely dispersed Catholic population. To solve the urgent need for pastoral clergy, he founded an institution of general education. The original building stood at the centre of the Antigonish community and served for 25 years as the then known as St. Francis Xavier's College. The institution was relocated to Antigonish, Nova Scotia, with Dr. John Schulte as the first rector, succeeded by Most Rev. Dr. John Cameron.

By 1856, an ambitious curriculum had been developed in nine subjects, taught by six professors to 49 students, and the institution was then known as St. Francis Xavier's College. The original building stood at the centre of the Antigonish community and served for 25 years as the home of the college. Dr. Cameron's appointment to the Diocesan See in 1877 spurred further development, including a relocation to the southern boundary of Antigonish and the erection of the first wing of Xavier Hall in 1880. These 100 plus acres are the university's home today.

Full university powers were conferred upon the college by an act of the provincial legislature in 1866. A board of governors was appointed and incorporated under another act in 1882. This granted to the board general control over the direction and internal affairs of the institution.

The early graduates of StFX received a Bachelor of Arts degree. This academic program was broadened through the energy of new faculty, well qualified in both the humanities and natural sciences, and encouraged always by Bishop Cameron. A Master of Arts degree was first awarded in 1890 and a Bachelor of Letters was available by 1899. Just prior to the turn of the century, the university had departments of law, commercial studies and a faculty of applied science, the first in Nova Scotia. Bachelor of Science degrees were awarded by 1904.

The foresight of Bishop Cameron led him to invite to Antigonish the Sisters of the Congregation of Notre Dame of Montreal, to staff a school for young women. This St. Bernard's Academy became affiliated with the university in 1894 as Mount Saint Bernard College. In 1897 St. Francis Xavier became the first Catholic coeducational university in North America to grant degrees to women. Members of the Congregation joined the faculty in later years. Women represented a small fraction of the student body for more than 100 years, but by 1985, they equaled men in numbers.

On the occasion of the university's golden jubilee, the chancellor, Bishop Cameron, declared, "No multi-millionaire laid its foundations in wealth and built the university's walls from his own private fortune. But it boasts a more precious and, let me add, a more secure foundation: the loving hearts of a loyal people." The well-being of StFX lay in the generous hands of the Scots, Irish and Acadians of eastern Nova Scotia. The priest faculty for over 100 years toiled essentially without remuneration. No university owes more to its loyal people, the alumni, than does StFX. The gracious campus, the many academic programs and the research endeavors were possible only through their support, as very little assistance was received from the public, through governments, prior to the 1960s. Today StFX alumni are the most dedicated and committed alumni in Canada.

The Next Chapter

Many changes have impacted StFX, but perhaps there has never been so much optimism as there is today. In 2014 the Nova Scotia Legislature passed the new St. Francis Xavier Act (2014). The Act clearly defined the four objectives of the University. They are:

1. Provide students with a post-secondary education that is intellectually stimulating and personally enriching within an atmosphere of inclusiveness for all students, faculty and staff;
2. Promote academic excellence, service to society and innovation in teaching and research;
3. Provide opportunities to enrich the cultural, spiritual, social and recreational life of students; and
4. Respect the catholic heritage and character that have formed a vital part of the University's history.

Over the coming decade StFX is transforming its footprint as a clean energy environmentally sustainable campus; in fact, aiming to become a leader in Canada in this regard. Further the university has reaffirmed its commitment to be Canada’s premiere undergraduate residential university. The demand comes from awareness around the world that StFX provides a unique, personal, high quality learning community that is unparalleled in Canada and since its founding, it remains committed to the development of the whole person in service to humanity.
UNIVERSITY PERSONNEL

University Officers
Kent MacDonald, Ph.D. President
Kevin Wamsley, Ph.D. Academic Vice-President & Provost
Andrew Beckett, CPA, CA Vice-President, Finance & Administration, Director of Student Services
Murray Kyte, BBA, M.Ed., LL.B. Vice-President, Advancement
Richard Isnor, D.Phil. Associate Vice-President Research & Graduate Studies
Karen Brebner Ph.D. Dean of Arts
Timothy W. Hynes, Ph.D. Dean of Business
Jeff Orr, Ph.D. Dean of Education
Mike Melchin, Ph.D. Interim Dean of Science
Tara Bukaisitis, BA, MLIS Registrar & Director Enrolment Planning
Vacant University Librarian

UNIVERSITY SENATE

Members Ex-Officio
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Kevin O'Brien, Ph.D. Antigonish, NS
Michael O'Brien, MD, FRCPC Antigonish, NS
Sydney Pagan, BA Ottawa, ON
Chief P.J. Prosper Afton, NS
Nikki Robar, CPA, CA, CBV Halifax, NS
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Judy Steele, FCPA Halifax, NS
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Robert Kennedy, Ph.D. Past Chair
Barry Taylor, Ph.D. Secretary
Bobbi Morrison, Ph.D. Vice-Secretary

Elected Faculty Members
Term Expires June 2019
Marion Alex, MN, RN
Doug Al-Maini, Ph.D.
Frank Comeau, Ph.D.
Patricia Cormack, Ph.D.
Santo Dodaro, Ph.D.
Opal Leung, Ph.D.
Peter McInnis, Ph.D.
Anne Murray-Orr, Ph.D.
Dan Robinson, Ph.D.
Vijay Vishwakarma, Ph.D.
Term Expires June 2020
Hugo Beltrami, Ph.D.
Chris Gilham, Ph.D.
Réjeanne Leblanc, Ph.D.
Karine LeBris, Ph.D.
Charlene Weaving, Ph.D.
Term Expires June 2021
James Cormier, Ph.D.
Sharon Gregory, Ph.D.
Mark Fuller, Ph.D.
Moira Galway, Ph.D.
Patti Hansen-Ketchum, Ph.D.
Jonathan Rosborough, Ph.D.
Brandon Malloy, Ph.D.
Shah Razul, Ph.D.
Debra Dheppart-LeMoine, Ph.D.
Jeffrey Spring, Ph.D.
Kara Thomson, Ph.D.
Joanne Tompkins, Ph.D.
Other Member: Kathleen MacKenzie

Elected Student Members
Term Expires September 2019
William Burgess
Bryan Fedchun
David Lewis
Lucas Middleton
Caelan Peters
1. ADMISSION PROCEDURES AND REQUIREMENTS

1.1 Admission Procedures

Address all applications and inquiries concerning admission to:

St. Francis Xavier University
PO Box 5000
Antigonish, NS B2G 2W5
Phone: 1-877-867-7839, 902-867-2219
Fax: 902-867-2329
Email: admit@stfx.ca

Applications for admission should be made on the appropriate form. A non-refundable application fee of $40 (subject to change) is required. All applicants must submit a school transcript. StFX may grant transfer credit equivalency for academic work previously completed at other accredited universities or colleges. Transfer students must submit official university or college transcripts.

The admission procedure is complete when the candidate has returned a confirmation form along with the appropriate fee. Admissions decisions are final.

All information supplied by an applicant may be used by the university in its normal course of business. St. Francis Xavier University (StFX) is required to abide by Freedom of Information and Protection of Privacy legislation (FOIPOP) and the Personal Information Protection and Electronic Documents Act (PIPEDA) as they apply to universities.

Entrance Scholarships

All applicants from high school with superior grades will be considered for entrance scholarships. See section 2.6 for information on university scholarships.

Transfer Students

If you have studied at an accredited college or university applicants must submit their transcript for evaluation. If course work has been completed at more than one institution, all academic work must be submitted.

Transfer Credits

From time of admission to beginning studies at StFX, students may not enrol in additional courses at any level that they have not declared on their application for admission. Students may not knowingly, or carelessly provide untrue or incomplete information. The University may admit and grant transfer credits to a student who has attended another accredited college or university. Official documents of all previous academic work must be submitted whether or not transfer credits are sought. Failure to supply such documents is considered grounds for subsequent academic dismissal.

Mature Students

Applicants who have not fulfilled the normal admission requirements and who have been out of school for at least three years may be considered for admission. Applicant may not have university or college level studies that would constitute a basis for admission. All previous academic work must be submitted, letters of reference from employers, and an outline of future plans. Each applicant is considered on an individual basis. Please note some programs require specific prerequisites for admission.

Program for Students with Disabilities

StFX welcomes students with disabilities and offers a student-centred program of support. Students with disabilities are responsible for identifying and providing documentation of their disability to the co-ordinator of the program. Students are encouraged to make contact as soon as possible. For further information, call the Centre for Accessible Learning at 902-867-5349.

1.2 ADMISSION TO UNIVERSITY PROGRAMS

The university reserves the right to reject any application for admission on the basis of the applicant's overall academic record even if the entrance requirements are satisfied.

In special circumstances, a student lacking the specified requirements may be admitted. The university takes into consideration the overall demographics of its constituency.

Senate regulations limit enrolment in some programs. Admission to these programs is competitive and possession of the minimum requirements does not ensure acceptance into the program.

1.3 ADMISSION REQUIREMENTS FROM GRADE 12

a) The requirements for admission from high schools are stated below. The courses required for university programs are specified in the chart on page 3.

Nova Scotia

i) A minimum average of 70 in grade XII, to include English each year; no grade less than 65 in a course required for admission

ii) Credit for five university preparatory courses in each of grade XI and grade XII.

iii) Some programs may require a higher average; contact the Admissions office for more information.

Alberta

Applicants must have grade XII with subject distribution and minimum averages as for Nova Scotia. All five courses must be at the 30 or 31 level.

New Brunswick, Prince Edward Island, Manitoba, Saskatchewan, British Columbia, Northwest Territories, Nunavut, Yukon

Applicants must have grade XII with subject distribution and minimum averages as for Nova Scotia.

Newfoundland and Labrador

Applicants must meet the same course requirements and minimum averages as for Nova Scotia students. Courses needed to satisfy entrance requirements must be at the 3000 level and students must achieve at least 11 credits.

Ontario

Ontario secondary school students must have a minimum of five grade XII courses of U and M levels (preferable four U level courses) to include the program-specific requirements outlined on page 3, and must have completed the Ontario Secondary School Diploma (OSSD) or equivalent to be considered for admission.

Quebec

Applicants who have completed senior matriculation or one year of CEGEP will be considered for entry into the first year of a four-year program. Students, who have completed more than one year of CEGEP, may be eligible to receive transfer credits for courses in which they have received a passing grade. Only courses that apply to the intended program of study will be transferred.

General Requirements

The following university preparatory subjects are acceptable: English, entrepreneurship, geography, global history, global geography, history, mathematics (algebra, trigonometry, geometry, functions/relations), modern languages, classical languages, economics, biology, chemistry, Earth sciences, and physics. Some university preparatory courses may not be listed above. Please contact the Admissions office if you have any questions, or refer to the website www.stfx.ca/admissions/requirements.

b) In addition to English, all programs require additional grade XII credits as specified in the chart on page 3.

c) Admission to the music program is a two-part process. Students must apply to and be accepted by both the university and the music department.

i) Candidates must contact the music department to arrange for an audition or receive information regarding a taped audition. Call 902-867-2106 or email music@stfx.ca. Only after acceptance to the university and completion of a successful audition are candidates fully enroled in the music program.

Successful candidates receive letters of acceptance from both the university and the music department.

d) Students are initially admitted to the Bachelor of Arts (BA) with major undeclared:

i) Majors are offered in anthropology, aquatic resources, Catholic studies, development studies, Celtic studies, computer science, economics, English, French, history, mathematics, music, philosophy, political science,
psychology, public policy and governance, religious studies, sociology, Spanish, and women’s and gender studies.

Students are expected to declare major and minor subjects prior to second year registration. Students may choose the four-year BA advanced major or honours program during their first year of study.

e) Students are initially admitted to the Bachelor of Business Administration (BBA) program in the Faculty of Business with major undeclared. Students declare a major prior to registering for their third year.

The BBA degree with major, advanced major or honours is offered in accounting, entrepreneurship, enterprise systems, finance, international business, management and leadership, and marketing.

f) The Bachelor of Science (B.Sc.) degree with advanced major or honours is offered in biology, chemistry, computer science, economics, Earth sciences, mathematics, physics, and psychology. A B.Sc. major degree is also offered in these subjects and aquatic resources, but not in economics or psychology. Students may choose the B.Sc. advanced major or honours before their second year of study.

g) Students accepted into any B.Sc. Nursing option are required to provide proof of: current certification in Health Care Provider (HCP) and Standard first aid; screening through the child abuse register in their home province (if this service is available in their home province); current (within three months of start of classes) criminal records check completed at their nearest detachment of the RCMP or local police department; current certification in WHMIS (within 12 months); a copy of their birth certificate, valid driver’s license (or provincial health card) and required immunization records (Hepatitis B immunization and tuberculin-two step Mantoux testing is also required). Annual recertification of HCP is mandatory for clinical practice. Students from outside of Nova Scotia will be screened through the Nova Scotia Child Abuse Register during first semester.

h) Students can choose to focus on various areas of concentration for the Bachelor of Arts and Science in Health or the Bachelor of Arts and Science in Climate and Environment Programs. These include biomedical or social determinants for the HLTH program and climate or environment for the CLEN program.

i) Advanced Placement (AP): The AP program is accepted for admission on the same basis as Nova Scotia grade 12. Students who have completed courses in the AP program may be eligible for up to 30 transfer credits for selected AP courses with national exam results of 3, 4 or 5.

j) International Baccalaureate (IB): Students admitted to StFX with a score of 30 or higher on the IB Diploma and who have received a minimum score of 5 on all higher level and standard level courses, will be granted up to 30 transfer credits. Students, who have any one minimum score falling below 5 will have their courses individually assessed for possible transfer credits. Students who have completed IB courses but who do not possess the diploma or who scored less than 30 on the IB Diploma may be eligible to receive individual university course credit if they have achieved a grade of 5, 6 or 7 in higher-level courses.

k) Early fall admission: Students who have a grade 11 average of at least 80 may be considered for early fall admission before their first set of grade 12 marks is available. Students applying for early fall admission should include their final grade 11 marks and a school-approved list of courses they are taking in grade 12 (both semesters) with their application. Grade 12 courses must be consistent with the guidelines listed above. Students applying to B.Sc. Nursing must also send first semester grade 12 grades because early admission does not apply to this program. However, students are encouraged to submit their grade 11 grades with a second choice of program if they wish to be considered for a second choice before nursing decisions are processed. For further information, contact the admissions office.

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**FACULTY OF ARTS**

<table>
<thead>
<tr>
<th>Program (four-years)</th>
<th>Description</th>
<th>High School Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor of Arts with Major</td>
<td>Offered in anthropology, aquatic resources, Catholic studies, Celtic studies, computer science, development studies, economics, English, French, history, mathematics, music, philosophy, political science, psychology, religious studies, sociology, Spanish, women’s and gender studies. Students may choose the advanced major or honours degree during their second year of study.</td>
<td>English and four university preparatory courses in grade 12. See 1.3 d.</td>
</tr>
<tr>
<td>Bachelor of Arts in Human Kinetics</td>
<td>The study of human movement from an arts (humanities and social sciences) perspective prepares students for a variety of options: employment and careers in health and fitness, or further studies in education, occupational therapy, sport sociology, sport history, sport philosophy or sport psychology. Students must choose a major, advanced major or honours in kinesiology, or a major, advanced major or honours in pre-education during their second year of study.</td>
<td>English; one of math, biology, chemistry or physics; and three other university preparatory courses in grade 12 (grade 11 physics highly recommended). Limited enrolment.</td>
</tr>
<tr>
<td>Bachelor of Music</td>
<td>Students in the Bachelor of Music program are given the opportunity to focus on creativity and performance. They will develop more fundamental skills in improvisation and theory as the number of Music credits taken in this program is higher than those taken in the BA with Major in Music.</td>
<td>English and four university preparatory courses in grade 12. See 1.3 d. Admission depends on the student’s performance during an audition, which may be submitted on a CD or tape. See 1.3 c.</td>
</tr>
<tr>
<td>Bachelor of Arts in Public Policy &amp; Governance</td>
<td>Students will study the world of public affairs and leadership. This new program involves introducing students to a broad field that integrates many different disciplines to answer the key questions: how do we solve the common problems we have as a society, and how do we organize ourselves to provide those solutions? This involves analysis of government and other public institutions, their processes for tackling policy problems, and how to analytically approach the design, implementation and assessment of public policy.</td>
<td>English and four university preparatory courses in grade 12. See 1.3d.</td>
</tr>
</tbody>
</table>

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**FACULTIES OF ARTS AND SCIENCE**

<table>
<thead>
<tr>
<th>Program (four-years)</th>
<th>Description</th>
<th>High School Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor of Arts and Science in Climate &amp; Environment</td>
<td>This program serves students who seek an interdisciplinary education with a unique strength in both environment and climate. The field of environment focuses on the physical and chemical composition, nature, and the societal relationship we maintain with our physical setting, while the field of climate focuses on how the Earth’s energy balance affects our environment. Students in the BASc in Climate and Environment program will have the option of completing a Co-op Education program.</td>
<td>English; two of math, chemistry, biology or physics; and two other university preparatory courses in grade 12. See 1.3g.</td>
</tr>
<tr>
<td>Bachelor of Arts and Science in Health</td>
<td>A program for students interested in the ever-broadening field of health, including scientific, social and humanistic dimensions. Students in the BASc in Health will take courses in a wide range of disciplines and have the opportunity to focus on either the biomedical or social determinants and health equity field as they customize their degree. Students in the BASc in Health program will have the option of completing a Co-op Education program.</td>
<td>English; two of math, chemistry, biology or physics; and two other university preparatory courses in grade 12. See 1.3g.</td>
</tr>
</tbody>
</table>

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**FACULTY OF BUSINESS**

<table>
<thead>
<tr>
<th>Program (four-years)</th>
<th>Description</th>
<th>High School Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor of Business Administration</td>
<td>Majors, advanced majors and honours programs are offered in accounting, entrepreneurship, enterprise systems, finance, international business, management and leadership, and marketing. A joint honours in business administration and economics option is available. Students in this program will have the option of completing a Co-op Education program.</td>
<td>English, math and three other university preparatory courses in grade 12.</td>
</tr>
</tbody>
</table>
FACULTY OF EDUCATION

Program (two-years) | Description | Entrance Requirements
--- | --- | ---
Bachelor of Education | A professional degree program that prepares graduates to enter the school system as teachers, at either the elementary or the secondary level. | Completion of an undergraduate degree (BA, B.Sc. or equivalent). Normally a minimum average of 70 in senior year of the undergraduate program. Limited enrolment.

1.4 ADMISSION FROM THE UNITED STATES

High school graduates who have completed 16 academic subjects will be considered for admission to a four-year degree. The 16 courses must include four English courses and the program-specific subjects listed in the following chart.

<table>
<thead>
<tr>
<th>Program (four years unless otherwise indicated)</th>
<th>Additional Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor of Arts</td>
<td>see 1.3 d</td>
</tr>
<tr>
<td>Bachelor of Arts in Human Kinetics</td>
<td>3 sciences and/or mathematics</td>
</tr>
<tr>
<td>Bachelor of Music</td>
<td>see 1.3 c</td>
</tr>
<tr>
<td>Bachelor of Arts in Public Policy &amp; Governance</td>
<td>see 1.3 c</td>
</tr>
<tr>
<td>Bachelor of Business Administration</td>
<td>4 mathematics</td>
</tr>
<tr>
<td>Bachelor of Science</td>
<td>4 mathematics and 4 sciences</td>
</tr>
<tr>
<td>Bachelor of Science in Human Nutrition</td>
<td>4 mathematics and 4 sciences</td>
</tr>
<tr>
<td>Bachelor of Science in Nursing (four years and two sessions)</td>
<td>4 mathematics and 4 sciences</td>
</tr>
<tr>
<td>Diploma in Engineering (two years)</td>
<td>4 mathematics and 4 sciences</td>
</tr>
<tr>
<td>Bachelor of Science with Diploma in Engineering</td>
<td>4 mathematics and 4 sciences</td>
</tr>
<tr>
<td>Bachelor of Science in Human Kinetics</td>
<td>4 sciences and/or mathematics</td>
</tr>
<tr>
<td>Bachelor of Arts &amp; Science in Climate &amp; Environment</td>
<td>4 sciences and/or mathematics</td>
</tr>
<tr>
<td>Bachelor of Arts &amp; Science in Health</td>
<td>4 sciences and/or mathematics</td>
</tr>
</tbody>
</table>

1.5 ADMISSION FROM OTHER SYSTEMS OF EDUCATION

International applications will be considered on an individual basis.

For applicants from a British system of education, students must complete English and four other academic courses at the Ordinary level as well as four GCE AS level examinations or two GCE A level examinations with a minimum grade of A, B, or C for admission to any program. A student who has received exceptional results at the ordinary level may be considered for admission. Students who achieve a final grade of A, B, or C in approved Advanced ‘A’ level courses may be eligible to receive transfer credit. English, mathematics, two sciences, and one other academic subject are required for admission to programs in the Faculty of Science.

For applicants whose first language is not English, or whose normal language of instruction has been other than English, a test of English language proficiency may be required. The IELTS test is preferred and strongly recommended. Students with an IELTS score of 6.5 and no band below 6.0 will be deemed to have satisfied the English language requirements for admissions to undergraduate or graduate programs. Students with IELTS scores below 6.5 may be considered for admission conditional on the completion of a program designed to improve English language competency to an IELTS 6.5 equivalent. Other acceptable tests include: MELAB (minimum score required is 90), TOEFL (minimum score required is 92), CAEL (minimum score required is 70).
1.6 ADMISSION TO THE BACHELOR OF SCIENCE IN NURSING

Besides the traditional four-year degree program for students applying from high school, other students may apply for the accelerated two-year option or the part-time post-RN option. Admission is competitive and enrolment is limited. Students seeking re-admission must contact the Assistant Director, School of Nursing, prior to June 30. Transfer student should contact the Admissions office for options.

CASPPer is a mandatory admissions requirement for the BSc in Nursing program. The test can only be taken once each year and is only valid for one academic cycle. Test scores are not released to students to protect the integrity of the test. The scores are used in combination with high school requirements and averages for admissibility into the BScN program. All students must successfully complete the test prior to the March 1 deadline in order to be considered for admission to Nursing.

<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
<th>Admission Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accelerated two-year</td>
<td>University students who hold the required prerequisite courses may complete the B.Sc.Nursing program in a full-time two-year option. This program begins in January.</td>
<td>This program is available to transfer applicants who must have the following 30 credits completed prior to admission with a minimum grade of 65 in each of the mandatory courses and an overall average of 65 in the combined 30 university credits below: anatomy &amp; physiology (6 credits), microbiology (3 credits), English (3 credits), statistics (3 credits), and 15 credits of open electives. Successful completion of CASPER.</td>
</tr>
<tr>
<td>Post-RN 63 credits by distance, with limited opportunity for courses on campus</td>
<td>Designed around core nursing competencies with extensive flexibility that enables students to select courses meeting their professional interests and practice needs.</td>
<td>Completion of an approved registered nursing program and current RN license.</td>
</tr>
<tr>
<td>LPN to B.Sc. in Nursing Pathway (full-time, on campus) or LPN to B.Sc. in Nursing Pathway (part-time, distance)</td>
<td>A bridging program designed for LPNs to earn credit for their education and experience. Students who are successful in this program will join the accelerated option students in the semester beginning in May.</td>
<td>Two-year Diploma from Nova Scotia Community College (NSCC), Graduated 2008 or later. Grades-minimum 75% overall average in both years of the diploma program. Total of 1800 hours work experience within the last two years (require a letter of verification from employer(s)). Current LPN License</td>
</tr>
</tbody>
</table>

1.7 ADMISSION TO THE BACHELOR OF EDUCATION PROGRAM

Admission to the B.Ed. program is limited. Consideration is given to those who have successfully completed an undergraduate degree, provided references, and had experience related to a career in teaching. Admission is competitive and the possession of minimum requirements does not ensure acceptance into the program. See chapter 6 for admission and program requirements.

1.8 ADMISSION TO GRADUATE PROGRAMS

The requirements for admission to graduate programs are given in chapter 8.

2. GENERAL INFORMATION

2.1 Registration Fees

2.1.1 Tuition Fees

Students registered in 18 or more credits are automatically enrolled in the StFX Students’ Union Health and Dental Plans. This plan supplements provincial health care plans, it does not replace them. The fees for 12 months are:

- Fewer than 24 credits $301.67 per credit
- 24 to 30 Credits $8570.00
- Above 30 Credits $8570.00 plus $274.33 per credit

For nursing students, the tuition fees including tuition, laboratories, library, and university health service are:

- Fewer than 24 credits $313.33 per credit
- 24 to 30 Credits $8900.00

Students with disabilities enrolled in fewer than 30 credits qualify for the per credit rate upon recommendation of the Program for Students with Disabilities.

2.1.2 Other Registration Fees

Up to 18 credits, a pro-rated students’ union fee is assessed at $5.50 per credit hour. For 18 or more credits, the fee is a flat rate of $165.00. Students registered in 18 or more credits are automatically enrolled in the St. Francis Xavier Students’ Union Health and Dental Plans. This plan supplements provincial health care plans, it does not replace them. The fees for 12 months are:

- Canadian students $220.00 (single)*
- Dental Plan $175.00*
- International students $1085.00 (single)*

*Fees are subject to change from year-to-year dependent on changes to insurance premiums.

If a Canadian student is already covered under an extended health plan (this does not mean a provincial health plan), they may opt out of the students’ union health and dental plan(s). To opt out of the students’ union health and dental plan(s), students can go online to www.mystudentplan.ca. Select the StFX Students’ Union in the drop down and follow the steps to complete the opt out process. Opt out’s must be completed online between August 1 - September 9. Late opt out requests are not permitted.

International students attending StFX are automatically enrolled in the StFX Students’ union health and dental plans. International students are provided through this plan, the coverage that Canadian students receive provincially, as
2.1.4 Students’ Union Fees
The Students’ Union is the autonomous, democratic student organization at StFX. The union represents students’ interests and provides a wide variety of academic, social, issue-oriented, and cultural services for students. Fees are collected at the request of the union and are administered by students.

The general budget covers: student societies; Drive U, Food Resource Centre; orientation; activities and events; student newspaper; radio station; lobbying and publicity; issue awareness campaigns; elections; and general operations.

2.1.5 Payment Regulations
Students can access their student fee account on mesAMIS with their student number and PIN. Periodic notification of the balance owing on the student account will be sent to the students StFX e-mail account. All fees are subject to change at any time. Students can pay through online banking by setting up St. Francis Xavier University as a payee and the account number is the student ID number. Payments can also be made by debit card in person or by cheque. Cheques should be made payable to St. Francis Xavier University. A portion of the fees is due and payable by September 15, 2019 and the balance on January 15, 2020. Students are expected to continue to monitor their student account after January 15 each year. Refunds on student accounts will be issued as a cheque and mailed to the student address on file.

Recipients of university scholarships may deduct one-half the value of their scholarship from fees required on September 15, 2019. The balance of the scholarship is applied to fees due on January 15, 2020. Students should note that no reduction in fees is allowed for late entrance.

Monthly late payment fee: a late payment fee of one percent per month, or 12 percent per annum, will be charged on overdue accounts as of the last banking day of each month. The charge will begin in the first semester at the end of September, and in the second semester at the end of January.

Students are expected to be familiar with and to understand all regulations in the StFX Academic Calendar, in particular to understand that adding and dropping courses or withdrawing from the university affects a tuition fee account. Students must ensure that tuition fees are paid in full without any notice from the university, and pay the fees regardless of receipt of a bill.

Students whose fees will be paid by an external sponsor must provide proof of funding to the business office prior to the payment deadline dates.

2.1.6 Non-Payment of Tuition, Registration, Residence or Meal Plan Fees
Students with a balance of fees owing from a previous term will not be permitted to register for a subsequent term or receive an official transcript.

The university reserves the right to cancel the registration of students who fail to pay any fees owing to the university. The university reserves the right to refuse to let students sit for examinations if their fees to the university are overdue. The university will not release a transcript unless arrangements satisfactory to the business office have been made by the student for the payment of any outstanding fees.

A late payment fee of $50 is charged in the first term if payment is delayed beyond September 15, 2019 and in the second term if payment is delayed beyond January 15, 2020. The university is not responsible for deadlines missed by students who do not pay their fees on time.

The university reserves the right to cancel residence and meal contracts for non-payment of fees.

2.1.7 Other Undergraduate Fees
All fees are subject to revision.

- Application fee for admission to undergraduate and B.Ed. programs: $40.00
- Late payment fee (each term) (see 2.1.6): $50.00
- Confirmation payment (non-refundable)
  - B.Ed. students: $300.00
  - New students: $100.00
  - Transcript of record (each copy): $10.00
  - Letter of permission (per 3 credit course): $20.00
  - NSF cheque fee: $20.00
  - Unwarranted breakage of or damage to StFX University property will be charged to the student responsible.

2.1.8 Tuition and Fees for Graduate, Distance, Diploma in Adult Education and Diploma in Ministry Programs
For information about tuition, fees and refunding policy for graduate studies, distance education, the Diploma in Adult Education and Diploma in Ministry programs, refer to the information available from the applicable program office.
2.2 RESIDENCE AND MEAL PLANS

Students in residence agree to be governed by the StFX University Community Code of Conduct and the residence contract and to assume responsibility for their own actions or those of their guests, for their room and, along with other residents, for the common areas and assets of their house. No refunds of fees for residence or food service will be made if students are temporarily absent from residence. This includes absences for academic reasons. All inquiries about residence or meal plan contracts should be made to Residence Services, Morrison Hall, email: residence@stfx.ca, phone: 902-867-5106.

2.2.1 Application for Residence

New, Re-Entry, Mature, Exchange and Transfer Students

When a student applies to attend StFX, they are given the opportunity to apply for residence. New students direct from high school are guaranteed a space in residence if they confirm their acceptance to the university by paying a $100 confirmation fee and submit a residence application by May 15. Once offered a space in residence, students have until June 1 to pay their $400 residence fee to confirm their space. This $400 non-refundable fee is applied towards the student's cost for residence and meal plan. Students may continue to apply for residence after May 15.

Returning Students

Returning students may apply for residence using the online application. Information about the room assignment process can be found on the residence services website. Once a room assignment is offered to a student and a student accepts their room and selects their meal plan, a $400.00 non-refundable residence fee (room forfeiture fee) will be applied to the student’s account if a student cancels their residence contract before August 15. Refer to the residence contract for details about cancelling after August 15. Students wishing to return to residence must be in good standing with the Community Code of Conduct. Students can continue to apply to live on campus during the academic year.

2.2.2 Residence and Meal Fees and Regulations

All students living in residence are required to participate in a combined room and meal plan. There are minimum meal plans and declining cash balance (DCB) associated with each residence. Students can always increase their meal plan option at any time; however, no meal plans can be downgraded after October 7. Off-campus students may purchase a meal plan and/or DCB or purchase meals. Visit the residence website.

2.2.3 Duration of Residence Occupancy

New, Re-Entry, Mature, Exchange and Transfer Students

The university shall permit new students to occupy their assigned room from Monday, August 26, 2019 until 24 hours after their final exam in December or by noon the day after the final exam period, whichever date and time is earlier. Students may return to residence second term on January 5, 2020 until 24 hours after their final exam in April or by noon on the day after the final exam, whichever date and time is earlier.

Returning Students

The university shall permit returning students to occupy their room from Monday, September 2, 2019 until 24 hours after their final exam in December or by noon the day after the final exam, whichever date and time is earlier. Students may return to residence second term on January 5, 2020 until 24 hours after their final exam in April or by noon on the day after the final exam, whichever date and time is earlier. Note: Students, in extenuating circumstances, may apply to occupy their room on dates outside of those identified above; however, they will be required to sign additional contract(s) and will be subject to additional charges. Pre-approval by residence services is required.

2.2.4 Cancellation of Residence Application and Contract

New Entry Students

Where the resident notifies the University prior to June 1, that he/she does not intend to take a room in residence, the residence deposit will be returned. If the resident notifies the university that he/she does not intend to take a room in residence after June 1, he/she will forfeit their $400 residence deposit. If the resident notifies the University after August 15 that he/she does not intend to take their assigned room in residence, then the resident is responsible for 15% of the room fee for the full academic year.

Returning Students

Once the returning resident accepts his/her room assignment, he/she is bound to the residence contract. Breaking a contract after accepting a room assignment will result in a $400.00 room forfeiture fee. If the resident does not notify the University prior to August 15 that they do not intend to return to residence, then the resident is responsible for 15% of the room fee for the full academic year.

Where the resident notifies the university in writing that they wish to decline their room assignment either after the resident takes up his/her room (this includes an off-campus move) or after the day when the resident was expected to take occupancy (this includes an off-campus move), then the resident assumes full responsibility for room and meal plan fees for the 2018-2019 academic year except in the following cases:

a) if the resident formally withdraws from the University (academic withdrawal) up to and including November 1, they will receive an 85% credit for the remaining room and meal plan fees from the date they vacate the premises; if the resident formally withdraws in the first term after November 1 they will be charged room and meal plan fees for the first term; if the resident formally withdraws in the second term up to and including February 1, the resident will receive an 85% credit for the remaining room and meal plan fees from the date the resident vacates the premises; if the resident formally withdraws in the second term after February 1, the resident will be charged with room and meal plan fees to the end of the academic year according to the current calendar of events. Residents are required to vacate their residence within 24 hours of academic withdrawal; or

b) if the resident is released from this contract due to compassionate circumstances, it is at the sole discretion of the University.

The university reserves the right to cancel any residence contract on the basis of violation of policies outlined in the University Community Code and/or residence contract for residence and dining hall.

2.3 STUDENT SERVICES

The StFX student services department strives to maintain an inclusive and welcoming environment. Along with residence and food service, programs are provided to help students develop their capabilities and interests as fully as possible within the university community. In addition to the services identified below, the student services department works with the students’ union to co-ordinate the first-year orientation program.

2.3.1 Athletic and Recreational Programs

The university has a wide variety of athletic and recreational programs. The campus recreation program provides all students with opportunities to participate in different forms of physical activity through intramural sports, which offer competitive leagues and tournaments; non-credit instruction in a variety of physical activities; self-directed activities; and sport clubs. StFX Club sports include badminton, men’s baseball, cheerleading, curling, dance, equestrian, women’s field hockey, men’s lacrosse, rowing, men’s rugby, swimming and ultimate Frisbee. StFX has a long and distinguished history in intercollegiate varsity athletics, offering students with superior athletic ability an opportunity to develop and utilize their talents in competition with students from other universities within the Atlantic University Sport conference and USPORTS national organization. There are women’s teams in basketball, cross-country, hockey, rugby, soccer and track & field; and men’s teams in basketball, cross country, hockey, football, soccer and track & field.

2.3.2 Student Career Services

The Student Career Services (SCS) offers three primary services: career coaching, career information and employment services. Career coaching services are provided on an individual and group basis. The SCS can incorporate the strong interest inventory in students’ career decision-making process and further educational opportunities. Throughout the academic year, the SCS offers a variety of events and programs that help students make informed career decisions and develop effective job search strategies. Some examples include workshops on career planning, resume writing, job search, interview skills and job fairs. Employment related services include advertising new graduate, summer and on-campus jobs as well as employer and school information sessions which help students gain an understanding of the skills required in today’s workplace.

2.3.3 Chaplaincy Services

In keeping with the university’s Catholic Christian character, a university chaplain and an associate chaplain co-ordinate a team ministry which gives interested students an opportunity for religious and spiritual expression. Part-time ministers of the Anglican and United Church co-ordinate activities for students of their denomination.

2.3.4 Health and Counselling Centre

The Health and Counselling Centre provides a student-centered approach to primary health care, with a focus on supporting student wellness and resilience across all areas of their health. Our interdisciplinary team is comprised of family
physicians, registered nurses, clinical therapists and counsellors, and we also provide consultation opportunities with specialist physicians, Student Life staff and other care providers from the StFX and wider Antigonish communities. The Health and Counselling Centre provides a range of health services, addressing the physical, sexual, mental health needs of our students. We also offer individual and group counselling, along with campus-wide wellness initiatives. Students may book an appointment with our intake nurse by calling 902-867-2283, or by dropping by the Health and Counselling Centre, located on the 3rd Floor of Bloomfield Centre (Room 305). For more information, please visit our website: http://www2.mystfx.ca/health-and-counselling/

### 2.3.5 Student Life Office
The Student Life Office works closely with other areas on and off campus to enhance student success. The office strives to provide a positive space for all students to feel welcome and included in the wider StFX and Antigonish community. Academic success is always the number one priority while attending university however, a close second is engaging with and being involved in all the things the campus community has to offer.

The office is responsible for non-academic student advising for Gender and Sexual Diversity, Aboriginal, and Student of African Descent, as well as the Student Career Centre. The office acts as the primary liaison with the Students’ Union and works collaboratively to offer programming on student leadership, off campus resources and university transition. The Student Life Office is responsible for the administration of the Community Code of Conduct which deals with all matters of non-academic student conduct.

The office is located on 3rd floor Bloomfield Centre (Room 306). To contact us, please visit our website at http://www2.mystfx.ca/student-life/ or phone (902) 867-3934.

### 2.3.6 Financial Aid Office
The university maintains a financial aid office to advise students regarding Canadian, American and Ecuadorian government student loans, help students with financial planning, administer the university bursary program, and provide information on scholarships and awards from sources outside the university. For further information, visit the website here.

### 2.3.7 Student Life Advisors
SFX offers advising which aids students transitioning into and through university and recognizes that students have a variety of needs in the many distinct communities within the broader StFX community. The university aims to foster an environment of cultural competency and diversity through a variety of programs and one-on-one assistance which encourages student academic and personal success. These include Gender and Sexual Diversity, Aboriginal and Students of African Descent and mature student advisors. More information is available at http://sites.stfx.ca/student_life/

### 2.3.8 Tramble Rooms Centre for Accessible Learning
SFX welcomes students with diagnosed, permanent disabilities and offers a student-centered program of support. Supports can include: course selection and registration assistance; assistive technology support and training; physical accessibility arrangements; testing accommodation, tutoring, note taking assistance, academic strategists and advocacy training.

The Tramble Centre is located at the Angus L. Macdonald Library, Room 108. Contact us at (902) 867-5349 or visit the website at http://www2.mystfx.ca/accessible-learning/

### 2.3.9 Wellspring Centre
The Sisters of St. Martha staff Wellspring Centre, a comfortable, relaxing environment for reflection, interaction, prayer, support, personal and spiritual growth.

### 2.3.10 Student Success Centre
Student Success Centre services complement course work by assisting students in developing their academic communication skills and assisting them in accessing the other academic supports they require, including locating subject tutors. StFX students can arrange free one-to-one appointments by registering through the centre’s web page (http://sites.stfx.ca/ssc/), by calling the centre at (902) 867-5221, or by walking in to the centre in the Angus L. Macdonald library. Student Success Centre instructors discuss with students ways to improve writing and general academic skills and habits. Writing consultations are valuable at any stage of the writing process. Appointments may also focus on improving academic writing and communication skills such as note-taking, oral presentations, and exam preparation. In addition, the instructors at the centre assist students through the following programs:

**APEX: Academic Program of Excellence**
This is a free, mandatory university program for students accepted and placed on probation by StFX or another institution and for students re-admitted after suspension or dismissal as a result of a previous year’s academic performance. See section 3.12. Students are required to participate in six workshops in the fall term. In addition to attending workshops, students must meet with a Learning Skills instructor at least twice per term in fall and winter, including once in September. The one-to-one appointments provide opportunities for students to focus on their specific academic needs. Details are available on the Student Success Centre's website. Upon application by a student, the Committee on Studies of the appropriate faculty may excuse the student from taking APEX.

**EAP: English for Academic Purposes**
A bridging program for English language, for students planning to take a bachelor’s degree at StFX, who have been conditionally accepted into an academic program but do not meet the English language requirements. The courses consist of 25 hours per week of classroom instruction and some outings to local sites and cultural events. Students must pass a test equivalent to our standard for admission before moving into a diploma or degree program at StFX.

EAP is not an English-as-a-second-language (ESL) course; rather, the EAP curriculum concentrates on reading critically, writing analytically, and applying these skills to academic material. Classes provide students with the opportunity to listen, learn, and put their academic skills into practice. Course fees and other details are available on the Student Success Centre’s website.

### 2.4 HUMAN RIGHTS & EQUITY
All members of the university including students, staff and faculty have the right to study, work and learn in an environment that promotes equity and that is free from harassment and discrimination on human rights grounds (as described in the Nova Scotia Human Rights Act, 1991). In support of ensuring a campus free of discrimination and harassment, and of creating a collegial study, work and living environment where all individuals are treated with respect and dignity, the StFX Human Rights & Equity Advisor assists with the resolution of discrimination and harassment issues, including arranging for informal or formal procedures for resolving concerns and complaints. The Human Rights & Equity Advisor also offers education and training on a wide variety of human rights and diversity issues, and advocates for educational and employment equity. The Discrimination and Harassment Policy can be found on the human rights’ office website at https://sites.stfx.ca/equity/index.html or on the Human Resources website at http://sites.stfx.ca/hr/policies

### 2.5 SAFETY AND SECURITY
Safety & Security Services fosters and safeguards a healthy, safe and welcoming campus community that supports the well-being of students, faculty, staff and guests. Partnerships within the university and active collaboration with local law enforcement and community emergency response teams ensures essential services are in place and ready to respond.

Safety & Security Services provides 24-hour coverage 365 days per year via the Safety & Security Operations Centre (SOC). In addition, our team of dedicated Safety & Security Officers conduct regular vehicle and foot patrols of campus instilling confidence that everyone is able to LIVE, LEARN, WORK and PLAY in a supportive and safe environment.

The Student Safety & Security Services Leadership Team, known as “X-PATROL”, work side by side with Safety & Security Services Officers to provide campus event supervision, evening foot patrols and a walk home service.

### 2.6 UNIVERSITY SCHOLARSHIPS AND BURSARIES
The purpose of the university scholarship program is to recognize superior scholastic achievement on the part of high school graduates and in-course students. Awards are offered to students selected by the university scholarship awards committee and are tenable only at StFX University. If a student is eligible for more than one university-nominated scholarship, s/he will receive the largest to which s/he is entitled.

The university gratefully acknowledges the generosity of the persons and organizations whose contributions made possible the following scholarships, awards, and bursaries:

- Dr. Louis J. Allan Scholarship
- Daniel W. & Marjorie E. Almon Scholarship
- Alumni Scholarship Endowment
- Ambrose Allen Bursary
- The Lord Ambrose Celtic Travel Bursary
- Christopher Amirault Award
- Anderson Environmental Award
- George Anderson Business Award
- George Anderson Leadership X-Ring Award
Antigonish Diocese CWL Bursary
Art History Prize
Justin Avery Memorial Award
Bank of Montreal Scholarship
Rev. R.V. Bannon Scholarship Fund
Barrick Gold Scholarship
Holly Bartlett Memorial Bursary
Bauer Bursary Fund
A.P. Beaton Scholaristic Award
John Beaton Fellowship Bursary
Rev. Donald Belland Bursary
Bergengren Credit Union Scholarship
Lou Bilek Soccer Award
Rod & Betty Bilodeau Bursary
Birks Foundation Bursary
Michelle Birks Memorial Bursary
Black Student Bursary in Education
Harry and Martha Bradley Scholarship
Bishop Bray Foundation Scholarship
Cecilia Brennan Bursary
Jacqueline Brougham Award
Jo M. Brown Scholarship in Nursing
Claude Brunelle Memorial Scholarship
Florence Kate Burroughs Nursing Scholarship
CJFX Scholarship
Dominic Joseph Campbell O’Halloran Bursary
Rev. J.V. Campbell Bursary
Michael A. “Diker” Campbell Scholarship
Cape Breton Scholarship and Bursary Fund
Dr. J.J. Carroll Scholarship
Catholic Women’s League Scholarship
Celtic Travel Bursary
Central Home Improvement Warehouse Scholarship
Clarence & Helen Chadwick Bursary
Chadwick-Hayes Scholaristic Award
Chevrolet High Note Student Bursary
Dr. Leo P. Chiasson Scholarship
A.W. (Bill) Chisholm Bursary
Donald A. Chisholm Memorial Scholarship
Rev. J.C. Chisholm Scholarship in Biology
Rev. John Archie Chisholm Memorial Scholarship in Celtic Studies
J. Fraser Chisholm Scholarship
Rev. John W. Chisholm Fund
Joseph D. Chisholm Scholarship
Mary Ann Chisholm Nursing Bursary Award
Rod Chisholm Scholarship
CIBC Scholaristic Award
Rosemary Landry Clark Memorial Award
Rev. Dr. E.M. Clarke Scholarship in Pure and Applied Sciences
Class of 1954 Bursary
Class of 1955 Bursary
Class of 1956 Bursary
Class of 1962 Bursary
Class of 1963 Scholarship
Class of 1965 Fund
Class of 1970 Bursary
Class of 1971 Scholarship
Class of 1973 Service to Others Award
Paul Cogger Memorial Scholarship
Gerald P. Coleman Q.C. Award
Louis Connolly Fund
Jean E. Cooke Bursary
Daniel Cordeau Scholarship
Arleen Power Corey Memorial Fund
Rev. Cornelius B. Collins Scholarship
Rev. Cornelius J. Connolly Bursary
Rev. Cornelius J. Connolly Scholarship
General Romeo Dallaire African Leadership in Education Award
John & Selena Daly Scholarship
James E. & Mary D. Deagle Endowment
Edward P. Delaney Bursary
Edward P. Delaney Scholarship
Democracy 250 Leadership Bursary
Development Studies Internship Bursary
Alphonse Desjardins Commemorative Scholarship
Jeannine Deveau Educational Equity Bursary
Jeannine Deveau Educational Equity Scholarship
L.A. DeWolfe Memorial Scholarship
Diploma in Ministry Bursary
Dr. John Dobson Memorial Award in Adult Education
Paul Dole Memorial Bursary
Rev. John Dougher Bursary
Alexander Doyle Memorial Scholarship
Rev. D.A. Doyle Scholarship
Dorothy Doyle Bursary
DSM Bright Futures Bursary
The Sir James Dunn Foundation Internship Scholarship
Trudy Eagan Women in Business Award
Engineers Nova Scotia - Future Engineer Entrance Award
Faculty Staff Scholaristic Award
J. Wallace Farrell Memorial Scholarship
Margaret Martell Farrell Scholarship
Margaret Martell Farrell B.Ed. Award
The Audrey Fenwick Memorial Award for Studies in Adult Education
Rev. Peter Fiset Fund
Florida Alumni Bursary in Memory of Jim Kenney
Irene & Joseph Francis Memorial Award
Roger Franklin Memorial Scholarship
Hugh Allen Fraser Scholarship
Fund for French Scholarships
Douglas P. Furlott Award
Gaelic Scholarship Fund
L.T. Gallant Bursary
Danny Gallivan Memorial Scholarship
Wilfred J. Garvin Scholarship
General Motors of Canada Ltd. Women in Science Bursary
General Motors of Canada Ltd. Women in Science Scholarship
Dr. A. Marie Gillian Award in Adult Education
Anne Gillis (of Glen Alpine) Award
Donald and Margaret Gillis (of Glen Alpine) Award
Sister Henrietta Gillis Award for Education
Hugh and Celia Gillis Bursary
Joseph and Tessie Gillis Fund
Margaret Gillis (of Glen Alpine) Award
Mary Gillis (of Glen Alpine) Award
John and Sarah Gillis-Campbell Award
Mary Margaret Gillis-Campbell Award
Colin and Christine Gillis-Chisholm Award
Joan Gillis-Lang Award
Margaret C. Gillis-MacDonald Award
Mary Ann Gillis-MacIsaac (of Glen Alpine) Award
Glen Scholarship
Fried Gormley Scholarship
Jeff Graham Memorial Scholarship
Mary Jane Graham Bursary
Catherine (MacLeod) Grant Scholarship
Daniel and Emeline Grant Scholarship
Rev. J. Edward Grant Bursary
Ray Greening Memorial Scholarship
Shirley (Martinello) Grinnell Scholarship
The Gulf Canada Scholarship
Dr. H.B. Hachey Scholarship
A.G. Hamilton Scholarship
Thomas J. Hayes Scholarship
Dr. H. Stanley and Doreen Alley Heaps Scholarship
Heaslip/Macdonald Award Fund
Bernard M. Henry Scholarship
Dr. H.B. Hachey Scholarship
Rosemary & Stephen A. Holton Scholarship
Dr. Mary G. Hickman Scholarship
Bernard M. Henry Scholarship
Heaslip/Macdonald Award Fund
Sister Henrietta Gillis Award for Education
Hugh and Celia Gillis Bursary
Joseph and Tessie Gillis Fund
Margaret Gillis (of Glen Alpine) Award
Mary Gillis (of Glen Alpine) Award
John and Sarah Gillis-Campbell Award
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Joan Gillis-Lang Award
Margaret C. Gillis-MacDonald Award
Mary Ann Gillis-MacIsaac (of Glen Alpine) Award
Glen Scholarship
Fried Gormley Scholarship
Jeff Graham Memorial Scholarship
Mary Jane Graham Bursary
Catherine (MacLeod) Grant Scholarship
Daniel and Emeline Grant Scholarship
Rev. J. Edward Grant Bursary
Ray Greening Memorial Scholarship
Shirley (Martinello) Grinnell Scholarship
The Gulf Canada Scholarship
Dr. H.B. Hachey Scholarship
A.G. Hamilton Scholarship
Thomas J. Hayes Scholarship
Dr. H. Stanley and Doreen Alley Heaps Scholarship
Heaslip/Macdonald Award Fund
Bernard M. Henry Scholarship
Dr. Mary G. Hickman Scholarship
Rosemary & Stephen A. Holton Scholarship
Mitch Hudson Memorial Scholarship
Phil Hughes Leadership Award
Philip H. Hynes Memorial Scholarship
IBEW Local 625 Nursing Award
Arthur and Sandra Irving Scholarship
Dr. A.A. Johnson History Award
Joyce Family Foundation Bursaries
Julie Anne Award
B.J. Keating Memorial Award
Gisela Keck Outstanding Achievement Award
Rev. George Kehoe Memorial Bursary
Alexander and Mary Kell Memorial Scholarship
Angus Kell Memorial Bursary
Thelma May Kempffer Award
M. Colleen Kennedy Memorial Bursary
Margaret Kennedy Scholarship
Killiam American Bursary
Elmer & Pauline King Atlantic Canada Bursary
Rev. Martin Luther King, Jr. Award
Rev. John B. Kyle Scholarship
Dr. & Mrs. Francis E. Lane Scholarship
Joan Gillis Lang Fund
Livingstone-Topshee Award
MacBain-Riley International Fund
Don Loney Scholarship
Rev. Dr. Dan MacCormack
Senator John MacCormick Scholarship
MacDonald-MacIntyre Scholarship
Anastasia MacDonald Bursary
Angus R. MacDonald Memorial Bursary
Rev. B.A. MacDonald Scholarship Fund
Rev. Hugh John MacDonald Memorial Fund
James M. MacDonald Bursary
Kathryn M. MacDonald Scholarship
Linda MacDonald Humanitarian Bursary
M. & N. MacDonald Bursary
Dr. Vernon and Mrs. Ann MacDonald Bursary
The Honourable Hugh J MacDonnell Memorial Bursary
John H. MacDougall Engineering Bursary
Allan J. MacEachen Fellowship in Celtic Studies
Angus MacGillivray Bursary
Cotter MacGillivray Bursary
Katherine MacGillivray Maloney Nursing Award and Bursaries
Rev. Rod MacInnis Bursary
Rannie MacInnis Memorial Bursary
Rev. R.K. MacIntyre Scholarship
Hon. Angus MacIsaac Democracy 250 Veteran’s Memorial Leadership Bursary
Rev. Charles MacIsaac Memorial Bursary
Donald F. MacIsaac Memorial Scholarship
John C. MacIsaac Foundation Scholarship
Mary McNair MacIsaac Bursary
Minnie MacIsaac Award
J. Elizabeth Mackasey Memorial Award for Education
Michael and Jean MacKenzie Award
Gerard MacKinnon Memorial Bursary
Hugh MacKinnon Scholarship
Dr. Ron MacKinnon Enterprise Systems Scholarship
Dr. Cecil MacLean Award
Donald and Ethel Lyle MacLean Scholarship
Monsignor Donald A. MacLean Scholarship
Rev. Leonard (Butch) MacLean Bursary
Neil MacLean Memorial Gaelic Teacher Award
Roderick D. MacLean Award
The Duncan Hugh and Millie MacLellan Bursary
Joseph & Mary (MacNeil) MacLellan Bursary
Rev. J.D. MacLeod Bursary Fund
Joan M. and Douglas MacMaster StFX University Award
Daniel and Mary MacNeil Fund
John V. MacNeil Fund
Archie and Catherine MacPhee Memorial Bursary in Catholic Studies
Joseph B. MacSween Award
Rev. Rod J. MacSween Scholarship
The Noreen Manthorne Memorial Bursary
Married Students Bursary
James A. Martin Award
Emerson Mascoll Bursary
Dr. James McArthur Memorial Fund
Harrison McCain Foundation Scholarship
Senator J.P. McCarthy Scholarship
Dr. Daniel McCormick Scholarship
Irene McFarland Memorial Bursary
The McGill Bursary
Dr. J. William McGowan Scholarship
Frederick J. McNerney Scholarship
Rev. Roderick McNinns Fund
Rev. Leo G. McKenna Scholarship Fund
Jack McLachlan Fellowship in Biology
Mary McNair MacIsaac Bursary
William Ian Meech and Lloyd Remington Meech Memorial Scholarships
Memorial Scholarship for a Woman in Engineering
Dr. Edward J. Meyer Memorial Scholarship
Yancy Meyer Memorial Bursary
Dr. Marguerite Michaud Scholarship
Myles Mills Class of 1959 Leadership Award
Moncton Student Fund
Alexander Moore Chisholm Bursary
Evelyn and Denis Morris Scholarship
Morrissey Sisters Endowment Fund
Joan (MacDonald) and Fraser Muir Bursary
Benedict M. Mulrooney Scholarship
Mila Mulrooney Scholarship for African Nova Scotians
Donald and Barbara Munroe Scholarship
Robert J. and Gertrude Gillis Munroe Scholarship
Dr. Frederick Murdock Scholarship
Daniel Joseph Murphy Fund
Nasha Murphy Memorial Award
William and Jenny Murphy Award
Vincent Nasso Bursary
Rev. J.B. Nearing Scholarship
Rev. Dr. P.J. Nicholson Scholarship
Paul and Miki Norris Bursary
Nova Scotia Power Scholarships
Daniel and Margaret O’Brien Bursary
Dr. Ed O’Connor Scholarship
Commodore Bruce S. Oland Scholarship
Philip W. Oland Scholarship
Barry O’Leary Leadership Award
Rudy Pace Memorial Jazz Bursary
The James and Marguerite (Murphy) Pistone Bursary
Pluta Family Bursary
Prodigy Consulting Scholarship
Allan Quigley Adult Education Access Award
Rev. Donald M. Rankin Scholarship
RBC Leadership Award
Ken Reashor Bursary
Dr. Abraham Risk Award
Joy (MacIsaac) and Diego Romero Scholarship
Helen & Cyril Ross Bursary
Bruce and Dorothy Rossetti Scholarship
Father Gerald Roussell Bursaries
Dr. Ria Rovers Memorial Scholarship
Royal Bank Scholarship
Noah Rossell “Return-to-University” Bursary
B.A., Ryan Scholarship
Claire Sampson Nursing Scholarship
Loretta Saunders Bursary
James P. Sawler Scholarship
Tom & Lieselot Scales Bursary
Schwartz School Scholarship/Bursary
Schwartz Business Order of Merit Entrance Awards
Schwartz Business Scholars of Distinction
Schwartz College Transfer Entrance Scholarships
Schwartz Heather Reisman Women in Business Scholars
Schwartz National Scholars
Schwartz School of Business International Scholars
T.J. Sears Family Scholarship
Service Learning Bursary
Dr. William Shaw Bursary in Earth Sciences
Dr. Ann Sherman Scholarship
Sisters of St. Martha Scholarship in Nursing
Sisters of St. Martha Single Mothers Bursary
C. Gordon Smith Scholarship
St. Francis Xavier University Alumni Scholarships
St. Francis Xavier Association of University Teachers Bursary
St. Martha’s Hospital School of Nursing Alumnnae Bursary
The Sobey Scholarship
J. Jarvis Stewart Bursary
Hon. John B. Stewart Scholarship for Political Science
StFX Halifax Alumnus Kehoe Bursary
John L. Stoik Scholarship
Students for Life Bursary
Students’ Union Bursary
Sullivan Family Scholarship
Marjorie McLeod Sullivan Bursary
Tannenbaum Canada Israel Exchange Student Scholarship.
Fred L. Taylor Memorial Scholarship
TD Bank Scholarship in Jazz Studies
Allard Tobin Fund
Dr. J.J. Tompkins Memorial Scholarship
Rev. John F. Toomey Bursary Fund
Rev. John F. Toomey Scholarship Fund
Toronto Alumni Bursary
Judge D. Tramble Bursary
Arthur P.H. Tully Fund
Katherine Tully Scholarship
Ted and Ann (MacDonald) Turcotte Bursary
Paul Wacko Scholarship
Walker Wood Foundation Bursary
Walker Wood Foundation Bursary for Bachelor of Arts
Walker Wood Foundation Bursary for Bachelor of Science in Nursing
Ada MacNeil Wallace Bursary
Martin J. Walsh Bursary
Katherine Wdowiak Memorial Award
Kathie Wdowiak Bursary
Westbury Family Scholarship
James and Mary Whelan Scholastic Award
Rev. Robert Wicks Fund
August Wilkins Atlantic Engineering Competition Fund
August Wilkins Scholarship in Engineering
XEDC Entrepreneurship Bursary
Angus F. and Jean A. Young Award
John H. Young Award
Young Family Award

2.6.1 Major and Entrance Scholarships
StFX is founded on the values of academic excellence, leadership, and service to others. The StFX National Entrance Scholarship program reflects these qualities. Students’ efforts in achieving a high school average of 85 or greater in their grade 12 year are recognized with a guaranteed minimum award.

Scholarship eligibility is based on a student’s first semester grade 12 final marks. Final scholarship averages are based on the five required courses for the program to which the student is applying. The deadline to apply for all entrance and major scholarships listed below is March 1. To be eligible for any guaranteed entrance scholarships you are required to submit the following:

a) An application for admission to the University;
b) A final first semester grade 12 high school transcript with an average of 85% or higher prior to March 1;

to apply for any of the major renewable scholarships you are required to submit the following:

a) An application for admission to the University;
b) A final first semester grade 12 high school transcript with an average of 85% or higher prior to March 1;
c) Complete all required tasks for major scholarships and upload application materials through the online scholarship application site, awards.stfx.ca. Application materials include a detailed résumé containing a description of extra-curricular activities and awards and two letters of recommendation, one of which must be from a high school teacher from your current year of high school.

If a student is eligible for more than one university nominated scholarship, s/he will receive the largest to which s/he is entitled. Students must be enrolled in at least 24 credits in the Fall/Winter terms combined, with a minimum overall average of 80% at StFX to maintain scholarship offer. All scholarships are tenable at StFX through four consecutive years of study. Effective September 2019, any new, incoming undergraduate students who do not meet the renewal terms stated above will not be eligible to renew their entrance or major scholarships in subsequent years. Effective September 2019, any new, incoming undergraduate students who do not meet the renewal terms stated above will have the opportunity to regain their entrance or major scholarship, in their second year of study only. Second year students who improve their overall average to 80% or higher will regain their scholarship for subsequent years of study.

$32,000 StFX President’s Scholarships
Recognizing those students who have achieved outstanding academic success. Renewable for four years at $8,000 per year. All students enrolling directly from high school who demonstrate the qualities and values honoured by StFX, notably leadership and dedication in service to others as well as academic achievement, are eligible. Open to all Canadian residents.

$28,000 International Baccalaureate (IB) Scholarships
Recognizing those students who have achieved outstanding academic success within the IB program. Renewable for four years at $7,000 per year.

$24,000 Philip W. Oland Scholarships and J.P. McCarthy Scholarships
Awarded based on a nomination from the applicant’s high school. Renewable for four years at $6,000 per year. Applicants must have the highest scholastic standing, and demonstrated history of leadership ability. Philip W. Oland Scholarships are available to students from the Atlantic Provinces only while J.P. McCarthy Scholarships are open to entering students from across Canada.

$24,000 StFX Canadian Scholarships
Canadian Scholarships are awarded annually to students from Canada who are entering St. Francis Xavier University. The winners have achieved superior academic standing while demonstrating leadership in their schools or communities. Scholarship valued at $24,000 is awarded in equal amounts of $6,000 annually throughout four years of study.

$24,000 StFX International Scholarships
Recognizing international students enrolling directly from high school who demonstrate the qualities and values honoured by StFX, notably leadership and dedication in service to others as well as academic achievement are eligible. Scholarship valued at $24,000 is awarded in equal amounts of $6,000 annually throughout four years of study.

$12,000 StFX Merit Scholarships
These scholarships are awarded to outstanding students in arts, science, or the Gerald Schwartz School of Business. These scholarships are renewable for four years at $3,000 per year. The application deadline is March 1.

$7,000 StFX Guaranteed Scholarships
These entrance scholarships are awarded to all applicants with an average of 90% or higher. These scholarships are renewable for four years at $1,750 per year. The application deadline is March 1.

$5,000 StFX Guaranteed Scholarships
These entrance scholarships are awarded to all applicants with an average of 85 to 89.9 per cent. These scholarships are renewable for four years at $1,250 per year. The application deadline is March 1.

Schwartz National Scholars
StFX will offer annually four Schwartz National Scholars awards of $20,000 per year, renewable, for a total of $80,000 over four years. These awards are open to all first-year full-time BBA students who have a minimum 90 per cent average and demonstrated StFX qualities of leadership and service to community. The awards are open to all nationalities.

Order of Merit Entrance Awards
StFX will offer six Order of Merit Entrance Awards, of $7,500 per year, renewable for a total of $45,000 over four years. These awards are open to first-year full-time BBA students entering from high school who are Canadian residents and have a minimum 90 per cent average and demonstrated StFX qualities of leadership and service to society.

Heather Reisman Women in Business Scholars
StFX will offer two Heather Reisman Women in Business Scholars awards, each renewable at $7,500 per year for a total of $15,000 over four years. These awards are open to first-year full-time female BBA students enrolling from high school. The awards are open to Canadian residents, with a minimum 90 per cent average and demonstrated StFX qualities of leadership and service to community.

Scholars of Distinction
StFX will offer 14 Schwartz Business Scholars of Distinction awards of $4,000 per year, renewable for a total of $16,000 over four years. The awards are open to first-year, full-time BBA students enrolling from high school with a minimum average of 85 per cent and demonstrated StFX qualities of leadership and service to community. The awards are open to Canadian residents.

International Scholars
SIFX will offer 14 Schwartz School of Business International Scholars awards, each valued at $8,000 annually and renewable for a total of $32,000 over four years. These awards are open to all first-year, full-time BBA students enrolling from high school with a minimum average of 85 per cent and demonstrated SIFX qualities of leadership and service to community. The awards are open to all non-Canadian residents.

**Transfer Entrance Scholarships**
SIFX will offer four Transfer Entrance Scholarships of $3,000, each renewable for a total of $9,000 over three years. These awards will be open to students transferring full-time into the BBA program from the Nova Scotia Community College system or equivalent college in Canada with a minimum of 80 per cent average and no fewer than 24 credits in the past year of study. The scholarship is open to all Canadian residents.

**2.6.2 University In-Course Scholarships**
In-course scholarships are awarded to students who have completed at least one academic year of 24 credits in the fall and winter terms combined towards a first degree. They are awarded on the basis of academic performance at SIFX University. A minimum average of 80 in each scholarship group is required. No application is necessary. The scholarships, ranging in value from $1,000 to $5,000, are awarded for one year.

For the purpose of scholarships, students are grouped by year of study and by degree programs as follows:
- **Group A**: BA and Music
- **Group B**: BBA
- **Group C**: B.Sc. and Engineering
- **Group D**: Nursing, Human Nutrition, and Human Kinetics

The following guidelines are used in making these awards:
- a) A student ranked first in each scholarship group will qualify for the amount of $5000.
- b) A student ranked in top 5% in each scholarship group will qualify for the amount of $2000.
- c) A student with an average of 80% or higher will qualify for the amount of $1000.
- d) If a student is eligible for more than one university nominated scholarship, s/he will receive the largest to which s/he is entitled.

**2.6.3 Bursaries**
University bursaries are available under three programs: Entrance, Limited and General. Awards range in value from $250 to $4000 and are based on demonstrated need of the student and availability of bursary funds. The holder of a bursary is expected to maintain a satisfactory academic record. Bursaries are not automatically renewed; a new application must be made each year. The online application form for university bursaries is available through the financial aid website here. The Entrance bursary program runs from mid-February to April and the limited and general bursary programs run from September to March of each year, each bursary has a separate due date. Bursary applications open by month, late submissions cannot be accepted. Bursaries are based primarily on financial need, satisfactory academic standing, and may include other criteria as specified by the donor(s).

**2.7 UNIVERSITY PRIZES**
The university gratefully acknowledges the generosity of the persons and organizations whose contributions make possible the many prizes awarded at the end of each academic year. Recipients of prizes are normally full-time students in regular attendance in a degree program at SIFX and must have given satisfactory evidence of merit. The university reserves the right not to make an award should there be no suitable candidate. Awards, unless otherwise specified, are tenable only at SIFX.

At convocation the following prizes, listed by department, are awarded to graduating students:
- Onex Corporation Gold Medal
- CPA Nova Scotia Award of Excellence
- East Coast Credit Union Prize in Entrepreneurship
- CIBC Wood Gundy Prize in Finance
- Killam REIT Prize in Marketing
- IBM Prize in Enterprise Systems
- Schwartz School Prize for International Business
- Schwartz School Prize for Management and Leadership
- Dr. Leo P. Chiasson Award for Biology to the Outstanding Advanced Major or Honours Student
- Centre for Marine Biology Prize
- Dr. Marguerite Michaud Prize for Canadian Studies
- Angus L. Macdonald Memorial Scholarship for Celtic Studies
- Flora MacDonald Prize
- Rev. Malcolm MacDonell Award in Celtic Studies
- Chemistry Industry Merit Award
- Employer’s Choice Award for X-cellence in Co-operative Education
- Dr. D.J. MacDonald and Dr. A.B. MacDonald Memorial Prize for Economics
- Engineering Department Medal
- Association of Professional Engineers of Nova Scotia Scholarship
- Association of Professional Engineers of Nova Scotia Award
- J. Wallace Farrell Memorial Award for Engineering
- Nova Scotia Power Centennial Scholarship for Engineering
- English Department Cape Breton Creative Writing Prize
- Margaret MacGillivray-MacDougall Prize for English
- Rev. R.J. MacSweeney Prize for English
- Ambassador of France Book Prize for French
- Ambassador of Switzerland Book Prize for French
- Jean Babin Prize for Excellence in French
- Consulate of Argentina Prize for Spanish
- Angus Dan Gills Prize in Gaelic
- Professor Donald J. MacNeil Memorial Award for Earth Sciences
- Mining Society of Nova Scotia Centennial Scholarship Medal
- Dr. Randall F. Cormier Award for Best Thesis in Earth Sciences
- Mary Trambl Memorial Award for Field Earth Sciences
- Ambassador of Germany Book Prize for German
- Ambassador of Austria Book Prize for German
- Ambassador of Switzerland Book Prize for German
- German Consulate General Montreal Prize
- Hogan/Phillips Prize in History
- Rev. A.A. Johnston History Award for Diocesan History
- Ita MacDonald Prize for Canadian History
- Dairy Farmers of Canada Award for Further Study in Dietetics/Nutrition
- Nova Scotia Home Economics Book Award
- Nova Scotia Health Research Foundation Award
- Dr. H. Stanley and Doreen Alley Heaps Prize for Computing Science
- Dr. A.A. MacDonald Prize for Mathematics
- Canadian Academy of Recording Arts and Sciences Award for Music
- Chevrolet High Note Student Bursary
- Paul Garoarke Philosophy Prize
- Rev. Charles R. MacDonald Memorial Medal for Philosophy
- Dr. M.S. Gautam Memorial Prize for Physics
- Wallbank/Weingartshofer Prize for Experimental Physics
- Yogi Joshi Prize for Excellence in Physics
- G.P. Brooks History of Psychology Prize
- Craig McDonald Mooney Prize for Psychology
- Walter Kontak Prize in Political Science
- Hon. John B. Stewart Scholarship for Political Science
- John and Mary Fraser Memorial Prize for Senior Religious Studies
- Rev. F. J. Mifflin Sociology Prize
- Allard Tobin Travel Endowment Fund Award
- Dr. G.H. Murphy Prize for Proficiency in Pre-medical Studies
- St. Francis Xavier Association of University Teachers Book Prizes
- Nominations to the Kappa Gamma Pi Honour Society
- Katherine Wdowiak Memorial Award in Nursing
- Women’s and Gender Studies Prize

At the end of each academic year the following prizes are awarded to undergraduate students:
- Gaelic Scholarship for Summer Study in Scotland
- Honourable Allan J. MacEachen Fellowship for Celtic Studies
- Rev. Donald M. Rankin Scholarship for Celtic Studies
- Rev. John Archie Chisholm Memorial Award for Celtic Studies
- Ceci MacLean Prize for Achievement in First-Year French
- B.J. Keating Memorial Award for Geology
- Frank S. Shea Scholarship for Geology
- Student-Industry Geology Field Trip Award
- Canadian Society of Petroleum Geologists Stanley E. Slipper Award
- Dr. F.J. Ginivan Prize for Mathematics
- Elizabeth Tobin McGivern Prize for English
- Dr. Winston Jackson Honours Nursing Prize
- David Davis Prize for First-Year Physics
- David Davis Prize for Third-Year Physics
- Charles Jordan Memorial Prize for Second-Year Physics
- Bishop Campbell Prize for Second-Year Religious Studies
- Camille LeBlanc Prize for First-Year Religious Studies
- Flying Officer Wallace MacDonald Memorial Prize for Third-Year Religious Studies
3. ACADEMIC REGULATIONS

3.1 Registration

3.2 Courses Taken at another Institution

3.3 StFX Degree or Diploma Requirements

3.4 Re-Admission to University

3.5 Directed Study & Selected Topics Courses

3.6 Student Classification

3.7 Class Attendance and Withdrawal

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3.10 Grading System for Undergraduate Programs

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3.20 Distinction and First Class Honours

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3.1 REGISTRATION

Registering and Adding Courses

a) Registration start times or time tickets are determined based on a student’s year of study, program, and then on total credits earned. Registration start times for first-year students are assigned based on program and student ID number in ascending order. Please refer to section 3.5 for additional information on how a students’ year level is determined.

b) Students are responsible for the accuracy of their course registrations and for ensuring that the courses they select are appropriate to their degree programs.

c) Students will be dropped from any second term courses if they have failed or dropped any required prerequisite course(s) in the first term.

d) Students who are uncertain about their course selection are encouraged to consult co-ordinators.

e) The regular academic year runs from September to April and is divided into two terms. The Fall term runs from early September to mid-December and the Winter term from early January to late April.

f) A course taught three hours a week over the regular academic year has a value of six credits and is called a full course. A course taught for three hours a week for one term has a value of three credits.

g) In the Fall and Winter terms, students may add courses to their schedule within the first week of classes. No student will be permitted to register for courses after this date without permission of the Registrar and/or Dean.

h) Credit will not be granted for any course in which a student is not formally enrolled.

Dropping Courses

a) Students may drop a course, online in Banner, on or before the relevant deadline. Please refer to the calendar of events for deadline dates for dropping full-year, first-term and second-term courses.

b) Courses dropped within the first week of classes will be removed from a student’s transcript.

c) After the first week of classes, a student will be permitted to drop courses as per the drop deadlines outlined in the calendar of events. A grade of DC, dropped course, will appear on the students’ official transcript but is not used in the calculation of the average.

d) Students who stop attending class, but do not drop the course, will receive a final grade based on the work completed to date with a zero grade for any components not completed. This final grade will appear on students’ transcripts and is used in the calculation of the average.

e) Students who cannot complete a course due to medical or other extenuating circumstances must contact the Dean’s Office and provide appropriate documentation.

f) Students should be aware that dropping a course may change their registration status from full to part-time, and may have an impact on tuition, refunds, student loans, Dean’s List eligibility, in-course scholarship eligibility, athletic eligibility, or other StFX bursaries or awards.

Normal Course Load

a) In most programs, the normal course load is 30 credits during the regular academic year. Students are encouraged to maintain a balanced course load of 15 credits per term, whenever possible.

b) Students enrolled in 60% of a normal full course load, or 18 credits, for the full academic year are considered to be full-time students.

Overloads

a) Students, who wish to enrol in more than a full course load per term must apply to the Registrar for approval. Letter of Permission (LOP) courses are included and are counted as part of the overall course load.

b) A minimum average of 65 is required, either for the previous academic year or for the first term if the application is submitted at the start of the second term.

c) Students will not be permitted to enrol in more than 36 credits in the regular academic year (September to April).

d) For spring and summer terms, students may enrol in up to 6 credits in either term. Students who wish to enrol in additional credits, must apply to the Registrar and meet the 65 minimum grade average.

e) The maximum number of credits permitted in either the spring or summer term is 9, however students are reminded that spring and summer courses are offered in a compressed time frame and are advised to carefully consider enrolling in more than the recommended 6 credits each term.

f) First-year students will not be permitted to carry an overload.

g) Students are responsible for any fees associated with taking additional courses above the normal course load. Refer to Section 2.1, Undergraduate Registration Fees, for additional information.

Repeating Courses

a) Students are permitted to repeat a course or register in a course deemed equivalent, or cross-listed, with one that they have already completed. However, credit will only be granted once; e.g., Credit will be granted for only one of HIST 232 or HIST 230. Refer to course descriptions for additional information.

b) The final grade for the first instance the course was taken will remain on the transcript and be denoted with an (R) to indicate a repeat grade. The credit hours will be removed but no adjustment will be made to the end of year average.

c) The final grade for the second instance the course was taken will be reflected on the transcript under the year it was retaken and will be used in the calculation of the average for that year. If the grade in the second instance is lower, an adjustment will not be made to the grade in the first instance.

Course Restrictions

a) Courses in business administration, education, engineering, human kinetics, human nutrition or nursing normally may be applied only to those programs respectively, unless the courses are taken to fulfill specific program requirements. Refer to the appropriate Faculty regulations for exceptions.

b) A “pair” is 12 credits in one subject with at least six credits at the 200-level or higher. As exceptions, language pairs in French, Celtic Studies and Classics programs respectively, unless the courses are taken to fulfill specific program requirements.

c) A student may complete only one pair from a department, and may not complete a pair in the major or minor subject.

d) A pair may not be completed in any of the professional or applied program disciplines: AQUA, BSAD, ENGR, HGIN, HNU or NURS.

Auditing Courses

a) A student may audit any course with approval from the course instructor.

b) A student given permission to audit a course may attend and participate in the course and may, in agreement with the instructor, choose to receive feedback from submitted course work and/or exams, but will not receive a grade and will not be given credit for the course.
c) Students wanting to take the course and receive credit will be given priority over audit students.

d) The fee for auditing a course is normally one-half of the normal course fee.

e) A decision to audit must be made within the first week of the term in which the course begins. Students who elect to audit a course may not, at a later date, request to receive credit for the course. Audited courses cannot be dropped after the first week of the term in which the course begins.

3.2 COURSES TAKEN AT ANOTHER INSTITUTION

Transfer Credit
a) Transfer credit may be granted for courses for which credit has been earned at an accredited university. If based on the subject and learning outcomes, the courses can be used to meet the student’s program requirements at StFX.

b) Students who receive a direct StFX course equivalency for courses taken at other institutions and choose to repeat the course at StFX will forfeit their transfer credit as students will not be permitted to receive credit for the same course twice.

c) Minimum grade and average requirements, as specified in the faculty regulations, apply to all transfer courses.

d) Official transcripts from all post-secondary institutions are required at time of admission. Failure to disclose attendance at another institution could result in academic dismissal.

e) Restrictions may apply to the transfer of credit for business administration courses at the 300 and 400 level.

f) Normally, transfer credit will not be granted for courses taken 10 years or more before the date of application.

g) Transfer credits may be granted for distance courses in recognized academic disciplines taken at Canadian universities.

h) Transfer credit will not be granted for distance courses if the StFX equivalent has a laboratory component.

i) Unless expressly permitted by the Deans, distance courses may only be used as electives or to meet requirements for pairs.

j) Upon completion of the Coady Diploma in Development Leadership, students will be eligible to transfer up to 12 credits as open electives towards a StFX undergraduate degree.

Courses Taken on Letter of Permission
a) To enrol in any course at another university, students must first obtain a letter of permission from the appropriate Dean prior to registering and completing the courses. The LOP form is available on mesAMIS.

b) Students who complete courses at another institution without having an approved letter of permission in place will not be eligible to receive credit for those courses.

c) Courses taken on letter of permission are counted towards a students’ course load and overload regulations are applicable; refer to section 3.1e for additional information.

d) Grades obtained for courses taken on a letter of permission are not used in the calculation of averages or to determine First Class Honours or Distinction.

e) Students in good academic standing or on academic probation are eligible to enrol in spring or summer courses at another university.

f) Students who have been suspended or dismissed are not eligible to receive credit for course work completed elsewhere while the suspension or dismissal was in effect.

3.3 STFX DEGREE OR DIPLOMA REQUIREMENTS

In order to obtain a first degree or diploma from StFX, students must normally complete:

a) At least half of the credit hours required for the degree or diploma at StFX

b) At least 2/3 of the subject credit hours required at the 300/400 level for major, advanced major, honours or joint honours programs at StFX

3.4 RE-ADMISSION TO UNIVERSITY

a) A student who has not been registered at StFX for a 12-month period or longer, or withdraws from university, must re-apply for admission.

b) A student who is re-admitted is bound by any changes made in the curriculum and regulations after their first registration.

c) Students are required to complete their degree within 10 years of their first registration.

d) Courses taken for credit 10 years before acceptance into a degree program will be assessed by the appropriate Dean.

e) If a student is suspended or dismissed from the university and successfully appeals this decision and is permitted to return, the student will be placed on probation for one year, and be required to enrol and complete the APEX program. Refer to section 2.3.11.

f) Upon re-admission to the university, students will be eligible to register in courses at StFX and elsewhere during the spring and summer terms preceding their term of re-admission.

3.5 DIRECTED STUDY & SELECTED TOPICS COURSES

Directed Study Courses
a) Directed study courses permit students of exceptional ability and motivation to pursue, on a tutorial basis, individual programs of study in areas not normally offered by a department.

b) Directed study courses are normally restricted to no more than two students.

c) Normally, a faculty member may offer no more than two directed study courses per year.

d) A directed study course may earn no more than six credits.

e) To be eligible for a directed study, students must have:

i) completed 12 credits in the department;

ii) attained a minimum average of 70 in the 12 credits;

iii) obtained written consent from the department.

f) Students interested in a directed study course should consult with the department chair and the appropriate faculty member. Formal application must be submitted by the Department Chair to the appropriate Dean four weeks before the start of the term in which the course is to be offered.

Selected Topics Courses
a) Subject to approval of the appropriate Dean, departments may offer selected topics courses in their discipline.

b) A selected topics course may be offered twice before the department must seek regular approval through the appropriate Committee on Studies and the University Senate.

c) Selected topics courses may be offered in any department or interdisciplinary program at the 100-, 200-, 300- or 400-level and may be offered for three or six credits.

d) Course numbers for special topic courses will be assigned by the Registrar’s Office.

3.6 STUDENT CLASSIFICATION

a) Students are classified as first year, sophomore, junior, or senior depending on the number of credits that have been earned.

b) Advancement in classification is granted when a student earns 30 credits in the preceding classification.

c) Students who are six credits short of the next level in a degree program will be placed in the next classification on a conditional basis.

<table>
<thead>
<tr>
<th>Year of Study</th>
<th>Credits Earned</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Year</td>
<td>less than 24</td>
</tr>
<tr>
<td>Second Year</td>
<td>24</td>
</tr>
<tr>
<td>Third Year</td>
<td>54</td>
</tr>
<tr>
<td>Fourth Year</td>
<td>84, 93 in nursing in previous curriculum</td>
</tr>
</tbody>
</table>

3.7 CLASS ATTENDANCE AND WITHDRAWAL

a) Students are expected to attend all classes and laboratory periods.

b) If a student is going to be absent for more than one class, the student is responsible for contacting each professor or instructor.

c) In the case of a sudden emergency requiring a student to be absent for more than five days, the student is required to contact the Dean’s office.
3.8 ACADEMIC INTEGRITY

All members of St. Francis Xavier University are expected to conduct themselves in an ethical manner in their academic work. It is the policy of the university that academic dishonesty in any form is not acceptable. Academic dishonesty is defined as any act, practice, or behaviour that gives a student an unearned academic advantage over another or that counteracts or undermines the integrity of academic or scholarly endeavor at St. Francis Xavier University.

Any member of the University Community makes as a complainant or reports another’s academic dishonesty. The academic integrity policies and procedures document is available at http://www2.mystfx.ca/registrars-office/academic-integrity provides guidelines to follow in reporting an offence.

3.8.1 The Code of Academic Conduct

An academic community flourishes when its members are committed to five fundamental values. An academic community of integrity:

a) advances the quest for truth and knowledge by acknowledging intellectual and personal honesty in learning, teaching, research, and service;

b) fosters a climate of mutual trust, encourages the free exchange of ideas, and enables all to reach their highest potential;

c) establishes clear standards, practices, and procedures and expects fairness in interactions among students, faculty, staff, and administrators;

d) recognizes the participatory nature of the learning process and honors and respects a wide range of opinions and ideas; and

e) upholds personal responsibility and accountability and depends upon action in the face of wrong-doing.

3.8.2 Offenses against Academic Integrity

The following is a list of offenses constituting academic dishonesty that are subject to discipline; this list is not intended to be exhaustive.

a) Plagiarism

Although academic work often involves research on, or reference to, the ideas, data, and critical commentary of other scholars, academic integrity requires that any use of another person’s work be explicitly acknowledged. Plagiarism is the misrepresentation of another’s work-whether ideas or words, intellectual or creative works, images or data, published or unpublished-as one’s own. Examples of plagiarism include but not limited to:

i) quoting, paraphrasing, or summarizing text, even small portions of text, without proper acknowledgement;

ii) paraphrasing too closely (e.g., changing only a few words or simply re-arranging the text); and,

iii) downloading from the Web, a library, or any other database all or part of a paper, a journal article, or a book, or downloading any other website material, excluding bibliography makers, and presenting it as one’s own work.

b) Cheating

Examples of cheating include but are not limited to:

i) submission, in whole or in part, of any purchased written work as one’s own;

ii) sharing papers, including the buying or selling, borrowing or leasing of essays, tests, or other assignments;

iii) submission, without the prior expressed written consent of the appropriate instructor(s), of any work for which credit has been, or is being, sought in another course, including any work that has been submitted at another institution;

iv) collaboration (i.e., working together) on an assignment which an instructor did not specify was to be completed collaboratively;

v) possession of unauthorized aids, including cell phones, iWatches and Smart Watches, or assistance including copying during tests and examinations;

vi) impersonating another student in a test, examination, assignment, or attendance record, or knowingly permitting another to impersonate oneself;

vii) knowingly helping another to engage in academically dishonest behaviour (including, but not limited to, providing answers to a test or examination or providing an essay or laboratory report that is subsequently plagiarized or submitted by another student as his or her work);

viii) obtaining or looking at a copy of a test or examination before it is administered; and

ix) altering a test or examination after it has been graded and returned by the instructor.

c) Falsification

Examples of falsification include but are not limited to:

i) falsification of any research results, whether in laboratory experiments, field trip exercises, or other assignments;

ii) alteration or falsification of transcripts or other academic records for any purpose;

iii) submission of false credentials;

iv) making false representation on an application for admission;

v) making false representation on an application for ethical approval for a research project involving human or animal subjects; and

vi) requesting the extension of a deadline citing reasons known to be false, including submitting false documentation supporting that request.

d) Tampering

Examples of tampering include but are not limited to:

i) unauthorized access to, use of, or alteration of computer data sets, including course, student, faculty, alumni, public, and corporate records;

ii) gaining unfair advantage by using software and computer tools that inhibit the use of the resources by others;

iii) damage to or destruction of library materials or laboratory resources; and

iv) willful or negligent damage to the academic work of another member of the university.

e) Miscellaneous

i) any other form of misrepresentation, cheating, fraudulent academic behaviour, or other improper academic conduct of comparable severity to the above.

The full academic integrity policies and procedures document is available at http://www2.mystfx.ca/registrars-office/academic-integrity

3.9 MID-TERMS AND EXAMINATIONS

a) October mid-term grades, accounting for at least 20% of a final grade, must be entered in Banner Self-service for all courses; February mid-term grades are to be entered in Moodle. See calendar of events for deadlines.

b) Dates for mid-terms quizzes in October and February are determined by the professor.

c) Once the examination schedule is posted as per the calendar of events, it is considered final.

d) December and April examinations are written during the formal examination periods as indicated in the calendar of events. Designated times are 9:00am, 2:00pm and 7:00pm.

e) Normally, final examinations for a three-credit course are 2 ½ hours in length. December examinations in a six-credit course are 2 hours in length and April examinations are 3 hours in length.

f) Take-home examinations may not be distributed before 1:00pm on the last day of classes for the term.

g) Students should be aware that their examinations could be scheduled on any of the days in the examination period and should be available to write their examinations at the scheduled time.

h) Students unable to write an examination at its scheduled time due to illness or due to a serious, unexpected circumstance must notify the Deans’ office prior
to the examination. Students must provide an original doctor’s certification of the condition for a medical problem or other supporting documentation.

i) Normally, no student will be required to write more than two examinations in 25 hours.

j) No written tests or examinations (excluding lab exams) worth 10% or more of a students’ final grade should take place during the two weeks prior to the last day of classes of the academic term (September - April).

3.10 GRADING SYSTEM FOR UNDERGRADUATE PROGRAMS

a) The passing grade is 50. Some programs have specific passing grade requirements; see specific advancement and graduation requirements by degree charts in sections 4, 5, or 6. The highest grade awarded and calculated in an average is 99.

b) The student’s average is a weighted calculation for full-time students. The average is included on the transcript at the end of each academic year. A six-credit course has a weight of one; a three-credit course has a weight of one-half. The average is based on final grades in all courses attempted. Grades for courses completed in the spring or summer terms are not included in the average.

c) Courses graded as Pass or Fail are not included in a student’s average calculation, regardless of credit value.

d) The grade and average requirements for major, advanced major and honours degrees are stated in chapter 4 for arts degrees, chapter 5 for business degrees and chapter 7 for science degrees. Failure to achieve grade and average requirements may result in academic penalties and may affect students’ eligibility to proceed in some degree programs.

Students must obtain an average of at least 55% and receive credit for 60% of attempted courses, in their final year, to be granted a degree or diploma.

e) With the exception of nursing courses with clinical components, at least 75% of the final grade in all courses will be based on written (not oral) work; further, at least 40% of the final grade in a six-credit 100- or 200-level course will be based on invigilated written December and April examinations, and at least 40% of the final grade in a three-credit 100- or 200-level course will be based on invigilated mid-term quizzes and December or April examinations.

f) Performance in nursing clinical courses will be evaluated based on a combination of assignments, the development of major plans of care and an evaluation of clinical practice performance. A grade of pass/fail will be awarded for the clinical practice portion of the course. Students must successfully complete the clinical practice in order to receive credit for the course.

g) When a student repeats a course, the original grade remains on the transcript and in the student’s average. However, the credits originally earned are removed from the student’s transcript. The final grade from the second instance the course was taken will be used in the average calculation for the year in which the course was completed.

3.11 ACADEMIC PENALTIES

a) Academic standing is assessed once, at the end of the academic year based on a minimum of two final grades over the academic year. The exception is nursing which are assessed at the end of each term; see section 9.28

b) All students, including those who withdraw from the University, will be assessed.

c) Academic assessment is based on a minimum of two final grades over the academic year.

d) To be considered in good academic standing at the end of the academic year, students are required to:
   i) earn a year end average of 55 or better, and
   ii) earned credit for at least 60% of the courses completed. Refer to chart.

e) Students who fail to meet one or both of these requirements will incur an academic penalty as listed in the following chart.

<table>
<thead>
<tr>
<th>Previous Penalty</th>
<th>Requirement(s) Not Met</th>
<th>Penalty at End of Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>One</td>
<td>Probation</td>
</tr>
<tr>
<td>None</td>
<td>Two</td>
<td>Suspension</td>
</tr>
<tr>
<td>One probation</td>
<td>One</td>
<td>Suspension</td>
</tr>
<tr>
<td>One probation</td>
<td>Two</td>
<td>Dismissal</td>
</tr>
<tr>
<td>One suspension</td>
<td>One</td>
<td>Dismissal</td>
</tr>
<tr>
<td>More than one</td>
<td>One</td>
<td>Dismissal</td>
</tr>
</tbody>
</table>

f) Students who require fewer than 30 credits to complete their degree will not be subject to academic penalties but will be required to meet the grading and average requirements in order to be granted a degree or diploma.

g) Students on probation must enrol in APEX unless, upon application by the student, the Committee on Studies of the appropriate faculty excuses the student on the grounds that the student would not benefit in a meaningful way from the program.

h) Academic penalties incurred for a full academic year are applied at the end of the following spring term. Notification of academic assessment will be sent to students via email to their StFX email account. A copy of the assessment will also be mailed to the home address on file.

i) Students who are suspended or dismissed and who are enrolled in courses when the penalty is applied may complete their in-progress courses. However, students will be withdrawn from any courses that they are registered in for future terms.

j) Students who are suspended from the university will be invited to return to their studies in the spring term following the term of their suspension.

k) Students who have been dismissed will not be eligible for further study at the university unless they successfully appeal the dismissal. See section 3.12, Appeal of an Academic Penalty, for additional information.

l) No credit will be granted for work completed elsewhere while a suspension or dismissal was in effect.

3.12 APPEAL OF AN ACADEMIC PENALTY

a) Academic penalties of suspension or dismissal may be appealed to the Committee on Studies of the appropriate faculty.

b) Appeals of suspension must be received by June 15 of the calendar year in which the suspension was imposed.

(c) Appeals of dismissal must be received by June 15 of the previous calendar year in which the student wishes to return to studies.

d) The decisions of the Committee on Studies are final.

e) Students who successfully appeal a suspension or dismissal will be eligible to return to their studies, on probation, for the next full academic year following the appeal. Students will be required to enroll in APEX.

f) If there will be 12 months or more between course registration, the student will be required to apply for re-admission. See section 3.4.

g) For information on the progression requirements and academic penalties for the Bachelor of Education; see section 6.4.

3.13 GRADE APPEAL PROCEDURE

a) Only final grades, including grades of course work used to calculate a final grade, may be appealed.

b) All appeals must be made in writing to the appropriate Dean. The letter must clearly state the reason for the appeal.

c) There is a fee of $10 for each grade appealed. This fee will be refunded if the appeal results in a change of grade.

d) Appeals must be made before January 15 for first-term courses; before May 30 for full-year and second-term courses; before July 15 for spring courses; and before September 15 for summer courses.

e) Upon receiving a grade appeal, the Dean will request a review from the Faculty and report the results to the student, or the student may request the Dean to arrange an interview between the student and the Faculty.
Academic Regulations

3.14 CONVOCATION

a) StFX confers degrees and/or diplomas at two convocations per year; Spring (May) and Fall (December). Refer to the calendar of events for specific dates.

b) All students who expect to receive their degree or diploma must submit an application to graduate through Banner Self-service. Refer to the calendar of events for application deadlines.

c) Students who are completing their degree requirements in the fall term are not eligible to graduate at fall convocation with the exception of students in those programs whose requirements are all completed well in advance of the end of the term.

d) The name printed on the parchment must be the student’s legal name as recorded on his/her academic record and the name provided on the admission application. Any change to this name must be supported by official documentation and submitted to the Registrar’s Office.

e) StFX degrees are printed in Latin and show the academic designation (i.e., Bachelor of Arts with Major) but not the specific major, concentration, or minor. However, this information is included in the students’ official academic record and appears on any transcript issued.

f) StFX diplomas are printed in English.

g) Graduates who are unable to attend convocation will have their degrees sent to their home address on file by courier or Expresspost.

h) Students graduating with an undergraduate degree may be awarded the designation Distinction or First Class Honours. Refer to Section 3.20, Distinction and First Class Honours, for additional information.

i) Candidates who receive degrees, diplomas and certificates from St. Francis Xavier University become members of the StFX Alumni Association. As members, alumni are eligible to receive the Alumni News, benefits and promotions exclusive to alumni, and information regarding development programs.

j) Additional graduation information is available at http://www.sites.sfx.ca/registraiters_officeregistrationgradiuation.

3.15 ACADEMIC RECORDS

3.15.1 Release of Student Academic Records

Disclosure to students of their own records
a) Students have the right to inspect their academic records and to challenge contents they believe to be inaccurate. This right does not extend to letters of reference given in confidence by the author. A member of the Registrar’s Office staff will be present during the inspection.

b) Students have the right to receive copies of their official StFX transcript.

c) No partial transcripts will be issued.

d) The Registrar will not normally provide students or third parties with copies of other documents on file, e.g., transcripts from other institutions.

Disclosure to University Officials
a) Information on students may be disclosed without their consent to faculty, university officers, or committees at the discretion of the Registrar.

b) Students’ personal and academic information is stored securely and is to be used solely for the university’s normal course of business.

Disclosure to Third Parties
a) The following information is considered public and may be released at the discretion of the Registrar without restriction:

i) Name; hometown if in convocation program;

ii) Certificates, diplomas, and degrees awarded;

iii) Date of conferral.

b) Information will be released without student consent in compliance with a judicial order, search warrant or subpoena, or as required by federal or provincial legislation.

c) Necessary information may be released without student consent in an emergency, if knowledge of that information is required to protect the health or safety of a student or other persons. Such requests should be directed to the Registrar.

d) Notification of Disclosure of Personal Information to the Maritime Provinces Higher Education Commission (MPHEC)

The MPHEC collects student identification information (student’s name, student ID number), student contact information (address and telephone number), student demographic characteristics, and enrolment information from StFX. Enrolment and demographic information is used by MPHEC in the preparation of basic statistics, as well as to understand student pathways through to graduation, and the factors that affect these pathways. The information assists governments and institutions in decision-making and in enhancing the post-secondary learning environment.

Personally-identifying information is used only for limited purposes:

i) To create record linkages between data from different institutions in order to track student pathways among institutions. Once records are linked, personal information is deleted from the research data file.

ii) To communicate with INSTITUTION and Statistics Canada during the data validation process

iii) Compile a student/graduate contact list for an MPHEC survey

The legal authority for these activities is provided by a data sharing agreement between StFX and the MPHEC, as well as the Maritime Provinces Higher Education Commission Act. The Act requires that all data received by the Commission is kept confidential, and ensures the protection of personal information. More information about the MPHEC may be found at www.mphec.ca. A copy of its Standard for Maintaining Confidentiality is available here: http://www.mphec.ca/general/confidentiality.aspx

Questions may be addressed to: Director, Research and Data Analysis Maritime Provinces Higher Education Commission 82 Westmorland St. Suite 401 P.O. Box 6000 Fredericton NB E3B 5H1 Phone: (506) 453-2844 Fax: (506) 453-2106 Email: mphec@mphec.ca

Notification of Disclosure of Personal Information to Statistics Canada

The federal Statistics Act provides the legal authority for Statistics Canada to obtain access to personal information held by educational institutions. The information may be used for statistical purposes only, and the confidentiality provisions of the Statistics Act prevent the information from being released in any way that would identify a student.

Students who do not wish to have their personally-identifying information submitted to MPHEC or Statistics Canada will notify StFX by contacting the Registrar’s Office.

e) Other than in the above situations, personal information about a student will only be released to third parties with the written consent of the student, or in accordance with the purposes for which it was collected or as required by law. A student’s academic record will only be released to third parties at the written request of the student, or when the student has signed an agreement with a third party, a condition of which is access to his or her record (e.g., financial aid), or as required by law. This restriction applies to requests from parents, spouses, credit bureaus and police.

3.15.2 Retention of Student Files

a) Academic records, that is, paper files in the Registrar’s Office, will be held for five years from the date of last attendance, and then destroyed.

b) Former students who wish to re-apply after their files have been destroyed may have to re-submit academic transcripts from other institutions.

3.15.3 Transcript Requests

a) Requests for transcripts must be made in writing by students and accompanied by the required fee. An original student signature is required on the request.

b) Requests for transcripts by phone will not be accepted.
c) Requests are to be made on the appropriate form obtainable from the Office of the Registrar or online at http://sites.stfx.ca/registrars_office/index.html.

d) Transcript requests will be processed in the order in which they are received.

e) Normal processing time is 3-5 business days, but additional processing time may be required during peak times in January and May.

f) Same-day service is available for an additional fee.

g) Transcripts include the following information, where appropriate

i) The student's program

ii) Courses and numeric grades (failed as well as passed) for all academic work attempted or completed at StFX. Approximate conversion to letter grades is: A = 99-80, B = 79-70, C = 69-60, D = 59-50, F = less than 50.

iii) The rank and year-end average if the student is enrolled in a full-time undergraduate program. The average is calculated by weighing each grade by the credit value; see section 3.10. The decile is a student's ranking (10 high, 1 low) in a course with a least 15 registrants.

iv) Transfer credits granted; grades for transfer credits are not shown.

v) Degrees, diplomas and certificates awarded and dates conferred.

vi) Academic penalties, including notations of academic dishonesty.

vii) Distinctions, including placement on the Dean's List.

viii) Theses titles.

h) Transcripts will be issued only if all financial obligations to the university have been met.

i) Transcripts are considered official only when printed on secured paper bearing the signature imprint of the Registrar and either faxed, mailed/couriered directly from the Office of the Registrar to an institution or agency, or provided to the student in a sealed envelope. Transcripts cannot be sent electronically.

j) Additional information is available on the website at http://sites.stfx.ca/registrars_office/.

3.16 REGULATIONS FOR A SECOND STFX DEGREE

To receive a second degree from StFX, a graduate of the university must complete at least 30 credits towards the second degree at StFX and must comply with all course requirements of the second degree. Candidates for a second degree may not choose a major, joint major, advanced major, joint advanced major in the same subject as the first degree.

A StFX graduate who previously earned a BA, B.Sc. or BBA below the honours level may subsequently qualify for and receive an honours degree in the same major as that of the first degree. The student must qualify by meeting all faculty and department course, residence, grade, and average requirements for the honours degree, and must complete a minimum of 18 additional credits at StFX towards the second degree.

3.17 CONTINUING AND DISTANCE EDUCATION

The continuing and distance education department offers degree and non-degree learning opportunities onsite and online during fall, winter, spring and summer sessions.

For degree-credit courses, see specific departments in chapter 9; section 9.28 for information on the part-time B.Sc. Nursing program; chapter 8 for programs leading to master's degrees in education. Non-degree and non-credit courses offered through continuing and distance education are normally concentrated in two areas: general interest and professional development. University preparation courses are available in the areas of mathematics and academic writing. Non-credit workshops may also be offered on campus and online.

Current listings may be obtained from the continuing and distance education department's website at http://sites.stfx.ca/continuingeducation or by phone at 902-867-3906 or toll-free at 1-877-867-3906.

Diploma in Intellectual Disability Studies

The Diploma in Intellectual Disability Studies is a professional/personal development non-credit online program. This is an opportunity for individuals who have some training and/or experience working or living with people who have an intellectual disability. Students must complete five 12-week courses to receive the diploma, however courses are offered individually for interest (contact the Program Office for details; inds@stfx.ca). Each course requires 10 to 12 hours per week of study. For additional information, refer to section 4.5.

Course* Offered
INDS110 Foundations of Disability & Caregiving Fall
INDS120 Relationships, Advocacy & Vision Winter
INDS130 Human Development Fall
INDS140 Building Community Winter
INDS150 Practicum Open access

*Not all courses may be offered each year.

3.18 EXCHANGE AND STUDY ABROAD

StFX has exchange agreements with a number of universities, normally for a third-year international study experience. Most of these universities are listed below. For universities where English is not the general language of instruction, there are usually some courses that are taught in English that might suit StFX students. Students interested in participating in an exchange or study abroad opportunity are encouraged to consult with the Office of Internationalization.

Aalborg University, Denmark
American University of Ras Al Khaimah, UAE
Bangor University, Wales
Bond University, Australia
CEU Universidad San Pablo, Madrid, Spain
Charles University, Czech Republic
ESB Reutlingen, Germany
ESC Amiens Business School
ESDES, Université Catholique de Lyon, France
ESSCA School of Management, France, Hungary, China
HAN-University of Applied Sciences
HANKEN School of Economics, Finland
Heriot-Watt University, Scotland
ICL A Yamanashi Gakuin University, Japan
IESEG, School of Management - Lille, France
Institut d'Etudes Politiques de Lille, France
Interdisciplinary Centre Herzliya, Israel
International School of Management, Germany
King Mongut's University of Technology-SIT, Thailand
Korea University, Seoul, Korea
Leeds Trinity University, England
NS-New England Partnership, USA
Pontificia Universidad Catolica del Peru, Peru
Universidad de Guanajuato, Mexico
Universidad del Salvador, Argentina
Universidad Iberoamericana, Mexico
Universidad Iberoamericana UNIBE, Dominican Republic
Universitat Koblenz-Landau, Germany
Universitat Stuttgart, Germany
Université Catholique de l'Ouest, Angers, France
L'Universite de Toulouse II – Jean Jaures, France
University of Exeter, England
University of Limerick, Ireland
University of Newcastle, Australia
University of the Highlands and Islands, Scotland
University of the West Indies, Barbados
Warsaw School of Economics, Poland
Yeditepe University, Turkey

Students on exchange pay full-time tuition to StFX and any other applicable fees to the host institution. A student may also apply to study abroad as a visiting student at any accredited university and pay tuition directly to that university. Exchange and study abroad students must apply to the International Exchange Office and be approved by StFX in order to have these courses credited towards their StFX degree. Students in some programs may need additional semesters to complete their degree.

To be eligible to participate, students must:

a) be enrolled in a four-year program;

b) be in good academic standing prior to the exchange semester/year;

c) earn an average of at least 70, based on a minimum of 15 credits, in the semester prior to submitting the exchange application;

d) submit an application to the International Exchange Co-ordinator.

The deadline to apply for exchange and study abroad opportunities is January 15th. Second year students applying by this deadline will be considered for host university spaces available in the following academic year. After January 15, students may only apply to do an exchange during the winter term of third year.
for remaining exchange spaces at host universities. For more information, contact Brenda Riley, Office of Internationalization, by email briley@stfx.ca or 902 867-4532.

3.19 DEAN’S LIST
At the end of each academic year students who have earned at least 24 credits, and who have earned an average of at least 75%, will be named to the Dean’s List if they rank in the top 25% of their class in their Faculty.

Students who participate in international education (i.e., exchange and study abroad opportunities) and co-op programs will be eligible for the Dean’s List provided that the student has a completed a minimum of 12 credits at StFX in the year of eligibility.

3.20 DISTINCTION AND FIRST CLASS HONOURS
Faculty of Arts and the Faculty of Business
a) The designation of Distinction is awarded to students whose general average over the final three years of the program is at least 80.

b) Candidates in the Faculty of Arts and Business who satisfy requirements for the degree with honours will be awarded the designation of First Class Honours when their general average is 80 or higher over the final three years, with an average of 80 or higher in all courses taken in the honours subject over the final three years.

c) Students who return to complete a minimum of 18 credits toward an honours degree are not eligible for the First Class Honours designation.

d) For students who complete part or all of a degree through part-time study, the designation of Distinction is awarded to those who earn an average of at least 80 over the last 90 credits. Students must complete 80% of the courses at StFX.

Faculty of Science
a) The designation of Distinction is awarded to students whose combined average over the final three years of the program is at least 80 with a minimum average of 75 in each of the three years.

b) In the Faculty of Science, the designation of First Class Honours is awarded to students whose general average over the final three years is 80 or higher, with a minimum average of 75 in each year, and who have satisfied all other requirements for the degree with honours.

c) For students who complete part or all of a degree through part-time study, the designation of Distinction is awarded to those who earn an average of at least 80 on the best 60 credits completed at StFX, with no grade below 75 in any course completed at StFX or elsewhere.

Accelerated and Distance Nursing Programs
a) For students in the B.Sc.Nursing for registered nurses by distance program, the average of at least 80 will be calculated on the best 33 credits completed at StFX if the student’s program is 63 credits. Of the grades considered in calculating the above average, none shall be below 75.

b) For students in the B.Sc.Nursing, accelerated option, the average of at least 80 will be based on the credits completed at StFX by calculating three averages, with no average less than 75, as follows:

i) semesters 3 and 4, (LPN pathway semester 4 only)

ii) semesters 5 and 6, and

iii) semesters 7 and 8.

3.21 CORRESPONDENCE FROM THE REGISTRAR’S OFFICE TO THE STUDENT
Upon registration at StFX, all official correspondence from the Registrar’s Office, with the exception of academic penalty letters, is sent to students via their StFX email account. Students are responsible for checking their StFX email regularly and to keep their inbox open for delivery.

3.22 OBLIGATIONS OF STUDENTS
Upon registration at StFX, students agree to abide by all applicable rules and regulations and acknowledge that their right to remain at StFX is subject to their observance of these regulations. Students must familiarize themselves with such documents as:

i) the StFX Academic Calendar available at http://sites.stfx.ca/registrars_office/academic_calendar or from the Registrar’s Office

ii) the StFX Community Code of Conduct, available at http://sites.stfx.ca/student_life/student_conduct or from the Student Life office
### 4. FACULTY OF ARTS REGULATIONS

#### 4.1 General Regulations

**4.1.1 Degrees Offered**

The Faculty of Arts offers degrees in Arts, Music and Human Kinetics.

Under the arts heading there are seven degrees:

- **Bachelor of Arts with Major:** in one of 19 majors listed below. A major in aquatic resources combined with a major in biology, Earth sciences, or mathematics is available.

- **Bachelor of Arts with Joint Major:** combines the study of two subjects; requires high academic achievement.

- **Bachelor of Arts with Advanced Major:** designed for the student who wishes both depth and breadth in subjects; requires high academic achievement.

- **Bachelor of Arts with Joint Advanced Major:** an advanced major program that involves the combined study of two subjects.

- **Bachelor of Arts with Honours:** in one of 14 subjects below; requires depth and breadth of subject study, and also superior academic achievement.

- **Bachelor of Arts Honours with Subsidiary:** involves the combined study of two subjects and superior academic achievement.

The music degrees are:

- Bachelor of Music

The Faculty of Arts, jointly with the Faculty of Science, offers:

- Bachelor of Arts in Human Kinetics
- Bachelor of Arts in Human Kinetics with Advanced Major
- Bachelor of Arts in Human Kinetics with Honours

The human kinetics degrees, each with a choice of kinesiology or pre-education major, are:

- Bachelor of Arts in Human Kinetics
- Bachelor of Arts in Human Kinetics with Honours

#### 4.1.2 Subjects Available

The subjects available chart lists the subjects available for study in the arts degrees within the Faculty of Arts and where these subjects can be a major, minor, pair or elective course, or where two subjects may be combined in a joint major, joint advanced major, or honours with subsidiary degree. Reference is also made to information in chapter 9.

<table>
<thead>
<tr>
<th>BA Major</th>
<th>BA Joint Major</th>
<th>BA Adv Major</th>
<th>BA Joint Adv Major</th>
<th>BA Honours</th>
<th>BA Honours Subsidiary *</th>
<th>BA AQUA</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH</td>
<td>Anthropology, see 9.2</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>M1, S, P, E</td>
</tr>
<tr>
<td>CSCI</td>
<td>Computer Science, see 9.12</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>M1, S, P, E</td>
</tr>
<tr>
<td>ECON</td>
<td>Economics, see 9.16</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>M1, S, P, E</td>
</tr>
<tr>
<td>ENGL</td>
<td>English, see 9.19</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>M1, S, P, E</td>
</tr>
<tr>
<td>FREN</td>
<td>French, see 9.26</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>M1, S, P, E</td>
</tr>
<tr>
<td>HIST</td>
<td>History, see 9.21</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>M1, S, P, E</td>
</tr>
<tr>
<td>MATH</td>
<td>Mathematics, see 9.25</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>M1, S, P, E</td>
</tr>
<tr>
<td>PHIL</td>
<td>Philosophy, see 9.29</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>M1, S, P, E</td>
</tr>
<tr>
<td>PSCI</td>
<td>Political Science, see 9.31</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>M1, S, P, E</td>
</tr>
<tr>
<td>DEVS</td>
<td>Development Studies, see 9.14</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>M1, S, P, E</td>
</tr>
<tr>
<td>CELT</td>
<td>Celtic Studies, see 9.8</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>P.E</td>
<td>M1, S, P, E</td>
</tr>
<tr>
<td>PSYC</td>
<td>Psychology, see 9.32</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>P.E</td>
<td>M1, S, P, E</td>
</tr>
<tr>
<td>RELS</td>
<td>Religious Studies, see 9.34</td>
<td>M1, M, P, E</td>
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<td>M1, P, E</td>
<td>P.E</td>
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<tr>
<td>SOCI</td>
<td>Sociology, see 9.35</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>P.E</td>
<td>M1, S, P, E</td>
</tr>
<tr>
<td>PSGV</td>
<td>Public Policy and Governance, see 9.33</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>P.E</td>
<td>M1, S, P, E</td>
</tr>
<tr>
<td>WMSS</td>
<td>Women's and Gender Studies, see 9.36</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>P.E</td>
<td>S.P, E</td>
</tr>
<tr>
<td>CATH</td>
<td>Catholic Studies, see 9.7</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>P.E</td>
<td>S.P, E</td>
</tr>
<tr>
<td>MUSI</td>
<td>Music, see 9.27</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>P.E</td>
<td>S.P, E</td>
</tr>
<tr>
<td>SPAN</td>
<td>Spanish, see 9.26</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>P.E</td>
<td>S.P, E</td>
</tr>
<tr>
<td>ART</td>
<td>Art History, see 9.4</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>P.E</td>
<td>S.P, E</td>
</tr>
<tr>
<td>ART</td>
<td>Studio Art, see 9.4</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>P.E</td>
<td>S.P, E</td>
</tr>
<tr>
<td>BIOL</td>
<td>Biology, see 9.5 and note 5</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>P.E</td>
<td>S.P, E</td>
</tr>
<tr>
<td>CHEM</td>
<td>Chemistry, see 9.9 and note 5</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>P.E</td>
<td>S.P, E</td>
</tr>
<tr>
<td>CLEN</td>
<td>Climate and Environment, see 9.11</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>P.E</td>
<td>S.P, E</td>
</tr>
<tr>
<td>ESCI</td>
<td>Earth Sciences, see 9.15 and note 5</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>P.E</td>
<td>S.P, E</td>
</tr>
<tr>
<td>PHYS</td>
<td>Physics, see 9.30 and note 5</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>P.E</td>
<td>S.P, E</td>
</tr>
<tr>
<td>CLAS</td>
<td>Classical Studies, see 9.10</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>P.E</td>
<td>S.P, E</td>
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<tr>
<td>GERM</td>
<td>German, see 9.26</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>P.E</td>
<td>S.P, E</td>
</tr>
<tr>
<td>AQUA</td>
<td>Aquatic Resources, see 9.3</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>P.E</td>
<td>S.P, E</td>
</tr>
<tr>
<td>BSAD</td>
<td>Business Administration, see 9.6 and note 1</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>P.E</td>
<td>S.P, E</td>
</tr>
<tr>
<td>ENGR</td>
<td>Engineering, see 9.18 and note 2</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>P.E</td>
<td>S.P, E</td>
</tr>
<tr>
<td>HLTH</td>
<td>Health, see 9.9 and note 6</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>P.E</td>
<td>S.P, E</td>
</tr>
<tr>
<td>HUKN</td>
<td>Human Kinetics, see 9.22 and note 3</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>P.E</td>
<td>S.P, E</td>
</tr>
<tr>
<td>HUNU</td>
<td>Human Nutrition, see 9.23 and note 3</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>P.E</td>
<td>S.P, E</td>
</tr>
<tr>
<td>IDS</td>
<td>Interdisciplinary Studies, see 9.24</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>P.E</td>
<td>S.P, E</td>
</tr>
<tr>
<td>MIKM</td>
<td>Mi'km'aq, see 9.26</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>P.E</td>
<td>S.P, E</td>
</tr>
<tr>
<td>NURS</td>
<td>Nursing, see 9.28 and note 2</td>
<td>M1, M, P, E</td>
<td>M1, M, P, E</td>
<td>M1, P, E</td>
<td>P.E</td>
<td>S.P, E</td>
</tr>
</tbody>
</table>

Students in a BA program, including those who have transferred from another program, may count towards the BA a maximum of 18 credits in courses taken in professional programs. The following regulations, in notes 1-3, apply.

Note 1 Students may normally complete a maximum of 12 credits in BSAD but only students who transfer out of BBA may count these as a pair. Only students completing a major or advanced major in Economics may complete a minor in Business Administration.

Note 2 Students who transfer out of the engineering or nursing program may count a maximum of 6 credits in ENGR or NURS.

Note 3 A maximum of six credits in HUKN and/or HUNU may be used as open electives; they may not be taken in the first year; permission of the professor and the department chair is required.

Note 4 The degree is BA Major in Economics or Public Policy and Social Research, and Major in Aquatic Resources.

Note 5 In addition to using science courses as electives, students may complete a minor or one pair in a science discipline.

Note 6 Students who transfer out of BASc in Health may use HLTH courses as a pair or as electives.

* A subsidiary may normally be done only in a subject in which a major is offered in the BA program with exceptions as noted.
4.1.3 Degree Patterns (see chart)
 Listed below are the degrees in the Faculty of Arts with their course patterns and credit requirements. Each degree requires 120 credits.

In general at StFX, courses are three credits for a one-semester course and six credits for a full-year (two-semester) course.

First-Year Pattern
Students in the first year of the BA normally follow the pattern of courses listed below. Group I and Group II refer to departments that offer the full range of BA degree options, namely, majors, advanced majors, and honours programs. All courses are introductory with numbers in the range 100-199 (e.g., ENGL 100). The normal academic load is 30 credits per year. In first year, students in the BA carry courses as follows:

Group I
6 credits from Catholic studies, Celtic studies, computer science, English, history, mathematics, philosophy, religious studies

Group II
6 credits from anthropology, development studies, economics, modern languages (French, Spanish), political science, psychology, public policy and governance, sociology, women's and gender studies

Group I or II
6 credits

4.1.5 Advancement & Graduation Requirements by Degree (see chart)
All students must fulfill the pattern and credit requirements as specified above and the course, seminar, research report, senior paper, or honours thesis requirements of the major, advanced major or honours department(s). For any honours with subsidiary or joint degrees, students submit only one research report, senior paper, or honours thesis to the first named department on the student’s application, after consultation with both departments.

Note 1 For students intending the secondary teaching stream, a minimum of 24 credits must be in one of the subject fields taught in Nova Scotia schools. For students pursuing the elementary teaching stream option, Arts A becomes 18 credits and the approved electives become 12 credits.

Note 2 Courses in Major 1 or Major 2 may not be used as electives.

Note 3 Major 1 plus Major 2 up to a maximum of 84 credits. A minimum of 24 credits of electives must be from departments other than honours or subsidiary.

Note 4 Senior research paper must be written on a topic in Subject A.

Note 5 A pair is 12 credits in one subject, with requirements and restrictions as outlined in the glossary section of this academic calendar.
Candidates who fail to meet the requirements for the degree for which they have applied may be eligible for another degree, provided those requirements are met.

Exceptions to these requirements need the approval of the Dean and the department chair.

4.1.6 Co-operative Education Program in Arts

A form of work-integrated learning, Co-op Education is a model of education that integrates academic study with related and supervised co-op work experience (12-16 months) with an employer partner in industry, government and not-for-profit across Canada. This optional academic program is for BA in computer science or mathematics students, BASc in Health, BASc in Climate & Environment. The CSCI Co-op Program is accredited by the Co-operative Education & Work-Integrated Learning Canada (CEWIL Canada). COOP 405 can be used as a major subject elective or as an open elective. See section 9.13 for further information.

4.2 BACHELOR OF ARTS AND SCIENCE

The Bachelor of Arts and Science (BASC) is designed to expose students to both Arts and Science knowledge that inform a particular topic. Since many contemporary topics and issues are better understood through thorough engagement with both scientific and humanistic contributions, the degree is structured so that students engage with as many relevant disciplinary contributions as possible. Students completing Bachelor of Arts and Science programs will complete interdisciplinary core courses pertaining to their subject of study as well as science, arts, and humanities requirements.

Currently, StFX offers a Bachelor of Arts and Science in Health and in Climate and Environment. Both programs are direct-entry.

This degree program is not intended as a compromise for students who cannot decide between an arts and science degree. This degree is rather for students with specific topical interests that are better served by interdisciplinary study.

4.2.1 Climate and Environment

The program was carefully designed to provide students with maximum exposure to knowledge that will contribute directly to their understanding of climate and environmental topics while maintaining a liberal arts approach that encourages commitment to broad critical and scientific inquiry, logical rigour, and creative problem-solving. Students will complete courses across the faculties of arts and science to gain a broad yet inclusive education in both climate and environment. This approach reflects the complexity of addressing climate and environment issues currently facing our planet. Global initiatives in tackling human and environmental issues highlight the need for an interdisciplinary approach, recognizing that solutions will only be found through integrated scientific, socio-political, and economic inquiry.

4.2.2 Health

The program aims to provide students with a contemporary education in health by drawing on knowledge from the natural sciences, social sciences, and humanities to engage students in nuanced and considered discussions about how we think about health, how we approach health, how we create health, what biases contribute to our understanding of health, and how health is interwoven into all aspects of our individual and collective lives. Students will gain a better understanding of the ways in which human health is determined and defined, by emphasizing what biology, chemistry, the social sciences, history, and other disciplinary fields of study contribute to an integrative understanding of health. Students will complete concentrations in biomedical, and social determinants and health equity, as well as a humanities requirement.

4.3 HUMANITIES COLLOQUIUM

The Humanities Colloquium (HC) is an interdisciplinary way of studying ENGL 100, HIST 101/102 and PHIL 100 in the first year. The courses are taught in a historically co-ordinated way with a focus on the great books of Western Civilization. These courses present an intensive introduction to four historical periods: The Ancient World; The Middle Ages; The Renaissance to the Enlightenment; and The Modern Age. In each period, students learn the history while simultaneously reading the philosophy and literature of the same era. Assignments, essays, and examinations are co-ordinated to reflect common themes across the courses.

The humanities colloquium concentration requires 36 credits:

a) ENGL 100, HIST 101 and 102, PHIL 100;
b) 12 additional credits that build on first year: 6 credits in ART history; 6 RELS credits from 212, 254, 311, 312 and 365 or CATH
c) 6 additional credits in any language taught at SFIX, such as Arabic, Celtic Studies, French, German, Greek, Latin, Mi’km’aq, or Spanish (students are not required to take all 6 credits in the same language).

Courses taken for credit in the HC may be used to fulfill other university course requirements. Please see the website at http://www2.mystfx.ca/humanities-colloquium/ for additional information.

4.4 SOCIAL JUSTICE COLLOQUIUM

The Social Justice Colloquium (SJC) is a first-year option for Bachelor of Arts students. Participants are enrolled in dedicated sections of anthropology, global history and women’s and gender studies. The instructors work together to coordinate their teaching so that students learn about social justice from various perspectives. In addition, students will complete a service learning experience that will be interwoven with academic learning. Through theory and practice, participants will become better students and more engaged community members.

Further information is available on the website at http://www2.mystfx.ca/sjc/

5. FACULTY OF BUSINESS REGULATIONS

5.1 GENERAL REGULATIONS

5.1.1 Degrees Offered

The following degrees are offered in Business Administration:

- Bachelor of Business Administration with Major, Advanced Major, and Honours in accounting, entrepreneurship, enterprise systems, finance, international business, management and leadership, or marketing
- Bachelor of Business Administration with Joint Honours in business administration and economics

5.1.2 Degree Requirements

All students in the BBA program will choose their area of concentration at the end of their second year of studies. Students will declare their major in one of the six streams identified above. Students who qualify academically for the advanced major or honours programs will be able to apply for these degree streams at that time. For more specific requirements for the advanced major and honours degrees see Section 9.6. Chart 5.1.2 shows the structure of the BBA major, advanced major and honours degree programs.

<table>
<thead>
<tr>
<th>BBA Degree Requirements Chart 5.1.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirements</td>
</tr>
<tr>
<td>BSAD core credits</td>
</tr>
<tr>
<td>BSAD stream prescribed credits</td>
</tr>
<tr>
<td>BSAD electives</td>
</tr>
<tr>
<td>Total BSAD credits</td>
</tr>
<tr>
<td>Arts/Science prescribed credit</td>
</tr>
<tr>
<td>Arts/Science electives</td>
</tr>
<tr>
<td>Total Arts/Science credits</td>
</tr>
<tr>
<td>Open credits</td>
</tr>
<tr>
<td>Total credits</td>
</tr>
</tbody>
</table>

* For the finance stream: Arts/Sc credits prescribed total 18
** For the finance stream: Arts/Sc electives total 30.

5.1.3 Electives

a) Arts and Science Electives

i) BA students must earn 36 credits of arts/science electives (with the exception of students in the finance stream who need to earn 30 credits).

Normally these credits are completed prior to the fourth year of study.

The arts/science electives must include a pair (12 credits) in each of two different subjects offered by the Faculty of Arts or the Faculty of Science with exceptions noted below. The remaining credits of arts/science electives may be additional courses in paired subjects or courses in other subjects.

Faculty of Arts Regulations / Faculty of Business Regulations 21
Faculty of Business Regulations / Faculty of Education Regulations

Economics, mathematics and statistics courses required to earn the BBA may not count as arts/science electives.

At least one of the two pairs must be in an arts subject. For maximum flexibility, students are advised to complete one arts/science pair by the end of their second year.

The following professional and applied subjects are not permitted as arts/science electives: Adult education, aquatic resources, education, engineering, human kinetics, human nutrition and nursing.

Economics courses beyond ECON 101 and 102 may count as an arts pair except for BBA students enrolled in the joint honours in business administration and economics program.

b) Earning a Minor in an Arts or Science Subject (BBA programs)

Any BBA student earning 24 credits in one arts or science subject may qualify for a minor in that subject. Any specific departmental requirements for the minor must be met. Students must also complete a pair (12 credits) in another subject.

To have a minor officially recognized, a student must advise the Dean’s office of the desire to have the minor noted on the academic record.

i) Students wishing to complete a minor in economics must complete 24 credits in addition to ECON 101 and 102.

ii) Students wishing to complete a minor in mathematics/statistics/computer science must complete 24 credits in addition to MATH 105 and STAT 101.

c) Open Electives

Most BBA programs include nine credits of open electives. Students may satisfy this requirement by completing BSAD courses, arts/science courses (as above) or, with permission of the appropriate chair, courses in selected subjects not normally permitted as arts/science electives including engineering, human kinetics, human nutrition and nursing.

5.1.4 Application for Advanced Major or Honours

In the second year of study, students apply for admission to an advanced major or honours program when they complete the appropriate application form and submit the form to the Dean’s office by March 31. Students are advised of their acceptance to the program in the summer following submission of the form. Students in the advanced major or honours programs must be registered full-time in their final year of study. The forms are available at http://sites.stfx.ca/dean_of_business/

5.1.5 Advancement and Graduation Requirements by Degree (see chart)

All students must fulfill the pattern and credit requirements as specified for the major, advanced major or honours programs. For BBA joint honours degrees, students submit only one honours thesis to the business administration or economics department.

Candidates who fail to meet the requirements for the degree for which they have applied may be eligible for another degree, provided those requirements are met.

Exceptions to these requirements need the approval of the Dean of Business.

5.1.6 Co-operative Education Programs in the Schwartz School of Business Administration

A form of work-integrated learning, Co-op Education is a model of education that integrates academic study with related and supervised co-op work experience (12-16 months) with an employer partner in industry, government and not-for-profit across Canada. The BBA Co-op Program is accredited by the Co-operative Education & Work-Integrated Learning Canada (CEWIL Canada). COOP 405 (3 credits) can be used as BBA elective or as an open elective. See section 9.13 for further information.

5.1.5 Advancement and Graduation Requirements by Degree

<table>
<thead>
<tr>
<th>Degree</th>
<th>Admission End of Second Year</th>
<th>Advancement End of Third to Fourth Year</th>
<th>Graduation and Fourth-Year Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBA Major</td>
<td>-</td>
<td>average 65 in courses taken in the first two years; average 65 in the required first- and second-year BSAD, ECON, MATH and STAT courses</td>
<td>average 70; average 70 in the BSAD and required ECON courses taken in year three in the majors subject</td>
</tr>
<tr>
<td>BBA with Advanced Major</td>
<td>average 65 in courses taken in the first two years; average 65 in the required first- and second-year BSAD, ECON, MATH and STAT courses</td>
<td>average 70; average 70 in the BSAD and required ECON courses taken in year four in the majors subject</td>
<td></td>
</tr>
<tr>
<td>BBA with Honours</td>
<td>average 75 in courses taken in the first two years; average 75 in the required first- and second-year BSAD, ECON, MATH and STAT courses; grade of 70 in each of these required courses</td>
<td>average 75; average 75 in all BSAD and required ECON courses; grade of 70 in each course in the honours subject</td>
<td></td>
</tr>
<tr>
<td>BBA with Joint Honours in Business Administration and Economics</td>
<td>average 75 in courses taken in the first two years; average 75 in the required first- and second-year BSAD, ECON, MATH and STAT courses; grade of 70 in each of these required courses</td>
<td>average 75; average 75 in all BSAD and required ECON courses; grade of 70 in each course in the honours subject</td>
<td></td>
</tr>
</tbody>
</table>

6. FACULTY OF EDUCATION REGULATIONS

6.1 BACHELOR OF EDUCATION ADMISSION REQUIREMENTS

The Bachelor of Education (B.Ed.) is a two-year program following a first degree. Applicants must have completed a first degree in arts, science, human kinetics, kinesiology, physical education or equivalent. The B.Ed. program has two streams: elementary and secondary with an additional middle years option available in either stream. Specialist programs in teaching physical education and French as a second language are available in all streams and options.

6.1.1 Admission Process

At the present time, admission to the B.Ed. program is limited to approximately 115 students. The admissions process consists of the three steps described below.

a) File Review

During the file review process, applicants are initially evaluated on four equally weighted criteria.

i) Academic record: Normally applicants must have a senior-year average of at least 70 or a GPA of 2.5. Consideration is also given to the applicant’s performance throughout the entire undergraduate program.

ii) Life experiences and community involvement: Both breadth and depth of involvement are evaluated, as is the applicant’s experience with diversity and with inclusive practices.

iii) Letters of reference: Evaluation of the applicant’s personal and professional qualities as presented by three referees who know the individual well as a student, worker and community member-leader.

iv) Essay on why the applicant wants to teach: Evaluation of the essay is based on the applicant’s articulation of his/her view of students, subject area, and vision for schooling.

b) Interview

Based on the above criteria, applicants will be short-listed for the next stage of the process in which interviews are normally required. Interviews are about 30-40 minutes in length and include core questions asked of all applicants applying to the B.Ed. program as well as specific questions relating to the elementary or secondary stream, as applicable. Secondary stream applicants are asked about the major and minor subject fields for which they are applying.
Interview questions focus on a general understanding of teaching, teaching content and processes, personal and professional qualities, an understanding of diversity and inclusive practices, and communication skills.

c) Decision
The applicant’s file review and interview are equally weighted. Composite scores from the two parts of the application process form the basis for offers in each stream of the program, and within subject fields in the secondary stream.

d) Criminal Records and Child Abuse Checks & Updates
Applicants for the Bachelor of Education Program must submit Criminal Records Checks and Child Abuse Registry Checks to the StFX B.Ed. Admissions Coordinator following confirmation of enrollment into the program; these checks will be shared with the participating School Board(s) for EDUC 471; EDUC 472; EDUC 481; EDUC 482 (Field Practicum). While enrolled in the B.Ed. program students are responsible to inform the Chair of the Department of Teacher Education of any changes that occur to the Criminal Records Check or the Child Abuse Registry Check that are submitted as part of the Admissions requirements; changes in this status could result in denial of practicum and/or denial of teaching license.

6.1.2 Admission Timeline
Jan 24 - Completed applications are submitted for the year in which admission is sought.
Feb 1-10 - Applications are reviewed by Faculty of Education.
Feb 10-Mar 15 - Selected applicants are invited for interviews by stream and by subject field throughout this period.
Feb 25-Mar 30 - Letters are mailed to applicants either making an offer, placing individuals on a wait list, or expressing regret.

6.1.3 Elementary Education (P-6) Requirements
There are five requirements for entrance into the B.Ed. elementary stream.

Social Studies: Nine credits are required in social studies from any one or combination of the following disciplines: history (with a preference for local and Canadian history), geography, economics, political science, anthropology, sociology, law, classics, Acadian studies, African-Canadian studies, Mi'kmaq studies, and/or philosophy.

Mathematics: Six credits are required in the subject field of mathematics. Three of the six credits must include the investigation of fundamental concepts and ideas.

English or French: Six credits are required in the subject field of English, if the undergraduate degree was delivered in English. Six credits are required in the subject field of French, if the undergraduate degree was delivered in French. Applicants for the specialist program for teaching French are encouraged to have courses in oral and written communication, communication strategies (speaking, listening, reading, writing strategies); Acadian, Quebec and francophone culture courses; and an introduction to French literature, which could include literature throughout the francophone world. In addition to this, elementary applicants are encouraged to have a course in children’s French literature taught in French.

Science: Six credits are required in science from any one or combination of: biology, chemistry, physics, Earth sciences, oceanography and environmental studies. Please note that a full laboratory component is recommended and is required for teacher certification in some Canadian provinces outside of Nova Scotia.

Developmental Psychology: Three or six credits are required.

A maximum of six credits of cognate courses may be recognized in fulfillment of the individual subject field requirements identified above.

Cognate coursework refers to coursework in which the content is consistent with the content in the discipline for which credit is being allocated, for example, classics as history, communications as English. Final decisions on cognates are determined by the Faculty of Education in consultation with the NS Department of Teacher Certification.

6.1.4 Secondary Education (7-12) Requirements
There are two requirements for entrance into the B.Ed. secondary stream.

a) Major Subject Field
A minimum of at least 30 credit hours of university coursework in one discipline of a subject field taught in Nova Scotia secondary schools. A maximum of 6 credit hours of cognate university coursework may be included in fulfillment of this requirement.

b) Minor Subject Field
A minimum of at least 18 credit hours of university coursework in one discipline of a second subject field taught in Nova Scotia secondary schools. A maximum of 6 credit hours of cognate university coursework may be included in fulfillment of this requirement.

Cognate coursework refers to coursework in which the content is consistent with the content in the discipline for which credit is being allocated, for example, classics as history, communications as English. Final decisions on cognates are determined by the Faculty of Education in consultation with the NS Department of Teacher Certification.

Note:
A number of positions in the secondary stream have been set aside for applicants who have at least 18 credit hours in a second minor subject field. This may give potential teachers an advantage in applying for middle school or junior high school positions. With appropriate methods courses, endorsement could be achieved in three subject areas rather than the customary two.

Secondary education students must prepare to teach two subject fields normally taught in the public secondary schools of Nova Scotia (English, French, social studies, mathematics, science, physical education/health education, fine arts, Gaelic, family studies, Spanish, business). Information on subject fields and related disciplines:

- English: Applicants are encouraged to have courses in Canadian, American, British (including Shakespeare); and post-colonial literature.
- French: Applicants are encouraged to have courses in oral and written communication; communication strategies (speaking, listening, reading, writing strategies); Acadian, Québécois, and francophone culture courses; and an introduction to French literature which could include literature throughout the francophone world.
- Social Studies: Applicants must have a concentration in one of the following related disciplines: African-Canadian studies, classics, Acadian studies, economics, geography, history, law, Mi'kmaq studies, political science, or sociology. Anthropology may be used for a minor subject field and as a major subject field only if the courses are cross-listed with sociology.
- Mathematics: Applicants are encouraged to take courses in calculus, algebra, geometry, and statistics.
- Science: Applicants must have a concentration in one of the following related disciplines: biology, chemistry, Earth sciences, environmental studies, oceanography, or physics.

Physical Education/Health Education: See section 6.2.

Gaelic: Applicants must have a concentration in one of the following related disciplines: Celtic studies, Scottish Gaelic, or Irish Gaelic.

Fine Arts: Applicants must have a concentration in one of the following related disciplines: art, drama, music or theatre studies.

Family Studies: Applicants must have a dual concentration which covers two of the three threads of the family studies program: food and nutrition; textile arts and family dynamics. Applicants’ transcripts will be assessed individually for suitability for the family studies field, but generally, a concentration in human nutrition, family studies, sociology, psychology, and consumer education is recommended.

Spanish: Applicants must have a concentration in Spanish with an emphasis on oral and written communication.

Business: Applicants must have a background in one of the related disciplines of business administration or commerce.

6.2 BACHELOR OF EDUCATION PHYSICAL EDUCATION SPECIALIZATION

As a specialist discipline, physical education requires that prospective students normally meet recognized CCUPEKA standards. In addition to the general requirements for either the elementary or secondary stream, applicants must have a minimum of 30 credits in the major subject for their first degree in the related disciplines of physical education, human kinetics, or kinesiology, with at least half consisting of courses beyond the introductory level. In addition, students should present among their required courses the following:

a) Courses illustrating knowledge of disciplinary content, including but not limited to, human anatomy/physiology; motor learning and control, biomechanics, and psychology of physical activity.
b) Courses related to the curriculum of the provincial school system including basic movement, gymnastics, dance, and team/individual sports, recreation and leisure pursuits, outdoor pursuits, and exercise and health-related fitness.

c) Courses in health education and growth and development.

d) A course in special populations in physical education. Consideration may be given to applicants with unique skill sets or experiences.

### 6.3 BACHELOR OF EDUCATION MI’KMAQ FOCUS

Applicants pursuing a Mi’kmaq focus in their B.Ed. may develop a concentration in language and/or culture. The language focus requires oral fluency in Mi’kmaq, and at least 18 credits in Mi’kmaq language-related courses in the first degree.

### 6.4 BACHELOR OF EDUCATION PROGRESSION REQUIREMENTS AND ACADEMIC PENALTIES

To qualify for the B.Ed. degree an average of at least 65 is required in all courses taken in the program. The pass mark in each course is 60.

Given the compressed time frame of the B.Ed. program, students will be reviewed at the end of each term. Students are expected to pass all of their academic courses and practicum each term.

a) Students who fail one academic course in one term will normally be placed on academic probation and may be withdrawn from practicum.

b) Students who fail more than one academic course in a term will normally be suspended.

c) Students who fail practicum (i.e. a student who receives two unsatisfactory reports in any single practicum term) will normally be suspended.

d) If a student is re-admitted to the program after the suspension period and fails one or more courses or receives two unsatisfactory practicum reports in a single practicum term, the student will normally be dismissed from the program.

The procedure for appealing two unsatisfactory practicum reports is given in Section VI (G) of the Faculty of Education Field Experience Handbook. The procedure for appealing an academic penalty is given in section 3.12. Students who successfully appeal will be permitted to return to the B.Ed. program as soon as course availability permits. Consideration for alternative arrangements to complete coursework will be made at the discretion of the department chair. A student who is suspended from the B.Ed. program may re-apply after a period of one year. Other regulations in 3.11 may apply.

### 6.5 BACHELOR OF EDUCATION PROFESSIONAL CONDUCT

The Department of Teacher Education has adopted guidelines for the conduct of preservice teachers enrolled in the Bachelor of Education program. As students and aspiring teachers, all B.Ed. program members must adhere to the guidelines as outlined in the B.Ed. Handbook and the Nova Scotia Teachers’ Union Code of Ethics.

In the event of unprofessional conduct of a Bachelor of Education student, a faculty advisor or faculty member is required to bring it to the immediate attention of the B.Ed. Chair. The B.Ed. Chair shall call a meeting of the B.Ed. Professional Committee which will examine the circumstances of the reported incident(s). Based on the advice of the committee, the B.Ed. Chair may recommend the imposition of penalties including probation and/or a letter a warning, or suspension from the B.Ed. program. In some cases, violation of professional conduct guidelines may result in the B.Ed. Chair recommending dismissal of the pre-service teacher to the Faculty of Education Committee on Studies.

### 6.6 BACHELOR OF EDUCATION CERTIFICATION

Candidates for a teacher’s certificate may be asked to disclose disciplinary action at an educational institution or violations of the law which resulted in penalty.

Upon completion of the B.Ed. program, students are eligible to apply for the Teacher’s Certificate, ITC, awarded by the Nova Scotia Department of Education.

### 6.7 DIPLOMA IN ADULT EDUCATION

This program is offered in major centres across Canada throughout the year. The Diploma in Adult Education is a professional designation. The modules are arranged as a series, yet each is a complete unit of learning which may be taken independently of the others at the discretion of the program director. The modules cover knowledge and skills in the following areas and carry credit value as indicated:

**ADED 331** Module 1 - Assessing Training Needs  
Credits: 1

**ADED 332** Module 2 - Setting Learning Objectives  
Credits: 1

**ADED 331** Module 3 - Evaluation Strategies  
Credits: 1

**ADED 332** Module 4 - Designing Learning Activities  
Credits: 2

**ADED 331** Module 5 - Facilitating Learning  
Credits: 1

**ADED 332** Module 6 - Practicum  
Credits: 6

Upon completion of the first five modules, the Certificate in Adult Education is awarded. The Diploma in Adult Education is awarded upon completion of the six modules. Students may count, in multiples of three, up to 12 credits as electives in BA programs.

### 6.8 CERTIFICATE IN ELEMENTARY MATHEMATICS EDUCATION

This program has been developed in response to a need identified by the Nova Scotia Department of Education and school board partners. The Certificate in Elementary Mathematics Education is recognized for a licensing upgrade in Nova Scotia. The certificate consists of a sequence of ten courses focusing on content and pedagogy suitable for the elementary and middle years and is offered to cohorts of in-service teachers on a part-time basis.

### 6.9 CERTIFICATE IN OUTDOOR EDUCATION

This certificate program is designed to fulfill a need identified by teachers across Nova Scotia in response to Physical Education curriculum changes. The Certificate in Outdoor Education is recognized for a licensing upgrade in Nova Scotia. The certificate consists of a sequence of eleven courses which focus on the skills and pedagogy required to offer outdoor pursuits to students Primary to grade 12. This certificate is offered to cohorts of in-service teachers on a part-time basis.

### 7. FACULTY OF SCIENCE REGULATIONS

#### 7.1 General Regulations

7.1.1 Degrees and Diploma Offered

7.1.2 Subjects Available

7.1.3 Degree Patterns

7.1.4 Declaration of Major, Advanced Major, or Honours

7.1.5 Advancement and Graduation Requirements by Degree

7.1.6 Bachelor of Science with Joint Advanced Major

7.1.7 Bachelor of Science with Joint Honours

7.1.8 Co-operative Education Program in Science

#### 7.2 Engineering

7.2.1 Bachelor of Science with a Diploma in Engineering

#### 7.3 Bachelor of Arts and Science

7.3.1 Climate and Environment

7.3.2 Health

#### 7.4 Possible Pathways in the Sciences

7.4.1 Architectural Studies

7.4.2 Pre-Medical Studies

7.4.3 Pre-Dental Studies

7.4.4 Pre-Veterinary Studies

7.4.5 Graduate Studies

7.4.6 Education and Teaching

### 7.1 GENERAL REGULATIONS

Each degree in the Faculty of Science requires 120 credits, with the exception of the B.Sc. Nursing and B.Sc.Human Nutrition with IDI degrees. The four-year B.Sc. in Nursing requires 120 credits; the accelerated option requires 90 credits; the accelerated option for LPNs requires 69 credits (after the pathway courses) and the option for RNs requires 63 credits. The B.Sc.Human Nutrition with IDI degrees require 138 credits. The Diploma in Engineering requires 69 credits. Courses for each degree option and diploma must follow the credit pattern required by the program chosen.

Students wishing to apply for an advanced major or honours program are advised to consult with the department chair as early as possible.

Re-entry to degree programs in the Faculty of Science will not be granted automatically to students who have been absent from the university for more than
10 years. In each science discipline, an entrance examination may be required to determine the extent to which credit will be awarded for courses completed previously.

7.1.1 Degrees and Diploma Offered

The Faculty of Science offers undergraduate degrees in the natural and applied sciences (aquatic resources, biology, chemistry, computer science, Earth sciences, economics, mathematics, physics, psychology) and in the health sciences (human kinetics, human nutrition, nursing) and the diploma in engineering.

Within the Bachelor of Science, there are several degree options:

- Bachelor of Science with Major: in one of seven majors listed below in chart 7.1.2. An optional minor is available in an arts or science subject. A major in aquatic resources combined with a major in biology, Earth sciences, or mathematics is available.
- Bachelor of Science with Advanced Major: in one of seven majors listed below in chart 7.1.2; requires high academic achievement. An optional minor is available in an arts or science subject. An option with business administration courses is also available.
- Bachelor of Science with Joint Advanced Major: combines the study of two science subjects; see chart 7.1.6 for combinations
- Bachelor of Science with Honours: offered in one of eight subjects listed below; requires superior academic achievement. An optional minor is available in an arts or science subject.
- Bachelor of Science with Joint Honours: combines the study of two science subjects; see chart 7.1.7 for combinations

Within the Bachelor of Science in Human Kinetics, there are three degrees, each with a choice of kinesiology or pre-education major:

- Bachelor of Science in Human Kinetics
- Bachelor of Science in Human Kinetics with Advanced Major
- Bachelor of Science in Human Kinetics with Honours

For the BA in Human Kinetics, see chapter 4 and section 9.22.

Within the Bachelor of Science in Human Nutrition, there are six degrees:

- Bachelor of Science in Human Nutrition
- Bachelor of Science in Human Nutrition with Advanced Major
- Bachelor of Science in Human Nutrition with Honours
- Bachelor of Science in Human Nutrition with IDI
- Bachelor of Science in Human Nutrition with Advanced Major with IDI
- Bachelor of Science in Human Nutrition with Honours with IDI

Within the Bachelor of Science in Nursing, there are three degrees and two certificates:

- Bachelor of Science in Nursing: Four-year option for students direct from high school; accelerated option for internal applicants and transfer students; accelerated option for LPNs; and a distance option for registered nurses; see sections 1.3 and 1.6
- Bachelor of Science in Nursing with Advanced Major
- Bachelor of Science in Nursing with Honours
- Certificate in Gerontological Nursing
- Certificate in Continuing Care

The Faculty of Science, jointly with the Faculty of Arts, offers Bachelor of Arts and Science in Climate and Environment, see section 7.3.

Bachelor of Arts and Science in Climate and Environment with Honours, see section 7.3.

Bachelor of Arts and Science in Health, see section 7.3.

Bachelor of Arts and Science in Health with Honours, see section 7.3.

The Faculty of Science offers one diploma:

Diploma in Engineering

The Diploma in Engineering can be completed concurrently with the Bachelor of Science degree; see section 7.2.1.

7.1.2 Subjects Available (see chart)

The following chart lists the subjects available for study in the science degrees within the Faculty of Science, where each subject may be used within the degree pattern, and where two subjects may be combined in a joint advanced major or joint honours degree.

7.1.3 Degree Patterns (see chart)

Listed in the chart on the next page are the degree options and the diploma in the Faculty of Science, with the credit patterns required for each. The available arts X and arts Y subjects are anthropology, art, Catholic studies, Celtic studies, classical studies, climate and environment, development studies, economics, English, French, German, history, music, philosophy, political science, psychology, public policy and governance, religious studies, sociology, Spanish, and women’s and gender studies.

For definitions of the humanities and social sciences, see the glossary at the end of this calendar.

7.1.4 Declaration of Major, Advanced Major, or Honours

Students meet with faculty advisors in their major, advanced major, or honours departments to discuss future course selection. In the first year of study, a student applies for admission to the desired program by completing and submitting the appropriate application form, signed by the chair, to the Dean’s office by March 29. Students are advised of acceptance to their programs in the summer following submission of their forms. The forms are available at http://www2.mystfx.ca/dean-of-science/

7.1.5 Advancement and Graduation Requirements by Degree (see chart)

All students must fulfill the credit pattern as specified in the chart, and the course, seminar, research report, senior paper, or honours thesis requirements of the major, advanced major or honours department(s). For joint degrees, students submit a research report, senior paper, or honours thesis in science A.

Candidates who fail to meet the requirements for the degrees for which they have applied may be eligible for other degrees, provided those degree requirements are met. Exceptions to these requirements need the approval of the dean and the department chair.

7.1.2 Subjects Available

<table>
<thead>
<tr>
<th>Code</th>
<th>Subject</th>
<th>B.Sc. Major</th>
<th>B.Sc. Advanced Major</th>
<th>B.Sc. Joint Advanced Major (See chart 7.1.6)</th>
<th>B.Sc. Honours</th>
<th>B.Sc. Joint Honours (See chart 7.1.7)</th>
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<tbody>
<tr>
<td>AQUA</td>
<td>Aquatic Resources</td>
<td>See note*</td>
<td>See note*</td>
<td>—</td>
<td>—</td>
<td>—</td>
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<tr>
<td>HLTH</td>
<td>Health</td>
<td>E</td>
<td>E</td>
<td>E</td>
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<td>E</td>
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<tr>
<td>HKIN</td>
<td>Human Kinetics</td>
<td>—</td>
<td>A, B, E</td>
<td>—</td>
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</tbody>
</table>

* Note The Aquatic Resources program is available with biology, Earth sciences or mathematics/statistics.

**Of science A, B, and C, only one may be economics or psychology.
### 7.1.3 Credit Patterns for Degree Options and Diploma

<table>
<thead>
<tr>
<th>Bachelor of Science (see notes 1-3)</th>
<th>Science A</th>
<th>Science B</th>
<th>Science C</th>
<th>Arts X</th>
<th>Arts Y</th>
<th>Other Req</th>
<th>Approved Elec</th>
<th>Elec</th>
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<td>6 credits</td>
<td>12 credits</td>
<td>6 credits</td>
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<td>18</td>
<td>30 credits</td>
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<td>6</td>
<td>24</td>
<td>6</td>
<td>—</td>
<td>18</td>
<td>18</td>
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<td>B.Sc. Major with science minor, see notes 8 and 10</td>
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<td>24</td>
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<td>—</td>
<td>6</td>
<td>30</td>
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<td>B.Sc. Advanced Major</td>
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<td>6</td>
<td>12</td>
<td>6</td>
<td>—</td>
<td>18</td>
<td>24</td>
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<td>B.Sc. Advanced Major with BSAD, see notes 1, 11 and 13</td>
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<td>6</td>
<td>12</td>
<td>6</td>
<td>BSAD 30</td>
<td>ECON 6</td>
<td>9 plus CSCI 3</td>
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<td>B.Sc. Advanced Major with arts minor, see notes 7 and 11</td>
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<td>12</td>
<td>6</td>
<td>24</td>
<td>6</td>
<td>—</td>
<td>18</td>
<td>12</td>
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<tr>
<td>B.Sc. Advanced Major with science minor, see notes 8 and 11</td>
<td>42</td>
<td>24</td>
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<td>12</td>
<td>6</td>
<td>—</td>
<td>6</td>
<td>24</td>
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<tr>
<td>B.Sc. Joint Advanced Major</td>
<td>42</td>
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<td>—</td>
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<td>B.Sc. Honours</td>
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<td>12</td>
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<td>B.Sc. Honours with minor in arts, see note 12</td>
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<td>—</td>
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<tr>
<td>B.Sc. Honours with minor in science, see note 12</td>
<td>60</td>
<td>24</td>
<td>6</td>
<td>12</td>
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<td>—</td>
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<tr>
<td>B.Sc. Joint Honours</td>
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<tr>
<th>Bachelor of Arts and Science</th>
<th>Core</th>
<th>Concentration 1</th>
<th>Concentration 2</th>
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<th>Elec</th>
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<td>BASc Honours</td>
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<tr>
<th>Human Kinetics</th>
<th>HKin Req</th>
<th>HKin Elec</th>
<th>Statistics</th>
<th>Science A</th>
<th>Science B</th>
<th>Arts X</th>
<th>Arts Y</th>
<th>Approved Elec</th>
<th>Elec</th>
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<td>36</td>
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<td>12</td>
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<td>B.Sc. HKIN Major Pre-Education</td>
<td>48</td>
<td>12</td>
<td>—</td>
<td>24, see Note 5</td>
<td>6</td>
<td>12</td>
<td>6</td>
<td>6</td>
<td>6</td>
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<tr>
<td>B.Sc. HKIN Advanced Major or Honours Kinesiology, see note 4</td>
<td>39</td>
<td>18</td>
<td>3</td>
<td>24</td>
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<td>12</td>
<td>6</td>
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<td>6</td>
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<tr>
<td>B.Sc. HKIN Advanced Major or Honours Pre-Education</td>
<td>54</td>
<td>3</td>
<td>3</td>
<td>24, see Note 5</td>
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<tr>
<th>Human Nutrition (see note 6)</th>
<th>HNU Req</th>
<th>HNU Elec</th>
<th>BIOL</th>
<th>BSAD</th>
<th>CHEM</th>
<th>STAT</th>
<th>Humanities</th>
<th>Social Science</th>
<th>Elec</th>
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<td>3</td>
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<td>B.Sc. HNU Advanced Major</td>
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<td>6 (or 12)</td>
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<td>3</td>
<td>12 (or 6)</td>
<td>6 (or 12)</td>
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<th>ENGL</th>
<th>STAT</th>
<th>CHEM</th>
<th>HNU</th>
<th>PHIL/RELS</th>
<th>PSYC</th>
<th>Elec</th>
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<td>B.Sc. Nursing for LPNs</td>
<td>63</td>
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<tr>
<td>B.Sc. Nursing for RNs</td>
<td>42, see note 9</td>
<td>12</td>
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<tr>
<th>Engineering</th>
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<tr>
<td>Diploma in Engineering</td>
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**Note 1** Of science A, B and C, one must be mathematics/statistics, and six credits must be calculus. In the B.Sc. Advanced Major in Science with Business Administration, either science A or B must be mathematics/statistics and must include six credits of calculus.

**Note 2** With permission of the chair of the department of the student’s major, courses from other science departments may be used to satisfy major, advanced major or honours program requirements: up to 6 credits for the major; up to 12 credits for the advanced major; joint advanced major, or the advanced major with business administration; up to 18 credits for the honours; up to 12 credits for the joint honours.

**Note 3** Students may use up to 30 credits of courses from professional programs (business administration, information systems, engineering, human kinetics, human nutrition, nursing) as open or approved electives.

**Note 4** For students pursuing the nutrition minor, there are 15 credits fewer human kinetics electives and 15 credits of additional science requirements. For students pursuing the health sciences minor, the 30 credits of science A and B are a combination of courses from biology, chemistry, and physics. See section 9.22.

**Note 5** For students pursuing the secondary teaching stream option, a minimum of 24 credits must be in one of the subject fields taught in Nova Scotia schools. For those intending the elementary teaching stream, science A becomes 18 credits and the approved electives become 12 credits.

**Note 6** The 12 credits art subject in all human nutrition programs must constitute a pair. See the glossary for definitions of pair, humanities and social sciences.

**Note 7** Available minors in arts are anthropology, art history, studio art, Catholic studies, Celtic studies, climate and environment, development studies, economics, English, French, history, music, philosophy, political science, psychology, public policy and governance, religious studies, sociology, Spanish, women’s and gender studies.

**Note 8** Available minors in science are biology, chemistry, climate and environment, computer science, Earth sciences, mathematics, and physics.

**Note 9** Includes 12 credits of humanities requirement: NURS 300 and NURS 330.

**Note 10** The degree awarded is Bachelor of Science with Major.

**Note 11** The degree awarded is Bachelor of Science with Advanced Major.

**Note 12** The degree awarded is Bachelor of Science with Honours.

**Note 13** Science A can be biology, chemistry, computer science, Earth sciences, mathematics/statistics, or physics.
### 7.1.5 Advancement and Graduation Requirements by Degree

<table>
<thead>
<tr>
<th>Degree</th>
<th>Admission End of Second Year</th>
<th>Advancement End of Third to Fourth Year</th>
<th>Graduation and Four-Year Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.Sc. Major</td>
<td>—</td>
<td>average 70 in Science A</td>
<td>average 70; average 70 in Science A</td>
</tr>
<tr>
<td>B.Sc. Advanced Major</td>
<td>average 65 in each of first two years; grade of 65 in each course in Science A</td>
<td>average 70; average 70 in Science A</td>
<td>average 70; average 70 in Science A</td>
</tr>
<tr>
<td>B.Sc. Joint Advanced Major</td>
<td>average 65 in each of first two years; grade of 65 in each course in Science A and B</td>
<td>average 70; average 70 in Science B</td>
<td>average 70; average 70 in Science B</td>
</tr>
<tr>
<td>B.Sc. Advanced Major with Science and Business Administration, see note 1</td>
<td>average 65 in each of first two years; grade of 65 in each course in Science A</td>
<td>average 70; average 70 in Science A</td>
<td>average 70; average 70 in Science A</td>
</tr>
<tr>
<td>B.Sc. Honours</td>
<td>average 75 in each of first two years; average 75 in Science A courses completed during the first two years; grade of 70 in each course in Science A</td>
<td>average 75; average 75 in Science A courses; grade of 70 in each course in Science A</td>
<td>average 75; average 75 in Science A courses; grade of 70 in each course in Science A and B</td>
</tr>
<tr>
<td>B.Sc. Joint Honours</td>
<td>average 75 in each of first two years; average 75 in Science A courses; grade of 70 in each course in Science A and B</td>
<td>average 75; average 75 in Science A courses; grade of 70 in each course in Science A and B</td>
<td>average 75; average 75 in Science A courses; grade of 70 in each course in Science A and B</td>
</tr>
<tr>
<td>B.Sc. Human Kinetics</td>
<td>—</td>
<td>—</td>
<td>average 55</td>
</tr>
<tr>
<td>B.Sc. Human Kinetics with Advanced Major</td>
<td>average 65 in each of first two years; grade of 65 in each HKIN course</td>
<td>average 70; average 70 in HKIN courses</td>
<td>average 70; average 70 in HKIN courses</td>
</tr>
<tr>
<td>B.Sc. Human Kinetics with Honours</td>
<td>average 75 in each of first two years; average 75 in HKIN courses completed during the first two years; grade of 70 in each HKIN course</td>
<td>average 75; average 75 in HKIN courses; grade of 70 in each HKIN course</td>
<td>average 75; average 75 in HKIN courses; grade of 70 in each HKIN course</td>
</tr>
<tr>
<td>B.Sc. Human Nutrition</td>
<td>—</td>
<td>—</td>
<td>average 55</td>
</tr>
<tr>
<td>B.Sc. Human Nutrition with Advanced Major</td>
<td>average 65 in each of first two years; combined average 65 in HNU and science courses in first year; grade of 65 in each HNU course</td>
<td>average 70; average 70 in HNU courses</td>
<td>average 70; average 70 in HNU courses</td>
</tr>
<tr>
<td>B.Sc. Human Nutrition with Honours</td>
<td>average 75 in each of first two years; combined average 75 in HNU and science courses in first year; average 75 in HNU courses in first two years; grade of 70 in each HNU course</td>
<td>average 75; average 75 in HNU courses; grade of 70 in each HNU course</td>
<td>average 75; average 75 in HNU courses; grade of 70 in each HNU course</td>
</tr>
<tr>
<td>B. Sc. Nursing</td>
<td>Successful completion of all mandatory courses; in first year, 65 average in core courses (B IOL 115, 151, 152, EN GL 111, STAT 101); in second year, minimum grade of 65 in nursing courses; pass for all clinical practice portions of courses</td>
<td>Successful completion of all mandatory courses; minimum grade of 65 in nursing courses; pass for all clinical practice portions of courses</td>
<td>minimum grade of 65 in nursing courses; pass for all clinical practice portions of courses</td>
</tr>
<tr>
<td>B.Sc. Nursing with Advanced Major</td>
<td>average 80 in each of first two years; grade of 75 in each NURS course; no nursing practice alert in second year</td>
<td>average 80; grade of 75 in each NURS course; no nursing practice alert</td>
<td>average 80; grade of 75 in each NURS course; no nursing practice alert</td>
</tr>
<tr>
<td>B.Sc. Nursing with Honours (requirements under review)</td>
<td>average 75 in each of the first two years; average 75 in NURS courses completed during the first two years; grade of 70 in each NURS course; no nursing practice alert in second year</td>
<td>average 75; average 75 in NURS courses; grade of 70 in each NURS course; no nursing practice alert</td>
<td>average 75; average 75 in NURS courses; grade of 70 in each NURS course; no nursing practice alert</td>
</tr>
<tr>
<td>B.Sc. Nursing for Registered Nurses</td>
<td>grade of 60 in each NURS course</td>
<td>—</td>
<td>grade of 60 in each NURS course</td>
</tr>
<tr>
<td>BASc Major</td>
<td>—</td>
<td>—</td>
<td>average 55</td>
</tr>
<tr>
<td>BASc Honours</td>
<td>average 75 in each of the first two years; average 75 in core and primary concentration courses completed during first two years; grade of 70 in each core and primary concentration course.</td>
<td>average 75; average 75 in core and primary concentration courses; grade of 70 in each core and primary concentration course.</td>
<td>average 75; average 75 in core and primary concentration courses; grade of 70 in each core and primary concentration course.</td>
</tr>
<tr>
<td>Diploma in Engineering</td>
<td>average 60 to advance to second year</td>
<td>—</td>
<td>average 60 over length of program</td>
</tr>
</tbody>
</table>

Note 1 The degree awarded is Bachelor of Science with Advanced Major.

### 7.1.6 Bachelor of Science with Joint Advanced Major

It is possible to pursue an advanced major program, which involves combined study of two science subjects; where Y = yes, possible:

| with BIOL CHEM CSCI ECON ESCI HKIN MATH PHYS |
|------|--------|--------|--------|--------|--------|--------|--------|
| BIOL | —      | Y      | Y      | Y      | Y      | Y      | Y      |
| CHEM | Y      | —      | Y      | Y      | Y      | —      | Y      |
| CSCI | Y      | Y      | —      | Y      | Y      | —      | Y      |
| ECON | Y      | Y      | Y      | —      | Y      | —      | Y      |
| ESCI | Y      | —      | Y      | Y      | Y      | —      | Y      |
| HKIN | Y      | —      | —      | —      | —      | —      | —      |
| MATH | Y      | —      | —      | —      | —      | —      | —      |
| PHYS | Y      | Y      | Y      | Y      | Y      | —      | —      |

### 7.1.7 Bachelor of Science with Joint Honours

It is possible to pursue an honours program which involves combined study of two science subjects; where Y = yes, possible:

| with BIOL CHEM CSCI ECON ESCI MATH PHYS PSYC |
|------|--------|--------|--------|--------|--------|--------|--------|
| BIOL | —      | Y      | Y      | Y      | Y      | Y      | Y      |
| CHEM | Y      | —      | Y      | Y      | Y      | —      | Y      |
| CSCI | Y      | —      | Y      | Y      | Y      | Y      | —      |
| ECON | Y      | Y      | —      | Y      | Y      | —      | Y      |
| ESCI | Y      | Y      | Y      | Y      | Y      | Y      | —      |
| MATH | Y      | Y      | Y      | Y      | Y      | Y      | —      |
| PHYS | Y      | Y      | Y      | Y      | Y      | Y      | —      |
| PSYC | Y      | —      | —      | —      | —      | —      | —      |
7.1.8 Co-operative Education Program in Science
A form of work-integrated learning, Co-op Education is a model of education that integrates academic study with related and supervised co-op work experience (12-16 months) with an employer partner in industry, government and not-for-profit across Canada. Students enrolled in biology, climate & environment, computer science, health, human nutrition, or mathematics are eligible to apply. The biology, computer science, and human nutrition co-op programs are accredited by the Co-operative Education & Work-Integrated Learning Canada (CEWIL Canada). COOP 405 (3 credits) can be used as a major subject elective or as an approved or open elective. See section 9.13 for further information.

7.2 ENGINEERING
The Bachelor of Engineering (B.Eng.) program in Nova Scotia is either a two-year diploma program at any of the associated universities followed by two years of study at Dalhousie University in Halifax, or a four-year program at Dalhousie University.

The StFX Engineering Diploma consists of 69 credits normally taken over two academic years. During the second term of the first year, students apply for conditional acceptance into one of the following engineering programs at Dalhousie University: chemical, civil, electrical, environmental, industrial, mechanical, or mineral resource engineering. Conditional acceptance into a program allows the student to choose the appropriate courses to take in the second year of the diploma program at StFX.

Dalhousie and the associated universities form a unified system of engineering education. Therefore, all diploma graduates from the associated universities are guaranteed admission to the Faculty of Engineering at Dalhousie University. However, it is not possible for Dalhousie to guarantee that students will gain entry to the program of first choice, since all programs are subject to a maximum number of admissions. Thus, in the second half of the first year, students are required to specify their choices of programs, in preferential order. The Dalhousie Faculty of Engineering notifies the chair of the StFX department of engineering of conditional admission to specific programs. The notification is normally sent in June. Placement of students into programs is based on academic performance. StFX, along with the other associated universities, has a formal Memorandum of Understanding (MOU) with Dalhousie University that addresses admissions. Article 4.0/1 of the MOU states that "The Faculty of Engineering at Dalhousie University will treat students from the Associated University programs on an equal basis with students who entered the program as freshmen at Dalhousie University. Academic merit will be the only deciding factor on admission to disciplines." Students who do not gain entrance to their preferred programs or do not wish to continue their studies at Dalhousie University may apply to an engineering program at any other institution and transfer the credits earned.

Students who transfer to the StFX diploma program from other universities must obtain at least 36 credits taken at SIFX in order to receive a diploma from SIFX. Students cannot normally use a distance or online course to satisfy the requirement of an engineering science course. An engineering science or design course may apply to their preferred programs or do not wish to continue their studies at Dalhousie University.

7.2.1 Bachelor of Science with a Diploma in Engineering
Students who wish to earn the engineering diploma and a B. Sc. degree can do so concurrently. This option exists for a major in biology, chemistry, computer science, Earth sciences, mathematics and physics. Students can also complete a diploma in engineering concurrently with an advanced major. Contact academic advising for available options.

7.3 BACHELOR OF ARTS AND SCIENCE
The Bachelor of Arts and Science (BASc) is designed to expose students to both Arts and Science knowledge that inform a particular topic. Since many contemporary topics and issues are better understood through thorough engagement with both scientific and humanistic contributions, the degree is structured so that students engage with as many relevant disciplinary contributions as possible. Students completing Bachelor of Arts and Science programs will complete interdisciplinary core courses pertaining to their subject of study as well as science, arts, and humanities requirements.

Currently, StFX offers a Bachelor of Arts and Science in Health and in Climate and Environment. Both programs are direct-entry. This degree program is not intended as a compromise for students who cannot decide between an arts and science degree. This degree is rather for students with specific topical interests that are better served by interdisciplinary study.

7.3.1 Climate and Environment
The program was carefully designed to provide students with maximum exposure to knowledge that will contribute directly to their understanding of climate and environmental topics while maintaining a liberal arts approach that encourages commitment to broad critical and scientific inquiry, logical rigour, and creative problem-solving. Students will complete courses across the faculties of arts and science to gain a broad yet inclusive education in both climate and environment. This approach reflects the complexity of addressing climate and environment issues currently facing our planet. Global initiatives in tackling human and environmental issues highlight the need for an interdisciplinary approach, recognizing that solutions will only be found through integrated scientific, socio-political, and economic inquiry.

7.3.2 Health
The program aims to provide students with a contemporary education in health by drawing on knowledge from the natural sciences, social sciences, and humanities to engage students in nuanced and considered discussions about how we think about health, how we approach health, how we create health, what biases contribute to our understanding of health, and how health is interwoven into all aspects of our individual and collective lives. Students will gain a better understanding of the ways in which human health is determined and defined, by emphasizing what biology, chemistry, the social sciences, history, and other disciplinary fields of study contribute to an integrative understanding of health. Students will complete concentrations in biomedical, social determinants and health equity, as well as a humanities requirement.

7.4 POSSIBLE PATHWAYS IN THE SCIENCES

7.4.1 Architectural Studies
In association with Dalhousie University, StFX offers the first two years of a minimum of four calendar years of study leading to a Bachelor of Environmental Design Studies.

A student who has successfully completed two years in a BA, BBA, B.Sc. or engineering program may apply to enter the third year at Dalhousie University School of Architecture. Some mathematical facility is required and credit should be gained at StFX for at least six credits in statistics and/or calculus. For requirements, interested students are encouraged to contact the School of Architecture, Dalhousie University.

7.4.2 Pre-Medical Studies
The field of medical studies has been evolving over the last few years. Most medical schools do not have specific course requirements. While familiarity in the natural sciences will help a student succeed in medical school, pathways to enter medical school are diverse. Students may enter medical school, for instance, with a BA, B.Sc., or a BAsc. Students should elect to complete a broad, yet structured and rigorous academic degree. Often, medical school admissions committees look for a student that not only excels academically, but also contributes to societal wellbeing through volunteering, and engagement in a variety of social situations. It is important for students to demonstrate, through their experiences in both their academic and personal lives, professionalism, ethical behaviour, excellent communication skills, and empathy.

In 2015, the Medical College Admissions Tests (MCAT) were revised to require student familiarity in a broad array of disciplines. To prepare for the MCATs, students may want to complete the following courses: general biology, general chemistry, organic chemistry, biochemistry, physics, introductory psychology, and introductory sociology. Beyond these courses, their education should include a broad study in the physical, life and social sciences, and the humanities.

7.4.3 Pre-Dental Studies
Admission to the four-year Dalhousie Doctor of Dental Surgery program requires the completion of a minimum of 10 full-year academic classes at the undergraduate level. These classes will normally be completed by May 1 of the year of expected entry to the Faculty of Dentistry. Two-term academic classes in the same discipline are considered equal to one full-year academic class. Academic requirements:

- a) One full-year academic class in each of biology, general chemistry, physics, organic chemistry. (Each of these courses must include laboratory instruction.)
- b) Two full-year academic courses (or four one-term courses) chosen from the humanities and/or social sciences.
- c) One full-year (or two one-term) writing course, English.
- d) One full-year university course (or two one-term courses) in vertebrate physiology and one university course (full-year or one-term) in each of introductory biochemistry and introductory microbiology. These courses should be at the second-year level or higher and applicants are encouraged to contact the Faculty of Dentistry for approval of selected courses.

7.4.4 Pre-Veterinary Studies
The Atlantic Veterinary College is located at the University of Prince Edward Island. Applicants are required to complete prerequisite courses and supply official
7.4.5 Graduate Studies
Students with an excellent academic record may be interested in moving on to a master's degree. There are many graduate programs to choose from regionally, nationally, and internationally. Faculty are well poised to give advice on potential graduate schools and programs. Students who are interested in pursuing a master's degree at SFX should refer to chapter 8.

7.4.6 Education and Teaching
Students interested in moving into the field of education and becoming a teacher. SFX offers a Bachelor of Education degree and students majoring in sciences may pursue teaching specializations in sciences, mathematics, physical education and family studies. Science students may also pursue additional teaching areas in departments in the arts. An option also exists for a degree in elementary education. See chapter 6 for additional information.

8. GRADUATE STUDIES
8.1 Master of Arts and Master of Science
8.2 Master of Applied Science
8.3 Master of Adult Education
8.4 Master of Education
8.5 Ph.D. in Educational Studies
8.6 Regulations

Graduate Studies is under the direction of the Associate Vice-President Research and Graduate Studies who is advised by the committee on graduate studies. Courses of study leading to the following graduate degrees are currently offered:

- Master of Arts
  - Master of Science
  - Master of Applied Science
  - Master of Adult Education
  - Ph.D. in Educational Studies

For fee information, see http://sites.stfx.ca/financial_services/StudentAccounts

8.1 MASTER OF ARTS AND MASTER OF SCIENCE
8.1.1 Admission Requirements and Procedures
Minimum admission requirements are:

- a bachelor's degree with the equivalent of an undergraduate major (36 credits) normally in the same field of study;
- an overall average of 70 (B) or higher in the bachelor's program.

Admission to these programs is based on the following factors:

- The university must be able to provide a program of study and research prescribed for the degree program.
- Design a learning program that includes:
  i) a comprehensive reading list;
  ii) a professional portfolio;
  iii) a comprehensive reading list; and
  iv) a critical review of relevant literature;
- Students must complete and submit an academic thesis to demonstrate that the learning objectives of the program have been achieved;
- Candidates must satisfy degree requirements as determined by the candidate's supervisory committee and approved by the department chair.

8.2 MASTER OF APPLIED SCIENCE
8.2.1 Admissions Procedures
Minimum requirements are:

- a bachelor's degree with the equivalent of an undergraduate major (36 credits) normally in the same field of study;
- an overall average of 70 (B) or higher in the bachelor's program.

8.2.2 Program Requirements

- a minimum residence of 12 months.
- Students must earn a total of 36 credits.
- Candidates must satisfy degree requirements as determined by the program.

8.3 MASTER OF ADULT EDUCATION
The M.Ad.Ed. program is with the exception of the residential institute, a distance-learning program. This program provides an effective learning experience for professional adult educators. Candidates come from a wide variety of career areas such as literacy, health education, higher education, vocational education, human resources training and development, community development, and educational technology.

8.3.1 Admissions Procedures
For admission to the M.Ad.Ed. program, applicants must:

- have completed an appropriate bachelor's degree with an overall average of 70 (B) or higher; and
- have post-baccalaureate experience in work relating to adult education.

Applications with an incomplete undergraduate degree who have significant practitioner experience in adult education/community development, may be considered for admission if they provide evidence of:

- a teaching license equivalent to a Nova Scotia Initial Certificate or been employed in a teaching capacity for at least five years in a school of nursing or a post-secondary institution and/or experience working with adults in an educational setting for at least five years.

Applications for admission should be sent to the university admissions office. This program has continuous intake; there is no admission deadline. Upon acceptance to the M.Ad.Ed. program, candidates are assigned to begin their studies in one of the foundations institutes which are held in the spring and summer.

8.3.2 Program Requirements
Students must earn a total of 36 credits in graduate work. Students may not use courses taken elsewhere toward the M.Ad.Ed. degree.

The program requires completion of ADED 505 during the three-week residential institute; completion of ADED 510 in year 1; completion of ADED 520 in year 2; completion of ADED 530 and ADED 600/601 in year 3. There are two routes by which a student may complete the requirements for the M.Ad.Ed.: a synthesizing examination route or a thesis route.

For successful completion of the degree, candidates must demonstrate a comprehensive knowledge of the area of study and an understanding of the principles and practices of adult education. To fulfill these requirements candidates must:

- design a learning program that includes
  i) a comprehensive list of readings;
  ii) a critical review of relevant literature;
- plan, complete, present, and defend a research project and synthesizing examination or complete and submit an academic thesis to demonstrate that the learning objectives of the program have been achieved;
- candidates must satisfy degree requirements as determined by the candidate's supervisory committee and approved by the department chair.

Graduating students should note that a final copy of the successful thesis must be approved and all grades submitted, no later than April 15 for Spring Convocation and November 15 for Fall Convocation.
8.4 MASTER OF EDUCATION

8.4.1 Admission Requirements and Procedures
The deadline for application to the M.Ed. program is normally February 15, with courses beginning in July of the same year. Students are responsible for checking with the admissions office to make sure their application is complete, as only completed applications will be considered.

Admission to the M.Ed. program is competitive and based on:

a) completion of a B.Ed. degree or its equivalent, with an overall average of at least 70;
b) at least two years of teaching experience prior to enrolment in the first graduate course.

Graduates who do not possess a B.Ed. degree will normally be considered when they have:
a) gained a teaching license equivalent to a Nova Scotia Initial Certificate (TC5) or been employed in a teaching capacity for at least two years in a professional school or a post-secondary institution;
b) met all other conditions.

Meeting the minimum admission requirements does not ensure acceptance into the program. Admission decisions are final.

8.4.2 Program Requirements
StFX offers the M.Ed. degree with a specialization either in educational administration and policy or in curriculum and instruction. In both streams, students must complete the specified core courses and six elective courses.

There are two options by which a student may complete the requirements for the M.Ed.: a thesis route and a course-based route; see section 9.17. Students who choose the thesis route must complete 24 credits in graduate education courses and a thesis worth 12 credits. Those in the course-based route must complete 36 credits in graduate education courses.

This degree fulfills the requirements of the Nova Scotia Department of Education and Early Childhood Development for an increase in level of teacher certification. Graduate courses which may be taken for credit towards an M.Ed. degree are listed in section 9.17.

8.5 PH.D. IN EDUCATIONAL STUDIES
The Ph.D. in Educational Studies is offered in partnership by St. Francis Xavier University, Mount Saint Vincent University, and Acadia University. This research-oriented doctoral program is jointly administered by the Inter-University Doctoral Administrative Committee (IDAC). Applicants are admitted to one university and graduate from that home institution of record.

Doctoral students can focus their studies on one or more of six interrelated themes: curriculum studies, educational foundations and leadership, inclusive education, lifelong learning, literacies, and the psychological aspects of education. Regulations for students enrolled in the Interuniversity Ph.D. in Educational Studies are determined jointly by the partner institutions. Additional information is available at http://www.nspheducation.ca/en/home/default.aspx

8.5.1 Admission Requirements and Procedures
Applicants are encouraged to review the research interests of education faculty members at all three participating universities, available at their respective websites. An average of 14 students will be admitted each year: six at MSVU, four at SIFX, and four at Acadia. The IDAC may consider applicants on a case-by-case basis and waive the fixed application date, if deemed warranted and if space is available in the program for that year.

Minimum admission requirements are:

a) A master's level degree from a recognized university in education or in a related field of study (a cognate discipline);
b) Normally, a graduate thesis in a field related to the proposed doctoral studies. Those applicants who have not completed a thesis are required to submit evidence of their ability to undertake research in education through the completion of a qualifying research paper of sufficient depth and scope to reflect their research competence;
c) Evidence of scholarly preparation to conduct research, normally including graduate level courses in quantitative and/or qualitative research methods and design;
d) Three letters of reference, normally including two academic and one professional;
e) A recent curriculum vitae indicating current initiatives in education and any academic, scholarly work to date;
f) A letter of intent indicating a proposed area of study from among the six interrelated themes of educational studies;
g) A minimum of A- or 80% average in his or her highest degree.

Qualified applicants will only be admitted if a suitable supervisor and program can be provided. To achieve success in this doctoral program, applicants must demonstrate strong reading, writing and comprehension skills in the English language.

The application package is available from the doctoral program office in the faculty of education and online at the Inter-University Ph.D. website www.educationphd.ns.ca

a) Applicants apply for their institution of choice (Acadia, MSVU or SIFX) through the doctoral program office by November 15 for July 1 entry;
b) The IDAC will review all applications and, by majority agreement, recommend acceptance of applicants to the participating institutions;
c) The SIFX admissions office will inform the applicant, in writing after March 1, regarding the decision of the IDAC. SIFX becomes the institution of record for all doctoral students formally admitted to SIFX.
d) In addition to specific doctoral program requirements and regulations, StFX students are bound by the regulations and procedures pertaining to graduate studies at StFX.
e) Each dissertation supervisor will arrange for an entry meeting for his/her student(s) to develop a preliminary program plan and an initial outline of the proposed research area. This preliminary plan will be submitted in writing to the IDAC for approval (within a time frame specified by the IDAC), through the Doctoral Program Co-ordinator. Normally, this plan is completed before the July 1 start date.

8.5.2 Program Requirements
Students must complete EDUC 9001-9005 and 9010 during four consecutive semesters (14-month residency). Students normally defend their dissertation within two years after the portfolio examination, but no later than six years after entering the doctoral program, unless an extension has been granted. Students must register in a minimum of one course per year. Active students in the program are considered full-time throughout the program.

Students enrol in EDUC 9001 and 9002 on site in July at one of the three universities. The site for these two courses will rotate amongst the three universities from year-to-year. Students complete EDUC 9010 and 9100 with their dissertation advisor and their committee at their home institution of record. The remaining courses are delivered using an e-learning platform. In some instances, doctoral students may arrange to enrol in an existing topic-related Master level course, augmented with doctoral level analysis and applications. Doctoral students have the right to take courses and seminars and use the academic facilities of any of the three participating universities in accordance with their approved plan of study.

The required courses are: 9001; 9002; 9003; 9004; 9005; 9010, and 9100. At the time of admission, students will be advised if they are required, and they may choose, to complete (in consultation with pro-tem advisor and with approval from IDAC): EDUC 9006, 9007, 9008, and 9009. See section 9.17.3 for course information.

8.6 REGULATIONS
Students are expected to be familiar with all university and department regulations. See chapter 3 and the relevant department in chapter 9.

8.6.1 Program Types and Fees
Graduate programs at StFX are classified as:

a) Flat-fee programs: Students pay a flat fee for their program (based on an expected time to completion). The fee is charged once at the beginning of the program, and is paid in instalments at designated intervals. Flat-fee programs at SIFX currently include the Masters of Arts, Masters of Science and the Ph.D. in Educational Studies.
b) Per credit fee programs: Students pay fees based on the number of credits in which they are enrolled in a given semester. The Master of Applied Science, Master of Adult Education, Master in Education are per-credit fee programs.

8.6.2 Residency, Expected Time to Completion, Maximum Time to Completion
Each graduate program at SIFX has a defined minimum residency, and defined expected and maximum times to completion. The residency period is the length of time during which the student is expected to be on campus working full-time toward the completion of program requirements. These timeframes are outlined in the following table:
of 60 in each course and must maintain an average of 70 throughout the program. Students who fail any course or do not maintain the required average will receive notification from the Registrar’s Office that they have been placed on probation. A student who subsequently fails a second course or does not achieve a program average of 70 will be dismissed; in progress courses will be dropped (with DC entered on the transcript) and refund rules applied.

For Master of Arts or Master of Science students, evaluation of in-progress thesis work is carried out through the annual review process and the completion of the annual progress report form (See “Forms” section of the Graduate Studies website). A student whose thesis progress is rated as ‘not acceptable’ following the annual review may be subject to dismissal.

Notification of dismissal will be sent to the student (copied to the appropriate Dean and Graduate Student Coordinator/Chair) by the Registrar’s Office.

A student may elect to appeal a dismissal to the Committee on Graduate Studies. To submit an appeal, students follow the steps described in Sections 3.12 and 3.13 of the Academic Calendar, as applicable to graduate students. The appeal must be received by the AVPRGS, as Chair of the COGS, within three weeks of receiving notification of dismissal.

If a student believes that the work is not proceeding satisfactorily for reasons outside of his/her control, the student may make representation to his/her Supervisory Committee, the department Chair, the Dean, and if the matter remains unresolved, to the Chair of the Committee on Graduate Studies.

### 8.6.7 Extension

Students who have not completed their program requirements by the maximum time to completion (see section 8.6.2) may apply to the AVPRGS for a maximum one-year program extension.

An application for an extension will normally be submitted at least two months before the maximum time to completion. Extensions are deliberated on a case-by-case basis. They require a plan to outline how the program requirements will be completed in the extension year. If an extension is denied, no further registration or reinstatement will be permitted.

If the extension is approved, students who are using the extension to complete a thesis will be charged an extension fee (the equivalent of 6-credit tuition) for the extension period. Students who are not completing a thesis, but are using the extension period to complete course-work, will pay tuition at course enrolment. A student who does not complete the degree requirements by the end of the extension period will be declared inactive and removed from the program. Students on extension are normally considered part-time.

### 8.6.8 Inactive Status

Students who have not met the requirements for graduation by the maximum time for completion are automatically designated inactive unless they have applied for and been granted an extension. Inactive students lose their rights and privileges as SFx students.

Once designated inactive, students must reapply for admission and are subject to all rules and procedures for new admissions. Students on approved leaves of absence are temporarily designated inactive; they need not reapply for admission at the end of the leave.

### 8.6.9 Leaves of Absence

Circumstances can lead to situations in which graduate students are obliged to step away from their study. A leave of absence may be granted for a specific length of time, up to a maximum of one year.

Examples of exceptional situations where a leave may be considered include: medical reasons; family duress or unforeseen family responsibilities including parental leave; pursuit of an employment opportunity that makes a positive contribution to the student’s graduate program. Requests for leaves of absence will be reviewed by the appropriate Graduate Studies Coordinator or Chair (and Supervisory Committee when appropriate) and approved by the relevant Dean. Leaves of absence are usually dependent upon students previously showing adequate progress in their program of studies. The request must be supported by documentation explaining the exceptional circumstances that would prevent continuation of the program during the period for which the leave applies. In addition, the request should include a plan for the return to the program.

Once an initial leave of absence has been granted, additional leaves are only possible in extraordinary circumstances and require special approval by the AVPRGS.

Students on leaves of absence are designated inactive, and the academic mentorship of the supervisor and access to laboratories is suspended. Students on leaves are charged a nominal fee of $100, which allows them to maintain a SFx email account.

Time that a student spends on a leave of absence does not count toward the maximum time for completion.

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### Program Minimum Residence

<table>
<thead>
<tr>
<th>Program</th>
<th>Minimum Residence</th>
<th>Expected time to complete</th>
<th>Maximum time to complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA</td>
<td>12 or 18 months*</td>
<td>24 months</td>
<td>5 years</td>
</tr>
<tr>
<td>M.Sc.</td>
<td>12 or 18 months*</td>
<td>24 months</td>
<td>5 years</td>
</tr>
<tr>
<td>M.A.Sc.</td>
<td>12 months</td>
<td>16 months or 2 years</td>
<td>6 years</td>
</tr>
<tr>
<td>M.A.Ed.</td>
<td>N/A</td>
<td>36 months</td>
<td>36 months**</td>
</tr>
<tr>
<td>M.Ed.</td>
<td>N/A</td>
<td>24 months</td>
<td>6 years</td>
</tr>
<tr>
<td>Ph.D. in Educational Studies**</td>
<td>14 months</td>
<td>4 years</td>
<td>6 years</td>
</tr>
</tbody>
</table>

*12 months for candidates holding an honours degree and 18 months for all other candidates.

**See section 8.6.7.

***Regulations for students enrolled in the Inter-university Ph.D. in Educational Studies are determined jointly with the partner institutions. Please consult http://www.nspheducation.ca/en/home/default.aspx for registration and fee information.

### 8.6.5 Full-time and Part-time Status

Students in flat fee programs, such as the MA and M.Sc. programs maintain full-time status for the first 24 months. After the first 24 months, students are automatically classified as part-time until they have reached the maximum time to completion. Students in the M.A.Ed. program maintain part-time status throughout the program. Ph.D. in Educational Studies students are considered full-time students throughout their program.

In exceptional cases and for a limited period of time, MA and M.Sc. students may apply to the AVPRGS to be considered full-time after the first 24 months. In order for full-time status to apply, students must demonstrate all of the following:

a) They are geographically available to campus.
b) They visit the campus regularly.
c) They are not engaged in full-time employment on or off campus.
d) They are engaged in their academic work full-time.

If any of these conditions changes, the student will no longer be considered full-time. The continuation fee for full-time students is the same as the continuation fee for part-time students.

Students in the M.Ed. or M.A.Sc. are considered full-time or part-time based on the number of credits in which they are enrolled in a given period. The full- or part-time status is assessed on a term-by-term basis, so a student can be full-time for part of the year and part-time for the remainder. A student is considered full-time when enrolled in 18 or more credits during the period of September to May. Students are also considered full-time for the given period when registered in six credits for the period May-June or for the period July-August.

### 8.6.6 Academic Standing

To maintain satisfactory standing, graduate students must achieve a passing grade
8.6.10 Graduation
Students are responsible for ensuring that they have registered for convocation by the required date and that they have fulfilled all degree requirements by the requisite deadline. Supervisors must ensure that all grades (including the thesis grade) have been submitted at least one week prior to convocation.

8.6.11 Non-degree Graduate-level Students
Students without previous admission to a degree program may be permitted to register in graduate courses offered in the MA, M.Sc. and M.Ed. programs provided they meet the program’s admission requirements and obtain the approval of the instructor and department chair and notification of the chair of the committee on graduate studies.

Non-degree students taking StFX courses are distinct from non-degree visiting research students. Visiting research students are enrolled at other universities and visit StFX to further their research. See Guide to Graduate Studies for procedures.

A student who has registered in courses in compliance with the previous paragraph and who is later admitted to a degree program without condition, may, upon recommendation of the department chair, be granted advanced standing to a maximum of 6 credits provided they are acceptable as part of the program in which the student is enrolled.

8.6.12 Visiting M.Ed. Students
Normally, only students who have been accepted into the StFX M.Ed. program are eligible to enrol in M.Ed. courses offered by the university. Graduate students in good standing in M.Ed. programs at other universities may also apply to take up to 6 credits of M.Ed. courses at StFX. Such students are encouraged to contact the continuing and distance education office to determine course availability and eligibility. Students should apply for admission as non-degree students with a letter of permission from their home institution.

8.6.13 Transfer Credit
New applicants may request permission to transfer credits (a maximum of six credits) to the MA, M.Sc. or M.Ed. program prior to acceptance.

8.6.14 Letter of Permission
Once registered in the MA, M.Sc. or M.Ed. program, a student may request a letter of permission from the relevant department chair and Dean to complete a maximum of six credits from another university. These credits can be used to fulfill program requirements.

8.6.15 English Language Requirement
See section 1.5.

8.6.16 Thesis Regulations
Master of Adult Education
Students choosing to follow the thesis route are required to prepare a thesis based on original research under the guidance of the chair or faculty advisor. Theses are evaluated by two faculty members of the Department of Adult Education, and an external examiner. A final corrected copy of the successful thesis must be submitted to the supervisory committee for approval within a timeframe established by the examining committee in consultation with the candidate for approval at least two weeks prior to the date of the convocation at which the candidate expects to graduate. The final copy of the thesis based on a research project requiring ethics approval must include a copy of the appropriate certificate of approval. Students are responsible for providing print and electronic copies of the approved thesis to be deposited with the StFX Library and Archives Canada. More details can be found in the ‘Graduate Thesis Submission Guidelines’ on the Graduate Studies website.

Master of Arts, Master of Science
Upon admission to, or registration in, a thesis program, and after consultation with the candidate and with department faculty members, each candidate will be assigned a thesis Supervisory Committee by the Department Chair. This Committee will include the candidate’s thesis advisor and at least one other faculty member, normally chosen from the Department.

Candidates must make a formal presentation of the thesis proposal. The formal presentation is normally made to the faculty of the department for which the thesis is being written, and it is open to members of the Committee on Graduate Studies, other interested faculty members, and graduate students. The Department Chair (and/or the candidate’s thesis supervisor) will ensure that at least two weeks’ notice is given of the date, time, and place of the presentation of the thesis proposal.

After presentation of the proposal, after obtaining the approval of the appropriate ethics committee(s), and on the recommendation of the candidate’s thesis supervisory committee, and the Department Chair or Director of the School, the candidate will be permitted to register in the thesis.

When completed, the thesis is submitted to the Chair of the candidate’s supervisory committee for approval. The thesis is read by at least one other faculty member, designated by the Department Chair. The thesis is also read by an external examiner chosen by the Department Chair after consultation with the candidate’s Supervisory Committee. The external examiner is a faculty member external to the candidate’s Department and may be, as appropriate, external to the University. After consultation with the candidate’s Supervisory Committee, the Department Chair will appoint a thesis examination committee consisting of the external examiner, the candidate’s thesis advisor, and at least one (but no more than three) other members of the Department. (Members of the Supervisory Committee may serve as members of the Examining Committee.) The Chair of Graduate Studies or her/his designate will be a non-voting member of this Committee ex-officio.

The external examiner must submit a report on the thesis to the Chair of the Supervisory Committee and to the Chair of the Committee on Graduate Studies.

A public presentation and defence of the thesis is presented by the candidate after receipt of the external examiner’s report and following the approval of the supervisory committee. Normally, at least two weeks’ notice is given (to the Chair of Graduate Studies) concerning the date, time, and place of the presentation and defence. Immediately following the public presentation, an examination of the candidate is held. Normally, the public presentation and examination will not exceed 120 minutes.

The examining committee will then, in camera, arrive at a unanimous decision, agree on any changes to be made to the thesis, determine who will be responsible for ensuring that these changes are made, and consider whether the student is to be nominated for the Outstanding Graduate Student Research Award. Should the committee not be able to arrive at a decision on the disposition of the thesis, the matter will be referred to the Committee on Graduate Studies.

The decision of the examining committee, along with their names and signatures, will be recorded on the thesis examination form, with a copy retained by the department and a second copy sent to the Chair of Graduate Studies.

A final corrected copy of the successful thesis must be submitted to the supervisory committee for approval within a timeframe established by the examining committee in consultation with the candidate. Students are responsible for providing print and electronic copies of the approved thesis to be deposited with the StFX Library and Archives Canada. Students must also complete and submit the required StFX Thesis Non-exclusive License Form. More details can be found in the ‘Graduate Thesis Submission Guidelines’ on the Graduate Studies website.

8.6.17 Research Ethics Approval
All faculty and student researchers at StFX who wish to carry out research involving human participants, whether on campus or elsewhere, must have their projects approved by the University Research Ethics Board (REB) or one of its department sub-committees. Before such a research project is initiated and before registration in the thesis is permitted, students must obtain REB approval, or must provide a letter signed by their research supervisor and by the chair of the REB, stating that the project does not require REB approval. Research undertaken towards a thesis or research project involving animal use or testing normally requires review and approval by the StFX animal care committee. Researchers must submit electronically a completed application form and any supporting documentation. Researchers must have REB approval prior to beginning the study. The REB operates within the Tri-Council Policy Statement Guidelines; researchers may consult these or the REB website http://www2.mystfx.ca/research-ethics-board/.

8.6.18 Outstanding Graduate Student Research Award
Students who have completed their degree with a master’s thesis of outstanding quality may be considered for an outstanding graduate student research award.

2019-2020 StFX Academic Calendar
9. DEPARTMENTS AND PROGRAMS

9.1 Adult Education
9.2 Anthropology
9.3 Aquatic Resources
9.4 Art
9.5 Biology
9.6 Business Administration
9.7 Catholic Studies
9.8 Celtic Studies
9.9 Chemistry
9.10 Classical Studies
9.11 Climate and Environment
9.12 Computer Science
9.13 Co-operative Education
9.14 Development Studies
9.15 Earth Sciences
9.16 Economics
9.17 Education
9.18 Engineering
9.19 English
9.20 Health
9.21 History
9.22 Human Kinetics
9.23 Human Nutrition
9.24 Interdisciplinary Studies and Service Learning
9.25 Mathematics and Statistics
9.26 Modern Languages
9.27 Music
9.28 Nursing
9.29 Philosophy
9.30 Physics
9.31 Political Science
9.32 Psychology
9.33 Public Policy and Governance
9.34 Religious Studies
9.35 Sociology
9.36 Women and Gender Studies

SFX offers both a master’s degree in adult education (M.Ad.Ed.) and a diploma in adult education (see section 6.7 for Diploma in Adult Education).

Graduate Program
The admission procedures and requirements for the M.Ad.Ed. degree are in chapter 6. Students have three years to complete 36 credits. Further details can be found on the department’s web page: https://sites.sfx.ca/adult_education_graduate_studies/index.html or in section 8.3.

Master of Adult Education Courses

505 Introduction to the Field, Research and Practice
This is an intensive three-week residential institute during which students become familiar with the foundations of, and requirements for, the master’s program. This institute will require intensive reading and writing in a broad range of foundational literature in adult education and learning, as well as the development of a detailed learning plan for completion of the program. Credit will be granted for only one ADED 505 and ADED 500. Six credits.

510 Professional Portfolio and Literature Review
Development and submission of a professional portfolio consisting of learning experiences, accomplishments, and demonstrated professional competencies, supported by documentation. Second, development and submission of a critical review of the literature in the field with an emphasis on the area and aspect of study as seen in the learning plan. Six credits.

520 Practical Research Project
Developing a practical research project to achieve learning intents. This project is typically completed in the student’s place of practice and typically requires approval of the SFX Research Ethics Board. At the end of this phase, the student submits a project report that includes a detailed description of the learning intents, program design, means of implementation, and evaluation of the project. Twelve credits.

530 Learning Program Evaluation
This phase includes a report on the student’s personal and professional learning with reference to the learning plan developed in ADED 505. This reflective report evaluates knowledge gained and changes in practice, and is accompanied by a narrative. Six credits.

Alternate Routes to Graduation
There are two routes by which a student may complete the requirements for the M.Ad.Ed.
1) complete and submit an academic thesis (ADED 600) or
2) complete, present, and defend a project and synthesizing examination which demonstrates that the learning objectives of the program have been achieved (ADED 601).

600 Thesis
The thesis is a scholarly contribution to the field of adult education. Upon completion of the preceding phases of the program, students draft an outline and write a thesis in consultation with their faculty advisor. The thesis provides an opportunity for students to analyze and reflect on their professional project, in light of the relevant adult education literature. The completed thesis is submitted to an external examiner and to the committee on graduate studies for approval. Credit will be granted for only one of ADED 600 or ADED 601. Six credits.

601 Synthesizing Examination
The synthesizing examination is the alternative route to complete the M.Ad.Ed. It follows satisfactory completion of the preceding phases of the program. The synthesizing examination is intended to provide an opportunity for students to reflect on their professional project and bring the relevant literature and student's research project together with the particular reference to practice. The synthesizing examination will be attended by two faculty members of the adult education department. Credit will be granted for only one of ADED 601 or ADED 600. Six credits.

9.2 ANTHROPOLOGY
C. Fawcett, Ph.D.
M. Haller, Ph.D.
L. J. McMillan, Ph.D.
S. Vincent, Ph.D.

Anthropology is the holistic study of human culture and biology in the past and present. Anthropologists teach about human evolution and global archaeology as well as contemporary cultures around the world. The Department of Anthropology offers honours, advanced major or major degrees. Students may select courses to meet their own interests in a general anthropology core area, or may choose to follow suggested patterns in the following core areas: Archaeology, the Anthropology of Development or Indigenous Peoples. These streams are described on the Department of Anthropology’s website. Students not pursuing degrees in anthropology may take a minor, a pair or electives. For general program regulations, see section 4.1.

Minor and Subsidiary
Requirements include 24 credits as follows:

a) ANTH 111 and 112 (6 credits);
b) 3 credits from ANTH 243, 253;
c) 3 credits from ANTH 218, 223, 233, 234;
d) 12 additional credits in ANTH.

Major and Advanced Major
Requirements include 36 credits as follows:

a) ANTH 111 and 112 (6 credits);
b) 3 credits from ANTH 243, 253;
c) 3 credits from ANTH 218, 223, 233, 234;
d) ANTH 303 (3 credits);
e) 3 credits from ANTH 304, 305;
f) 18 additional ANTH credits, 12 of which must be at the 300/400 level;
g) Advanced major students are required to write a senior paper in a 400 level ANTH course.
Honours
Requirements include 60 credits as follows:

a) ANTH 111 and 112 (6 credits);
b) 3 credits from ANTH 243, 253;
c) 3 credits from ANTH 218, 223, 233, 234;
d) ANTH 303, 304 and 305 (9 credits);
e) 33 additional ANTH credits, of which 12 must be at the 300/400 level;
f) ANTH 400 (6 credits).

Social Justice Colloquium
The Social Justice Colloquium is a first-year option for Bachelor of Arts students. Participants are enrolled in dedicated sections of anthropology, global history and women's and gender studies. See section 4.5 for further information.

111 Introduction to Physical Anthropology/Archaeology
Archaeology and physical anthropology provide a unique opportunity to examine the development of human society. With their long temporal depth, we can examine how humans, and their ancestors, evolved and populated the entire globe. The nature of modern archaeological and physical anthropological research including topics of hominid evolution, origins of agriculture, rise of state-level societies and First Nations archaeology will be discussed. Students will have an opportunity to apply this knowledge using real archaeological data. Credit will be granted for only one of ANTH 111 or ANTH 110. Three credits. Offered every year.

112 Introduction to Socio-cultural Anthropology
Socio-cultural anthropology involves the comparative study of societies throughout the world. Students will learn how societies differ from each other, as well as observing similarities among them. The course surveys traditional ways of understanding cultures while incorporating current insights and research. Topics include diverse political and economic systems, kinship patterns, religion, forms of ethnic and gender identity, health and medicine, development and migration. Departmental foci relating to First Nations, development and general anthropology are introduced. Credit will be granted for only one of ANTH 112 or ANTH 110. Three credits. Offered every year.

218 Anthropology of Health and Illness
An examination of global health and illness from an anthropological perspective, this course applies key anthropological concepts to topics such as the meaning of health and illness cross-culturally, cultural construction of the body, medical pluralism, cross-cultural psychiatry, critical medical anthropology and the health of Indigenous peoples in Canada and other parts of the world. Prerequisite: ANTH 110 or ANTH 111/112 or permission of the instructor. Three credits. Offered in 2019-2020 and alternate years.

223 Anthropology of Globalization
Globalization has affected more than the world economy: people, politics and culture all travel globally, with wide-ranging consequences. This course will examine the history of global processes by focusing on how different peoples around the world have engaged in or resisted them. Ethnographic studies will be used to explore global diversity as well as the effects of efforts to impose global uniformity. Cross-listed as DEVS 223. Prerequisite: ANTH 110 or 111/112, or DEVS 201, 202 or permission of the instructor. Three credits.

233 Ethnographic Studies
This course explores the rich cultural diversity of human societies around the globe through an ethnographic lens. Using a variety of ethnographic works, students will analyse how anthropologists have represented this diversity. Course material will include classic and current texts about ‘other’ and ‘own’ societies, the representation of Indigenous peoples, ethnographic film, as well as portrayals of culture in new media. Prerequisite: ANTH 110 or 111/112 or permission of the instructor. Three credits.

234 Introduction to Indigenous Anthropology
The diversity and complexity of contemporary cultural, political and legal Indigenous issues are explored using anthropological methods and theories. Beginning with the historical antecedents of colonial relations and leading to contemporary ethnography, this course assesses the impacts of state policies and legislation on Indigenous treaty rights and livelihoods today. Students will study engaged anthropology and the relationships between the State and Indigenous peoples in areas of Indigenous rights, culture, law, governance, politics, environment, media, social development, gender, and health, and examine potential pathways and strategies toward reconciliation and equity. Credit will be granted for only one of ANTH 234 or ANTH 331. Prerequisite: ANTH 110 or 111/112 or permission of the instructor. Three credits. Next offered 2020-2021.

243 Principles of Archaeology & Prehistoric Societies
This course offers an examination of modern archaeological research including how archaeologists work in the field, their analytical techniques, and some of the principal methodological and theoretical issues facing the discipline. A wide variety of archaeological examples (from lavish Egyptian tombs to simple nomadic settlements) will be used to illustrate the main themes of the course. Students will participate in the process of archaeological research through a series of practical exercises and assignments. Prerequisite: ANTH 110 or 111/112. Three credits. Next offered 2019-2020 and alternate years.

253 Origins of Cities
Urban living is an increasingly common experience for humans across the globe; city life, however, is not a modern phenomenon. This course is a broad introduction to the process of urbanism and the rise of early pre-industrial cities in both the New and Old Worlds. Specific cases are examined in order to elucidate the varying roles cities played in ancient states and how this knowledge can aid in our current understanding of modern urban life. Prerequisite: ANTH 110 or 111/112. Three credits.

303 Anthropological Theory
This course will give students an understanding of past and present trends in anthropological theory. Students will learn about the purpose of theory and the main elements of major theoretical frameworks. There will be an emphasis on how to apply theory to anthropological material. Prerequisites: ANTH 110 or ANTH 111/112 and at least 8 ANTH credits at the 200 level. Three credits. Offered every year.

304 Principles and Methods of Fieldwork
This course introduces students to qualitative field methods used by anthropologists and social scientists. Through lectures, seminars and field assignments, students will participate in a variety of research techniques including digital data gathering, video ethnography, participant observation, archival searches, oral and life histories, interviewing, sampling, mapping and focus group strategies. In addition to practical application of these skills, students will learn about Indigenous research methods, collaborative and ethical research design. Prerequisite: ANTH 110 or ANTH 111/112 or permission of the instructor. Three credits. Offered in 2019-2020 and alternate years.

305 Anthropological Data Analysis
This course introduces students to the basic principles of statistics and quantitative analysis of anthropological data. Through lectures, seminars and lab assignments, students will learn skills such as quantitative research design and methods, data analysis, and computer applications in anthropological research. Prerequisite: ANTH 110 or ANTH 111/112. Three credits.

310 Anthropology of Tourism
Tourism is an important industry as well as a source of identity and meaning for individuals, local groups, and nations. This course examines tourism using a variety of theoretical frameworks. Students analyse various forms of tourism, such as historical tourism, cultural heritage tourism, eco-tourism, ethnic tourism and development tourism. Attention is given to gender, ethnicity, nationalism, class, environmental and economic impact, and the political importance of tourism in a globalizing world. Prerequisite: ANTH 110 or ANTH 111/112. Three credits.

320 People and Development
This course critically examines how development policy and practice have affected target populations. Students will develop critical analytical skills and knowledge by examining the strengths and weaknesses of strategies such as those promoting popular participation, gender equality, small-scale business, local knowledge and democratic reform, as well as of different forms of development institutions. The course uses case studies based on long-term, first-hand participant observation that place development processes in larger historical, political and economic contexts. Cross-listed as DEVS 321. Prerequisites: ANTH 110 or ANTH 111/112 or DEVS 201, 202; ANTH 223 is recommended. Three credits. Offered every year.

321 Celtic Art
Weave your way through Celtic knots and “horror vacui” fear of empty space,” and discover the art of the Celts. From the Battersea Shield to the Book of Kells, we will trace our way through the extraordinary legacy of weaponry, jeweller, illuminated manuscripts, Celtic crosses, and Sheela-na-Gigs to arrive at a deeper understanding of the people who made them. Acceptable as a course in history. Cross-listed as ART 321 and CELT 321. Three credits.

323 Feminist Anthropology
This course examines how past and present feminist anthropologists have used and problematized categories of difference and identity, such as, gender, class, sexuality, race, ethnicity, ability, religion and nationality as they pursue anthropological research. Focusing primarily on socio-cultural anthropological research, but also addressing work by linguistic and biological (physical) anthropologists and archaeologists, the course will highlight the theoretical, methodological, and empirical contributions of feminist anthropologists to anthropology and to women.
and gender studies. Credit will be granted for only one of ANTH 323 and ANTH 324 and WMGS 324. Cross-listed as WMGS 327. Prerequisite: ANTH 110 or ANTH 111/112 or WMGS 100 or WMGS 200 or permission of the instructor. Three credits.

326 Issues in the Anthropology of Kinship
This course explores current themes and debates about the constitution of families cross-culturally. It will examine topics such as: cultural understandings of kinship; historical transformations of kinship systems; current reconfigurations of marriage; partnering strategies; new reproductive technologies; transnational adoption; intra-familial conflict; the role of kinship for individuals and in societies; and the influence of the state on kin patterns. Course material will include ethnographic examples from around the world. Cross-listed as WMGS 326. Prerequisite: ANTH 110 or ANTH 111/112, or WMGS 100 or 200 or permission of the instructor. Three credits. Offered 2019-2020 and in alternate years.

332 Mi’km’aq Studies: Advanced Critical Issues in Indigenous Anthropology
Using theories and methods relevant to researching Indigenous knowledge, self-determination, strategies of resistance and cultural sustainability of the Mi’km’aq Nation of Atlantic Canada, we explore Mi’km’aq oral histories, cosmology and sociocultural organization. In the second section, we look at the impact of colonization on Mi’km’aq cultural practices and governance. In the third section we look at contemporary issues such as the impact of court decisions on treaty implementation, customary law, economic development, resource use and cultural production. Prerequisites: ANTH 110 or ANTH 111/112 and ANTH 243 or permission of instructor. Three credits. Offered 2020-2021.

341 North American Archaeology
This course explores past and present Indigenous societies from North America and examines how these societies emerged, developed and were radically transformed by European colonization. Students will discover that even though great spans of time separate modern and ancient Indigenous cultures, cultural continuity exists.

Prerequisite: ANTH 243 or 253. Three credits.

342 Ancient Mesoamerica
This course will use archaeological and ethnohistorical information to examine the people who lived in Mesoamerica (currently, Mexico, Belize, Honduras and Guatemala) prior to and at the time of early contact with Europeans. Students will use archaeological data to study the Aztecs, Maya and Zapotecs and their predecessors. Students will also refine their knowledge of archaeological inquiry and methods through practical assignments based on actual archaeological data. Prerequisite: ANTH 243 or 253. Three credits. Offered 2019-2020 and in alternate years.

371 Archaeological Field Methods
This course teaches students the basic archaeological field methods of site survey and excavation through participation in an actual archaeological field project either locally or in another part of Canada or abroad. The course will examine a range of archaeological techniques and methodological approaches. It will also introduce students to the ethical issues they need to consider when conducting archaeological field research in Canada and abroad. Prerequisite: ANTH 243 or permission of the instructor. Three credits. Not offered 2019-2020.

372 Archaeological Laboratory Methods
This course teaches students methods of analyzing, cataloging and reporting on materials recovered from archaeological site survey and/or excavation. Students will learn how to disseminate information to professional and public audiences. Prerequisite: ANTH 371 or permission of the instructor. Three credits. Not offered 2019-2020.

400 Honours Thesis Research
A required course for all senior honours students. Six credits.

425 Power and Change
Power and change can be volatile processes. This course allows students to explore them from an anthropological point of view. The focus will be on food and power. It will address questions such as: How do gender, class, race, culture or other categories of difference affect who cooks and who eats, as well as what they eat? How has food become central to "gastro-diplomacy"? What are the politics of different kinds of food, locally produced food, food aid? How is food managed in times of crisis? Cross-listed as WMGS 425. Prerequisites: 12 credits ANTH, or HNU 385, or permission of instructor. Three credits.

435 Advanced Indigenous Issues
A course for senior students wanting to use Indigenous research methods and theories to engage anthropologically with specific issues of concern to Indigenous peoples. Topics may include in-depth analyses of Indigenous legal traditions, treaty and Aboriginal rights, politics and governance, natural resource management, cultural production and sustainability, decolonization and reconciliation. Prerequisite: ANTH 234 or permission of the instructor. Three credits. Next offered 2020-2021.

445 Advanced Archaeological Seminar
This seminar develops on the foundation of archaeological method and theory introduced in previous courses. Through an examination of various topics, students will engage in an in-depth analysis of key concepts and ideas. Past topics have included: Archaeology of Death and Dying; Ancient Colonization and Acculturation in the Mediterranean; Archaeology of Ancient Egypt. Prerequisite: ANTH 341 or 342 or permission of the instructor. Three credits. Offered 2019-2020 and in alternate years.

492 Selected Topics in Anthropology
The topic for 2019-2020 is Museums: Culture and Heritage on Display. This course explores the complex and contested world of museums. Approaching the museum from a critical perspective, students will examine how the museum, as both representational and public space, continues to evolve in meaning, reach, method, and purpose. Students will engage with a diversity of museum contexts and sites, across differing regions and cultures, with a particular emphasis on ethnographic and social history museums. The course will consider such key themes as: the origins and idea of the museum; objects, collections, and exhibiting; memory; the politics and ideologies of museum display; museums and their publics; and the challenges of exhibiting cultures. Three credits.

499 Directed Study
Under the direction of a professor, students will work in an area of anthropology not available in other course offerings. Interested students must consult with a faculty member or with the program co-ordinator. See section 3.5. Three or six credits.

9.3 AQUATIC RESOURCES, INTERDISCIPLINARY STUDIES IN

D. Risk, Ph.D., ISAR Co-ordinator
L. Patterson, M.Sc., ISAR Program Assistant

Advising Faculty

D. Garbary, Ph.B.D.  Biology
L. J. McMillan, Ph.D.  Anthropology
L. Harling Staliker, Ph.D.  Sociology
L. Lee, Ph.D.  Mathematics and Statistics
D. Risk, Ph.D.  Earth Sciences
Y. Grenier, Ph.D.  Political Science
P. Wilthay, Ph.D.  Economics

Water, a dynamic natural resource, is used as a focal point around which students can examine our changing world in terms of climate change, environmental management, freshwater policy, aboriginal use, erosion and flood events, adaptation of fisheries, cultural perceptions and ancient use, economic valuation, food production and procurement, healthy oceans, to name but a few.

Interdisciplinary Studies in Aquatic Resources (ISAR), a four-year program (comprised of 120 credits) leading to a BA or a B.Sc. degree, offers an integrated approach to the understanding, use and sustained management of aquatic resources as both natural and social systems. Aquatic ecosystems include groundwater, wetlands, lakes, rivers, oceans, etc.

ISAR prepares students for careers in natural resource management, government or private sector research and/or policy development, consultancy services, community development, and private enterprise. Depending on their program of study, students will also be positioned favourably for graduate or professional study in such areas as environmental law, public policy and administration, marine biology, oceanography, environmental sciences, human ecology, fisheries science and/or management, geographic information systems, conservation, and social science research.

All students complete two majors, the first in aquatic resources, and a second major in one of: biology; economics; Earth sciences; mathematics; statistics, and computer science; or public policy and social research (political science and anthropology or political science and sociology). ISAR students complete a mandatory work term (AQUA 400) and participate in the senior seminar (AQUA 450).

Students may enter the ISAR program in their 1st or 2nd year of study at StFX. Students entering the program in 2nd year will complete AQUA 100 and AQUA 201, 202 simultaneously.

Eligible ISAR students may consider completing an advanced major (B.Sc. students only) or an honours degree in their second major field of study: biology, Earth sciences, mathematics; honours degree with a subsidiary in AQUA: anthropology, economics, political science, sociology. All students must satisfy the requirements outlined in chapters 4, 5 or 7.
Major Program
Major candidates are required to complete:

a) a core ISAR major program of AQUA 100, 201, 202 (200), 325, and 400, 450; ESCI 171; BIOL 112; ECON 101, 102; and BSAD 101;

b) 36 credits in the second major discipline, or 48 credits for public policy and social research majors, including at least 18 credits of AR-designated courses from your second major;

c) at least 12 credits of AR-designated courses from at least two of the participating academic departments other than the major.

Candidates must also satisfy the requirements outlined in chapters 4, 5 or 7.

Progression Requirements
Students must achieve a minimum grade of 65 in AQUA 100, plus a minimum average of 65 in the first-year AQUA core courses (AQUA 100, BIOL 112, ECON 101 & 102, and ESCI 171) in order to maintain their ISAR major and proceed to the second year of study in the program.

Students are encouraged to meet regularly with the co-ordinator or program assistant to discuss their academic progress, work term opportunities and career aspirations.

BA Major in Economics and Major in Aquatic Resources
Year 1 AQUA 100; BIOL 112; ECON 101, 102; ESCI 171; MATH 106/107 or 126/127; 6 credits science electives at the 100-level.

Year 2 AQUA 201, 202; BSAD 101; ECON 201, 202; and one of ECON 211, 241 or 281; 6 credits AR-designated courses; 6 credits arts or science electives to include MATH 106 or 126, STAT 101 or STAT 231.

Year 3 AQUA 325; 6 credits AR-designated ECON to include 381; 3 credits ECON courses at the 300 and/or 400 level; 6 credits AR-designated courses; 15 credits arts or science electives for pairs.

Year 4 AQUA 400, 450; ECON required and elective courses at the 300 and/or 400 level; AR-designated courses as required; arts or science electives.

BA Major in Public Policy and Social Research (PPSR) (Anthropology and Political Science or Sociology and Political Science)
Year 1 AQUA 100; BIOL 112; ECON 101, 102; ESCI 171; PSCI 101, 102; ANTH 111, 112 or SOCI 101, 102.

Year 2 AQUA 201, 202; BSAD 101; 6 credits PSCI at the 200-level; 3 credits AR designated courses; 6 credits arts or science electives for pairs; plus PPSR with ANTH: ANTH 243 or 253 and one of 218, 223, 233 or 234; PPSR with SOCI: SOCI 202 and 3 additional SOCI credits at 200 level.

Year 3 AQUA 325; 3-6 credits AR-designated PSCI at the 300 and/or 400 level; 6 credits AR-designated courses; 6-12 credits arts or science electives for pairs; plus PPSR with ANTH: ANTH 304 or 305 and 400 level; PPSR with SOCI: 3-6 credits SOCI at the 300 and/or 400 level.

Year 4 AQUA 400, 450; PSCI courses at the 300 and/or 400 level, as required; AR-designated courses as required; arts or science electives; plus PPSR with ANTH: ANTH courses at the 300 and/or 400 level; PPSR with SOCI: SOCI courses at the 300 and/or 400 level.

B.Sc. Major in Biology and Major in Aquatic Resources
Year 1 AQUA 100; BIOL 112; ECON 101, 102; ESCI 171; MATH 106/107 or 126/127; 6 credits science electives at the 100-level (CHEM 101, 102 are recommended for those intending to major in biology or Earth sciences).

Year 2 AQUA 201, 202; BIOL 111; 12 credits from: BIOL 201, 202, 203, 204 or 315 and STAT 231; 6 credits AR-designated and/or arts electives for Arts X or Arts Y requirement.

Year 3 AQUA 325 or BIOL 307; 9 credits BIOL at the 300 and/or 400 level of which 3-6 credits must be of AR-designated BIOL; BIOL 391 recommended; BSAD 101; 6 credits AR-designated courses; 6 credits arts electives for Arts X or Arts Y requirement; 6 credits science electives to complete Science B.

Year 4 AQUA 400, 450; 9 credits BIOL of which at least 3 credits must be at the 400-level; AR-designated courses as required; arts and/or science electives as required to fulfill degree pattern.

B.Sc. Major in Earth Sciences & Major in Aquatic Resources
Year 1 AQUA 100; BIOL 112; ECON 101, 102; ESCI 171; MATH 106/107 or 126/127; 6 credits science electives at the 100-level (CHEM 101, 102 are recommended for those intending to major in biology or Earth sciences).

Year 2 AQUA 201, 202; BSAD 101; ECON 201, 215, 216, 271, 272; 6 credits arts electives for Arts X or Y.

Year 3 AQUA 325 or 3 credits of 375 or 376; 9-12 credits ESCI including 305 and 366; 6 credits of CHEM or MATH at the 200, 300 and/or 400 level to complete Science B; 3-6 credits AR-designated courses; 6 credits arts electives for Arts X or Y and/or science electives.

Year 4 AQUA 400, 450; 6 credits ESCI at the 300 and/or 400 level; AR-designated courses as required; arts and/or science electives as required to fulfill degree pattern.

B.Sc. Major in Mathematics, Statistics, and Computer Science and Major in Aquatic Resources
Year 1 AQUA 100; BIOL 112; ECON 101, 102; ESCI 171; MATH 106/107 or 126/127; 6 credits science electives at the 100-level.

Year 2 AQUA 201, 202; BSAD 101; MATH 253, 267, 277, 287; STAT 231; 3 credits AR-designated courses; 3 credits arts electives for Arts X or Y.

Year 3 AQUA 325; 6-9 credits from MATH 367, 387, STAT 311, 333, 334; 6 credits science (recommend BIOL or ESCI) at the 200, 300 and/or 400 level for Science B or C; 6 credits AR-designated courses; 6 credits arts electives for Arts X or Y; 3-6 credits science electives.

Year 4 AQUA 400, 450; 6-9 credits MATH/STAT/CSCI courses; 6 credits AR-designated courses; 9-12 credits arts and/or science electives as required to fulfill degree pattern.

AQUA 100, 201, 202, 325, 400 and 450 are restricted to students enrolled in the BA or BSc in Aquatic resources. AQUA courses cannot be taken as electives by non-aquatic resources students, and they cannot be used to make a pair or for arts X requirements.

100 Introduction to Aquatic Resources: Natural Science Applications
This course explores the living and non-living characteristics that determine the nature of aquatic resource ecosystems, and examines human interaction with these resources. Case studies expose students to the natural as well as some of the social science applications of aquatic resource use, while field trips and laboratory exercises introduce the methodologies used to study these ecosystems. Lab and field trips. Six credits.

201 Rivers, Lakes and Freshwater Governance
This course explores the political, economic and sociological dimensions of freshwater systems. Key concepts and frameworks are applied in both historical and contemporary settings. Topics include power relationships, watershed politics, water democracy and alternative governance arrangements. Credit will be granted for only one of AQUA 201, AQUA 200, 297 or 298. Prerequisite or co-requisite: AQUA 100. Three credits.

202 The Oceans’ Commons and Society
The “tragedy of the commons” has been a recurring concept when discussing ocean resources. In this course students will encounter how social scientists study and understand the use of the resources in the oceans’ commons. The course will explore theoretical paradigms, governance, social class, gender, race, fishing, aquaculture, and oil and gas. Students will gain a foundational understanding in social science approaches to issues relating to the aquatic resources. Credit will be granted for only one of AQUA 202, AQUA 200, 297 or 298. Prerequisite or co-requisite: AQUA 100. Three credits.

325 Aquatic Resources Field Camp
This course is a week-long field camp on integrated watershed management. It consists of assigned reading, talks by experts in watershed management and field trips to watershed sites. Students must complete the field camp prior to the beginning of either their third- or fourth-year of study. Not required for students who take one of BOL 307, ESCI 375, ESCI 376. Not offered every year, equivalences will be considered on an individual basis. No credit.

400 Work Experience/Student Internship
Students will spend the equivalent of one term, normally the summer between the junior and senior year, gaining hands-on experience in an aquatics-related work and/or volunteer setting. Placements may include research labs, aquatic resource businesses, community organizations, public policy agencies. To focus the applied learning experience, students develop a topic for special study, in collaboration with
### Earth Sciences

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ESCI 256</td>
<td>Hydrology</td>
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<tr>
<td>ESCI 272</td>
<td>Understanding Climate Change</td>
<td>3</td>
</tr>
<tr>
<td>ESCI 273</td>
<td>Health and the Environment</td>
<td>3</td>
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<tr>
<td>ESCI 274</td>
<td>Health Impacts of Global Environmental Change</td>
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<tr>
<td>ESCI 305</td>
<td>Geochemistry</td>
<td>3</td>
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<tr>
<td>ESCI 373</td>
<td>Remote Sensing</td>
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<tr>
<td>ESCI 374</td>
<td>Geographic Information Systems</td>
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<td>ESCI 376</td>
<td>Environmental Earth Science Field Course</td>
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<td>ESCI 386</td>
<td>Oceanography</td>
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<td>ESCI 406</td>
<td>Environmental Biogeochemistry</td>
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<td>ESCI 465</td>
<td>Hydrogeology</td>
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<td>ESCI 472</td>
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### Economics

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<td>Intermediate Macroeconomics I</td>
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<td>ECON 211</td>
<td>Local and Community Development Economics</td>
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<td>ECON 241</td>
<td>Canadian Economic Prospects and Challenges</td>
<td>3</td>
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<td>ECON 281</td>
<td>Environmental Economics</td>
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<td>ECON 301</td>
<td>Intermediate Microeconomic Theory II</td>
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<td>ECON 302</td>
<td>Intermediate Macroeconomics II</td>
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<td>ECON 305</td>
<td>Economic Development I</td>
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<td>ECON 306</td>
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<td>ECON 381</td>
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### Mathematics

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<td>MATH 254</td>
<td>Linear Algebra</td>
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<td>MATH 287</td>
<td>Natural Resource Modelling</td>
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<td>MATH 367</td>
<td>Differential Equations</td>
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<td>MATH 387</td>
<td>Mathematical Modelling</td>
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### Philosophy

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<td>PHIL 213</td>
<td>Philosophy of Science</td>
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<tr>
<td>PHIL 231</td>
<td>Human Nature I: Consciousness &amp; Epistemology</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 251</td>
<td>Critical Thinking</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 333</td>
<td>Environmental Ethics</td>
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### Political Science

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<tr>
<td>PSCI 221</td>
<td>Canadian Politics I: Structure &amp; Institutions</td>
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<tr>
<td>PSCI 222</td>
<td>Canadian Politics II: The Political Process</td>
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<tr>
<td>PSCI 241</td>
<td>Business and Government</td>
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<td>PSCI 251</td>
<td>Foundations of Global Politics</td>
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<td>PSCI 252</td>
<td>Contemporary Global Politics</td>
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<td>PSCI 291</td>
<td>Violence, Conflict and Politics</td>
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<td>PSCI 308</td>
<td>Global Justice</td>
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<td>PSCI 321</td>
<td>Federalism</td>
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<td>PSCI 322</td>
<td>Atlantic Canada</td>
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<td>PSCI 324</td>
<td>Provincial Politics</td>
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<td>PSCI 325</td>
<td>Indigenous Politics in Canada</td>
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<td>PSCI 335</td>
<td>Human Rights &amp; International Justice</td>
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<td>PSCI 343</td>
<td>Law and Politics</td>
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<td>PSCI 351</td>
<td>Canadian Foreign Policy</td>
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<td>PSCI 353</td>
<td>International Organizations</td>
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<td>PSCI 354</td>
<td>Global Political Economy</td>
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<td>PSCI 355</td>
<td>Global Issues</td>
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### Public Policy and Governance

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<td>PGOV 301</td>
<td>Comparative Public Policy</td>
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<td>PGOV 302</td>
<td>Public Management</td>
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<td>PGOV 307</td>
<td>Introduction to Science Policy &amp; Science-Based Public Policy Decision-Making</td>
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### Religious Studies

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<tr>
<td>RELS 221</td>
<td>Religion &amp; the Environmental Crisis</td>
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<td>RELS 333</td>
<td>Religion, Violence and Peace</td>
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### Sociology

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<td>SOCI 202</td>
<td>Research Principles &amp; Practices</td>
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<td>SOCI 243</td>
<td>Consumer Society</td>
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<td>SOCI 247</td>
<td>Environmental Social Sciences I: Problems &amp; Paradigms</td>
<td>3</td>
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<td>SOCI 248</td>
<td>Environmental Social Sciences II: Power &amp; Change</td>
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<td>SOCI 297</td>
<td>Selected Topics: Social Policy</td>
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<td>SOCI 301</td>
<td>Classical Social Theory</td>
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<td>SOCI 302</td>
<td>Topics in Contemporary Theory</td>
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<td>SOCI 307</td>
<td>Qualitative Research Methods</td>
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<tr>
<td>SOCI 321</td>
<td>Sociology of Atlantic Canada</td>
<td>3</td>
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<tr>
<td>SOCI 335</td>
<td>Sociology of Canada’s Indigenous Peoples</td>
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<td>SOCI 341</td>
<td>Global Agriculture</td>
<td>3</td>
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<td>SOCI 364</td>
<td>Food and Society</td>
<td>3</td>
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<td>SOCI 366</td>
<td>Coastal Communities</td>
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<td>SOCI 380</td>
<td>Urban Sociology</td>
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<tr>
<td>SOCI 433</td>
<td>Advanced Problems in Environment &amp; Society</td>
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### Statistics

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<tr>
<td>STAT 101</td>
<td>Introductory Statistics</td>
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<td>STAT 231</td>
<td>Statistics for Students in the Sciences</td>
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<tr>
<td>STAT 311</td>
<td>Survey Sampling Design</td>
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</tbody>
</table>
Art courses may be used as electives, a pair, or minor. Please see the art department website at http://sites.stfx.ca/art/ for a list of 2019-2020 course offerings.

9.4 ART
S. Gregory, Ph.D.

Part Time
K. Brown, BFA
K. Depper, MFA
J. Fecteau, BA
M. Gibson, MFA
L. Gillam, MFA
A. MacLean, BFA
A. McFarlane, BFA
I. Pygott
W. Rogers, B.Ed.
B. Sparks, BFA, MA
O. Tetu
A. Tragakis, BFA
R. Young, M.Ad.Ed.

Art courses may be used as electives, a pair, or minor. Please see the art department website at http://sites.stfx.ca/art/ for a list of 2019-2020 course offerings.

Minor in Studio Art
ART 100 or 101 and 102, 141 and 142 and 12 additional credits in studio courses. It is recommended that students take ART 141 and 142 before their senior year.

Minor in Art History
ART 141, 142, and 18 additional credits in art history courses. Students may take up to six credits of studio art courses for credit toward a minor in art history. Students may take no more than six credits from the following cross-listed courses for credit toward a minor in art history: ART/HIST 300, ART/PSCI 312, ART/ANTH/CULT 321, ART/CATH 331/332.

Students with advanced drawing experience and a portfolio can apply to enrol in advanced drawing and painting courses without the prerequisites of ART 101, 102.

101 Introduction to Drawing I
This course will introduce students to the art of drawing. Students will become familiar with conventional drawing materials including graphite, charcoal, conte, ink, and pastel. A disciplined daily working practice and routine will develop throughout the course, offering students transferable skills to all their academic pursuits. This course aims to encourage students to engage in further artistic study and life-long learning. ART 102 is recommended strongly as a complementary course. Credit will be granted for only one of ART 101 or ART 100. Three credits.

102 Introduction to Drawing II
This course will continue students' development in drawing based on the foundation of Introduction to Drawing I. Students will explore the use of conventional drawing materials and techniques while learning basic composition, advanced study of value and subtractive drawing, figure drawing, and abstract representation. An end-of-term self-directed artwork assignment is a summation of the course's learning outcomes. Credit will be granted for only one of ART 102 or ART 100. Prerequisite: ART 101, or portfolio demonstrating drawing skills. Three credits.

115 Introduction to Design
This course focuses on design principles and elements such as unity, balance, repetition, line, shape, and colour. The course provides students with a vocabulary and working knowledge of visual communication. Students develop their visual problem-solving skills and explore their creativity through studio projects and class discussions. Three credits.

125 Materials and Methods
This course will afford students the opportunity of working in a variety of art media, (two-dimensional and possibly three-dimensional) while exploring techniques, presentations, concept and materials. Projects may include painting, printmaking, sculpture, animation, textiles and more. Students with some prior knowledge of drawing and/or art experience will benefit most from this course. Prerequisite: ART 101, 102 (100) recommended. Three credits.

141 Art & Society I: From Caves to Cathedrals
Long before human beings developed written language, we were making works of art. This introductory survey examines art and architecture within the intellectual and social contexts of their historical production. It provides a working knowledge of the history of art from prehistory through Classical Greece and Rome, to the great cathedrals of the Medieval period. Students will begin to develop critical tools for studying visual culture, and achieve a deeper understanding of cultural history. Three credits.

142 Art & Society II: From Renaissance to Revolution
This section of the art history survey begins with works of art and architecture of the Italian Renaissance, where new ideas (including the notion of genius) had major repercussions for the cultural and artistic history of subsequent periods, including the Baroque, Romanticism, the 20th century, and our contemporary era. Students will learn new ways of observing and interpreting art, enrich their appreciation of art and architecture, and further deepen their understanding of cultural and intellectual history. Three credits.

145 Introduction to Colour
This course deals with the vocabulary, nature and physical properties of colour: hue, value, and intensity. Studio assignments provide practise in learning colour relationships in unified and contrasting colour schemes. Prerequisite: ART 101/102 (100) recommended. Three credits.

202 Introduction to Scenic Design
This course will cover the steps in the creation of theatre sets. The course will be, principally, based on the designer's ability to imagine the conception of the final product. Theatre assignments will be given to the design of a play, with a series of design stages each week, which in turn will lead to the completion of a major design project for a play chosen by the instructor. Prerequisite: ART 101, 102 (100) or permission of the instructor based on the student's resume of theatre experience or letter of interest. Three credits.

204 Introduction to Painting I
This introductory course will teach students the fundamental principles of representational painting – artworks created through the careful observation from life. Emphasis will be placed on learning techniques of studio painting and brushwork in conjunction with a thorough understanding of the formal qualities of colour: hue, value, and tone. ART 205 is strongly recommended as a complementary course. Credit will be granted for only one of ART 204 or ART 202 or ART 299 ST. Intro to Painting. Prerequisite: ART 101, 102 (100). Three credits.

205 Introduction to Painting II
This course is designed for students to further their technical and conceptual skills of representational painting acquired in ART 204. Subjects of increasing complexity are explored, including an investigation into landscape painting, the figure and independently researched topics. Prerequisite: ART 204, or portfolio demonstrating painting skills. Credit will be granted for only one of ART 205 or ART 202 or ART 299 ST. Intro to Painting. Three credits.

211 Stained Glass Studio I
This course introduces the copper foil method of stained glass. Students will create original designs and learn basic technical skills to complete a two-dimensional stained glass artwork using materials (including coloured, textured glass) and equipment in the studio. Prerequisite: ART 101, 102 (100), 115 or portfolio demonstrating drawing and design skills. Three credits.

212 Stained Glass Studio II
In this intermediate-level course in the copper foil method of stained glass, students will create original designs, and refine the technical skills learned in ART 211 to produce a three-dimensional stained glass art project. Prerequisite: Art 211 or portfolio demonstrating stained glass design and studio skills. Three credits.

221 Batik Studio
Batik is an ancient art form originating in Asia and Africa by which dyes and resist (such as melted wax) are applied to cloth. After learning basic skills for mixing dyes and applying wax to cloth, students will create a series of original batik artworks. The course also touches on other forms of resist art, e.g. silk painting, shibori, and tritik. Prerequisite: ART 101, 102 (100), 115 or portfolio demonstrating drawing and design skills. Three credits.

222 Weaving Studio
Tapestry weaving technique is practised by cultures around the world. In the Western tradition tapestries are typically pictorial narratives used as wall hangings. Students will learn the fundamental techniques of tapestry weaving applied to a small tapestry designed in collaboration with the instructor. Students will be introduced to the history and development of tapestry both as a technique and as an art form. Three credits.

231 Etching Studio I
Students will learn the basic techniques of intaglio printmaking: hardground, softground, drypoint and aquatint. They will be required to produce a series of prints demonstrating competence in each technique. Three credits.
233 Introduction to Printmaking
Students will learn two standard techniques of fine-art printmaking: etching and linocut. Students will gain knowledge of printmaking, its materials and tools by means of instructional demonstrations, hands-on printmaking projects balancing technical knowledge with artistic concept and vision, and the study and in-class presentation of other printmakers’ work. A public art event will take place at the end of the course: students will demonstrate learned printmaking techniques in a public location of their choice, on- or off-campus. Credit will be granted for only one of ART 233, ART 231 or ART 298 ST: Printmaking. Three credits.

240 Pastels
This studio course introduces pastels as a drawing medium. Pastels consist of crayon-like sticks of compressed pigment in either a chalk or wax binder. It is an expressive, direct medium that has been widely used by the European and English masters. In this course, colour mixing and pastel techniques on a variety of papers will be explored. Students will complete a number of landscape, still life, and portrait paintings. Emphasis will be put on developing compositional skills using pastels. Prerequisite: ART 101, 102 (100). Three credits.

244 History of Photography
From the public announcement of a viable process in 1839, to the present day, photographic images have come to dominate our visual world. This course will examine the history of photography through its technology and through the work of key photographers, styles, and purposes. It will also consider photography as a medium for art in itself, its position and relationships with the traditional arts, and its extraordinary power to construct a world. Three credits.

251 Medieval Art
This course examines major developments in art and architecture of the Middle Ages, from the triumph of Christianity in Imperial Rome through the late Gothic period of the 14th century. The Bible and most early Church theologians associated images with idolatry and paganism, yet this 1000-year period was one of exceptional richness and diversity in Christian visual arts. Students will see how medieval art and architecture reflect and respond to changing theological, devotional and societal needs. Three credits.

252 Baroque Art
This course explores developments in the visual arts in Europe during the 17th century. Works of art and architecture will be examined in their social and cultural contexts, including discussion of the Italian Counter-Reformation and new ideas about the function of religious images and buildings, urban planning and the glory of Rome, absolutist monarchies and visual propaganda, specialization in the art market and Dutch genre painting, and the rise of art academies and art theory. Three credits.

255 Watercolour - Techniques and Approaches
Students familiarize themselves with the materials and the basic techniques of transparent watercolour in this course. Instruction will include various classic and innovative approaches to this versatile medium, using paintings by well-known masters of the art of watercolour as a jumping-off point for their own exploration in the watercolour medium. Prerequisite: ART 101, 102 (100) or equivalent. Three credits.

260 20th Century: Modern Art
This course examines the origins of modernist endeavour in the late 19th century and covers art up to the end of World War II. Attention will be paid to major movements and artists, parallel movements in literature and music, the social and political context, and new technologies. Three credits.

261 Contemporary Art
This course examines art from the end of World War II to the present day. Attention will be paid to major movements and artists, the social and political context, and changing assumptions about what art should be and do. Three credits.

271 Introduction to Digital Photography
This course is designed for students interested in learning to effectively use digital photography as a means for self-expression, artistic medium, or cultural comment. The course aims to provide students with a rigorous training in the mechanics of the digital camera, digital processing, key photography concepts, and the use of electronic devices in these matters. Students will be assessed through written assignments, exams, and photography assignments. A digital camera with manual functions is required. Credit will be granted for only one of ART 271 or ART 297 ST: Digital Photography. Three credits.

295 Selected Topics
The topic for 2019-2020 is Romanticism to Impressionism: 19th Century Art. The 19th Century was a period of dramatic change in Europe and North America. Beginning with art movements and institutions just before the Revolutionary period in Europe, and ending with the Impressionists and the Arts and Crafts Movement, this course will consider how art reflects these changing aspects of society, such as urbanization and industrialization, the diminishing power of the church, and the rise of new political and social structures. Three credits.

297 Selected Topics
The topic for 2019-2020 is Introductory Animation. In this course, students will learn the basics of animation. Projects include simple 2D animation (flip-book and hand drawn animation) and stop-motion. There is a self-directed final project in which students will expand on acquired technical and theoretical knowledge of animation fundamentals. Animation comes in many styles, so a high level of drawing skill is not a requirement for this course. A laptop and digital camera is necessary. Open-access free animation software will be used. No prerequisite. Three credits.

298 Selected Topics
The topic for 2019-2020 is Introduction to Architectural Design. This course will teach students the fundamentals of architectural design. Students will learn the basic elements of architectural graphics, perspective, construction techniques, and knowledge of spatial requirements. Students will then apply this learning to produce a set of working drawings for a small building of their own design. Students will be encouraged to explore their personal interests and identity while working towards this final project. No prerequisite. Three credits.

300 A Cultural and Intellectual History of Canada
This course is an historical analysis of Canadian literature, art, and architecture, and the intellectual forces that have shaped Canadian society. Cross-listed as HIST 300. Six credits.

312 Art and Politics
This course introduces students to what modern artists have to say about politics and what governments do and say about art. It provides some of the historical and theoretical tools needed to analyze the political role of art in our time. Students will examine literary works, painting, music, and architecture, and discuss specific policies on art. Cross-listed as PSCI 312. Three credits.

320 Advanced Painting
A continuation of ART 204/205 with emphasis on composition, technique and materials with special attention to individual creativity and development. Prerequisite: ART 205 or portfolio demonstrating painting skills. Six credits.

321 Celtic Art
Weave your way through Celtic knots and “horror vacui” fear of empty space, and discover the art of the Celts. From the Battersea Shield to the Book of Kells, we will trace our way through the extraordinary legacy of weaponry, jewellery, illuminated manuscripts, Celtic crosses, and Sheila-na-Gigs to arrive at a deeper understanding of the people who made them. Acceptable as a course in history. Cross-listed as ANTH 321 and CELT 321. Three credits.

331 Catholicism and the Arts I
This course will trace Catholic themes and ideas about Catholicism in literary, musical, architectural, or artistic works from the beginnings of Christianity to the early Renaissance. Credit will be granted for only one of CATH 331 or CATH 330 Cross-listed as CATH 331. Three credits.

332 Catholicism and the Arts II
This course will trace Catholic themes and ideas about Catholicism in literary, musical, architectural, or artistic works from the Renaissance until the contemporary era. Credit will be granted for only one of CATH 332 or CATH 330. Cross-listed as CATH 332. Three credits.

343 Issues in Canadian Art through World War II
Students will consider Canadian art practice and institutions from pre-European contact up to the Group of Seven. Topics can include aboriginal practice and the representation of native peoples, the construction of wilderness and place, and the role of the church in Quebec in the context of social and political change. Prerequisites: ART 141, 142 or survey of Canadian art or permission of the instructor. Three credits.

344 Issues in Contemporary Canadian Art
Students will consider selected topics which can include: Michael Snow and his contemporaries, post-colonialism and contemporary aboriginal art, landscape and the critique of nature, feminism. Prerequisites: ART 141, 142 or survey of Canadian art, or permission of the instructor. Three credits.

346 Botanical Art and Illustration: Drawing
This course will be concerned with developing drawing to accurately reproduce plant forms. Non-flowering and flowering plant form and diversity will be covered using pencil, pen and ink. Prerequisite: ART 101, 102 (100) or BIOL 202 or portfolio demonstrating drawing or painting skills. Three credits.

347 Botanical Art and Illustration: Painting
This course will be concerned with developing drawing to accurately reproduce plant forms. Non-flowering and flowering plant form and diversity will be covered using pencil, pen and ink. Prerequisite: ART 101, 102 (100) or BIOL 202 or portfolio demonstrating drawing or painting skills. Three credits.
351 Anatomy for the Artist: Drawing
This course provides intensive study of human anatomy with the purpose aimed towards figure drawing. Students will focus on the skeletal and muscular systems, studying both bone specimens and live models. Using graphite and charcoal, students will gain the knowledge to accurately draw the human figure and place their work within the historical context of figurative art. Prerequisite: ART 101, 102 (100) or portfolio submission. Three credits.

356 Iconography of Christian Art: The Life of Christ
Iconography is the identification and interpretation of images. This course is an introduction to the iconography of Christian art, with an emphasis on images of the Life and Passion of Christ. The course will examine how images develop over history, and how they may be understood in light of historical events, changes in theological thought, and in the artist's own spirituality. Cross-listed as RELS 353. Three credits.

357 Iconography of Christian Art: The Saints
This course is an introduction to the iconography of Christian art, with an emphasis on images of Mary and the saints. The course will examine how images develop over history, and how they may be understood in light of historical events, changes in theological thought, and in the artist's own spirituality. Discussion will include how such images were used as objects of personal devotion but also for the conveying of important theological and social values. Cross-listed as RELS 354. Three credits.

363 Advanced Drawing I
A continuation of Art 100, this course covers the direct observation of still-life, figure drawing, composition, expression, and critical analysis. A variety of drawing media, both colour and black and white, will be used. Projects to be done outside of class will be assigned on a regular basis. Prerequisite: ART 101, 102 (100) or a portfolio approved by the instructor. Three credits.

364 Advanced Drawing II
This course will concentrate on the development of individual expression. There will be greater emphasis on the expressive potential of the figure. Projects to be completed outside the class will be assigned on a regular basis. Prerequisite: ART 363. Three credits.

371 Italian Renaissance Art I
During the Italian Renaissance, humanists began to look back to the Classical past for inspiration. At the same time, some religious leaders led followers to an increased interest in the natural world and contemporary everyday life. These new trends deeply affected the visual arts. This course will examine this period of profound innovation in painting, sculpture and architecture, from the time of Giotto to the precursors of High Renaissance style in Florence and Venice. Three credits.

372 Northern Renaissance Art
This course explores the innovative artistic legacy of Northern Renaissance Europe. New technical developments such as oil painting allowed artists to create unprecedented levels of realistic illusion in paintings. The rise of the printing press opened up new avenues for the dissemination of imagery in the form of woodcuts and engravings. The religious turmoil of the Protestant Reformation also had profound consequences for the development of art - and its subject matter - in the North. Three credits.

373 Italian Renaissance Art II
This course examines Italian art and architecture during the late 15th and 16th Centuries, beginning with the monumental "High Renaissance" style established by Leonardo da Vinci, Michelangelo, and Raphael. The role these artists and others played in the rise of the notion of artistic genius led to problems linked to artistic license as the century progressed. We will consider works of art from the point of view of style and technique, but also how art functions in its social and political context. Three credits.

399 Directed Study
See section 3.5. Three or six credits.

435 Seminar in Italian Renaissance Art
This course is an intensive investigation into an aspect of Italian Renaissance art. Topics may include, among others: Michelangelo and his biographers; Giorgio Vasari's Lives of the Artists; Raphael in Rome; Renaissance art in Venice; Italian Mannerism. Students will learn to use and assess important primary sources from the Renaissance period, and will also examine the secondary scholarly literature in some depth. See http://sites.stfx.ca/art/ for more information. Prerequisites: ART 142, or 371, or 373, or permission of the instructor. Three credits.

499 Directed Study
See section 3.5. Three or six credits.
Concentrations
Biology offers six areas of concentration, health sciences, ecology, cell and molecular biology, animal biology, plant biology, and aquatic biology. A concentration is included in the student's official academic record and appears on any transcript issued. Advanced major and honours students may fulfill the requirements for a concentration by completing a minimum of 15 credits, including at least 3 credits at the 400 level, from a specified concentration. Courses assigned to each concentration are listed below. Consult the chair for any courses not listed.

Health Sciences: BIOL 304, 315, 317, 320, 331, 335, 343, 347, 395, 416, 417, 419, 452, 453, 454, 484
Ecology: BIOL 302, 308, 311, 315, 331, 342, 343, 345, 360, 407, 468, 472, 474, 484
Cell and Molecular: BIOL 302, 304, 315, 317, 320, 331, 335, 395, 411, 416, 417, 419, 452
Aquatic: BIOL 307, 311, 342, 343, 345, 360, 468, 472, 474

Advanced Major Program
Students must take BIOL 111, 112, and four of the following courses: 201, 202, 203, 204, 315; and 391, 491, CHEM 101, 102 or 121, 122, CHEM 225 (or 221/222) and 265; MATH 106 and 107 or 126 and 127; STAT 231; an additional 24 BIOL credits, of which 18 must be at the 300 level, other than 499; 18 credits arts electives, to include one pair; 15 credits approved electives; 24 credits open electives.

Honours Program
Students must take BIOL 111, 112, and four of the following courses: 201, 202, 203, 204, 315; and 391, 491, 493, CHEM 101, 102 or 121, 122, 225 (or 221/222) and 265; MATH 106 and 107 or 126 and 127; PHYS 101, 102 or 121, 122; STAT 231; an additional 33 credits of BIOL or other approved science courses, of which 24 credits must be at the 300 level, other than 499; 18 credits arts electives, to include one pair; 15 credits approved electives; 24 credits open electives.

Joint Honours and Joint Advanced Major
Joint honours and joint advanced major programs may be offered with other departments. For course patterns see sections 7.1.3. Students considering a joint honours or advanced major should consult with the relevant department chairs as early as possible. A concentration in health sciences, ecology, cell and molecular biology, animal biology, plant biology, and aquatic biology may be completed for students having biology as their Science A. Requirements are as listed for advanced major and honours programs.

BSc Advanced Major in Biology with Business Administration
Science A  BIOL 111, 112, 12 credits from BIOL 201, 202, 203, 204, 315; and BIOL 391, 491; 18 additional BIOL credits must include at least 12 credits at the 300 (may include 315) or 400 level (at least 3 credits must be BIOL at the 400 level, other than 499)
BSAD/ECON  BSAD 101; 102, 471; 12 credits from BSAD 221, 223, 231, 241, 281, 281, 9 additional BSAD credits; ECON 101, 102
Science B  MATH 126, 127; BIOL/STAT 331; 3 additional MATH, STAT credits
Science C  CHEM 101, 102 or 121, 122
Arts X  12 credits
Arts Y  6 credits
Approved electives  CSCI 135; 9 additional credits

Co-operative Education Program in Biology
This optional academic program allows students the opportunity to gain 12 months of professional, paid work experience in a range of opportunities in industry, government and not-for-profit across Canada. Students can gain technical and professional experience in field and lab work, research, policy and education to reinforce classroom-based instruction and to increase students' networks and employability. The Biology Co-op Program is accredited by the Co-operative Education & Work-Integrated Learning Canada (CEWIL Canada). COOP 405 (3-credits) can be used as BIOL elective or as an open or approved elective. For further information on work term sequencing options and professional development training topics see section 9.13.

105 Introduction to Cell and Molecular Biology
This course will focus on the structure and function of cells, cell division, patterns of inheritance, and the molecular basis of inheritance. Restricted to students in the distance nursing program. Cannot be used as science A for biology students. Three credits and tutorial.

111 Introductory Cell Biology
An introduction to cells, their structure and function, and the techniques used to study them. Provides a basic introduction to cells as the building blocks of all life. Required for all students continuing in biology. Three credits and lab.

112 Diversity of Life
This course emphasizes the interrelationships of living systems and their roles in the global ecosystem. Students explore evolution and the origins of life, organismic diversity, adaptations, and ecology. Human interactions with the diversity of life are considered throughout the course. Basic skills that underpin success as an undergraduate student are also emphasized. Required for all students continuing in biology. Three credits and lab.

115 Microbes in Human Biology
An introduction to microorganisms from a human perspective for students in the nursing program. Topics include bacterial structure and function, bacterial genetics and antibiotic resistance, and viral structure and infection. Credit will be granted for only one of BIOL 115 or BIOL 215. Restricted to nursing students. Cannot be used as science A for biology students. Three credits and tutorial.

151 Fundamentals of Human Anatomy & Physiology I
An integrated approach to the study of the anatomy and physiology of the following: the integumentary, skeletal, muscular, nervous and endocrine systems. The course provides students with a comprehensive working knowledge of the anatomic and physiologic aspects of these systems. Credit will be granted for only one of BIOL 151, BIOL 251 or HKN 151. Restricted to first-year nursing students. Three credits and lab.

152 Fundamentals of Human Anatomy & Physiology II
An integrated approach to the study of the anatomy and physiology of the following: cardiovascular, respiratory, immune, digestive, urinary and reproductive systems. The course provides students with a comprehensive working knowledge of the anatomic and physiologic aspects of these systems. Credit will be granted for only one of BIOL 152, BIOL 252 or HKN 152. Restricted to first-year nursing students. Prerequisite: BIOL 151. Three credits and lab.

201 Animal Biology
An introduction to major groups of animals, emphasizing the structure, physiology and way of life of certain species. Prerequisites: an average of 55 in BIOL 111, 112 for biology majors, advanced majors or honours students. Three credits and lab.

202 Plant Biology
An introduction to the diversity, form and function of plants emphasizing the biology of land plants. Organisms are treated from the perspectives of evolution, reproduction, physiology, and ecology. Prerequisites: an average of 55 in BIOL 111, 112 for biology majors, advanced majors or honours students. Three credits and lab.

203 Introductory Ecology
An introduction to the fundamental concepts of ecology, exploring how organisms interact with their environment and with each other, at the levels of populations, communities and entire ecosystems. Interactions from competition to food chains are considered from an evolutionary perspective recognizing the role of the physical environment and humanity. Prerequisites: an average of 55 in BIOL 111, 112 for biology majors, advanced majors or honours students. Three credits and lab.

204 Introduction to Genetics
An introduction to the mechanisms of inheritance, genome structure, and genetic analysis. Concepts include: DNA structure and function; gene regulation, mutation, repair, linkage; gene manipulation. Laboratory involves problem solving and genetic crosses with fruit flies. Prerequisites: an average of 55 in BIOL 111, 112 for biology majors, advanced majors or honours students. Three credits and lab.

215 Microbiology for Human Nutrition
An introduction to microorganisms from a human health perspective, that focuses on immunological concepts, viruses, bacteria and fungi. Laboratories cover basic microbiological techniques and tutorials cover microorganisms from the food perspective. Credit will be granted for only one of BIOL 215 or BIOL 115. Restricted to Human Nutrition students and Human Kinetics students with Nutrition minor. Cannot be used as science A for biology students. Prerequisites: BIOL 111 and CHEM 101/102 (100) or 121/122(120). Three credits and lab/tutorial.

220 Biological Perspective of Health and Environmental Issues
This course is for non-science students. The course deals with how scientific principles are established. Topics include evolution and diversity, ecology and food, human evolution and population, diabetes, homeostasis, HIV and vaccines, antibiotic resistance, and cancer. Acceptable for credit only in the Faculties of Arts and Business and as an open elective in the B.Sc. Nursing. Online course. Six credits.

221 Issues in Resource Management
This course introduces the basic science necessary to understand current resource issues such as forestry and wildlife management with the goal of understanding
resource decision making, and how human activities can alter terrestrial ecosystems. Prerequisite: BIOL 112 or upper-year status in non-science programs. Cannot be used as science A for biology students. Three credits.

251 Human Anatomy and Physiology I
An integrated approach to the study of the anatomy and physiology of the following: the integumentary, skeletal, muscular, nervous and endocrine systems. The course provides students with a comprehensive working knowledge of the anatomic and physiologic aspects of these systems. Credit will be granted for only one of BIOL 251, BIOL 151, Hkin 151. Restricted to BSc and BASc Health students. Three credits and lab.

252 Human Anatomy and Physiology II
An integrated approach to the study of the anatomy and physiology of the following: cardiovascular, respiratory, immune, digestive, urinary and reproductive systems. The course provides students with a comprehensive working knowledge of the anatomic and physiologic aspects of these systems. Credit will be granted for only one of BIOL 252, BIOL 152, Hkin 152. Restricted to BSc and BASc Health students. Prerequisite: BIOL 251. Three credits and lab.

285 Paleontology: The History of Life
Covers the principles of paleontology including methods of analysis of fossil individuals, populations and species; biostatigraphy; paleoecology; biogeography; evolution and extinction; the origin and major events in the history of life from an evolutionary and ecological perspective. Laboratory study of selected fossil groups, field and laboratory techniques. Cross-listed as ESCRI 285. Prerequisite: ESCRI 171, 172 or BIOL 111, 112 or permission of the instructor. Three credits and lab. Not offered 2019-2020.

302 Evolution
Life on our planet, in all its wonderful diversity, has evolved to be this way. This course will introduce the student to the core concepts of Darwinian natural selection, the process of speciation, methods of phylogenetic construction, the relationship between phylogenetics and taxonomy, analysis of evolutionary patterns, the history of life on Earth, and selected topics including human evolution and social behaviour. Prerequisites: BIOL 201, 204 or permission of the instructor. Three credits and tutorial.

304 Comparative Physiology
This course uses an integrative approach to study the function of organ systems, including neural, cardiovascular, muscular, respiratory, renal, reproductive and endocrine. Examples of how animals, including humans, respond to different demands imposed by their environment and activities will be discussed. Prerequisite: BIOL 201. Three credits and lab.

307 Field Biology
Provides practical experience in the observation, collection, identification and quantification of organisms in nature. Held for two weeks in the spring session, the course emphasizes field ecology, dealing with some or all of the following groups of organisms: birds, small mammals, fish, plants, marine algae, marine invertebrates and insects. Prerequisite: BIOL 203. Three credits and lab.

308 Biology of Populations
This course covers the principles of plant and animal population dynamics. The great diversity in growth, survival, reproduction, and dispersal patterns in aquatic and terrestrial populations is examined. Contents include theory, evidence from experimental studies and the interaction between the environment and populations. Prerequisite: BIOL 203 or permission of the instructor. Three credits.

311 Coastal Marine Ecology
An introduction to coastal marine habitats and the factors that influence the population and community structure of primary producers and consumers. The course includes an overview of marine ecological theory, fieldwork, and laboratory observations, focusing on Nova Scotia shores. Prerequisite: BIOL 203. Three credits, lab and research project.

315 Introductory Microbiology
Provides a broad perspective on the microbial world and its role in the biosphere. The diversity, morphology and physiology of prokaryotic microorganisms will be discussed. Laboratories stress basic microbiological techniques including microscopic examination, isolation from natural environments, enumeration and examination of physiology. Prerequisites: BIOL 201, 204; CHEM 221/222(220) or CHEM 225 and 255. Open to human kinetics and health students upon completion of BIOL 204 and CHEM 220, or CHEM 225 and 255. Three credits and lab.

317 Molecular Biology
An introduction to the analysis of peptides and nucleic acids using standard molecular methodology. Topics include electrophoretic techniques; manipulation of DNA, the introduction of foreign DNA into host bacterial cells and the use of gene cloning, gene amplification, and DNA sequencing. During labs, students will apply these methods to interpret gels and to generate genetically modified bacteria. Prerequisites: BIOL 204, 315. Three credits and lab.

320 Biology of Cancer
An introduction to the problem of cancer, emphasizing the cellular and molecular biology of carcinogenesis in humans. The multi-causal, multi-step nature of the process will be highlighted, including the role of viruses, oncogenes, carcinogens and ionizing radiations. Prerequisites: BIOL 204; BIOL 201 or BIOL 251/252. Three credits and lab.

331 Statistical Methods
An investigation of statistics and experimental design in the context of biological and health science issues. Topics include analysis of variance, categorical data; distribution-free tests; linear and multiple regression. Students will learn to analyze data and interpret conclusions using a statistical software package. Recommended strongly for all major, advanced major, and honours students. Credit will be granted for only one of STAT 331, PSYC 394, PSYC 390. Cross-listed as STAT 331. Prerequisite: STAT 101 or 224 or 231. Three credits and a one-hour lab.

335 Developmental Biology
The course provides an introduction to the means by which animals replicate themselves. Students will be introduced to experimental methods, intercellular communication, the diversity of different ways that animals develop and the role of gene regulation therein. Laboratories will highlight topics covered in lecture and introduce students to some experimental techniques. Prerequisites: BIOL 201, 204. Three credits and lab.

342 Invertebrate Zoology
A comparative study of invertebrate animals and their adaptations, including their morphology, behaviour, physiology, ecology and evolution. Students will learn the remarkable diversity of both form and function in these animals. At the same time, students will refine their powers of observation, improve their ability to ask and answer critical questions about organisms, and design experiments that will lead to further insight into invertebrate zoology. Prerequisite: BIOL 201. Three credits and lab.

343 Comparative Anatomy of Vertebrates
A comparative study of the anatomy and evolution of chordate animals with emphasis on the vertebrates, including humans. In the laboratory, students will study the anatomy of representative vertebrates and will complete a project focusing on local wildlife. Prerequisite: BIOL 201. Three credits and lab.

345 Communities and Ecosystems
An outline of the essential theory of community and ecosystem ecology, including climate drivers, mineral cycles, energy flow and community structure. The concepts of succession, food webs and biodiversity are illustrated with comparative examples drawn from a variety of aquatic and terrestrial ecosystems. Prerequisites: BIOL 201, 202, 203. Three credits.

360 Global Change Biology
This course analyzes major anthropogenic phenomena that are currently affecting natural systems at a global scale. Topics include global warming, ocean acidification, species invasions, habitat fragmentation, and overfishing, focusing on the effects of such processes on aquatic and terrestrial organisms. Successful mitigation and conservation strategies are evaluated. Prerequisites: BIOL 201, 202, 203. Three credits.

374 Human Neuropsychology
Neuropsychology is the study of how damage to the brain causes changes in thoughts and behaviours. Cognitive changes associated with specific diseases/conditions will be the focus of the course (e.g., Alzheimer’s disease, multiple sclerosis, Parkinson’s disease, stroke, etc.). Examples of cognitive and behavioural symptoms will be presented via videos, audio recordings, and performance on neuropsychological tests. The assessment of cognitive processes will be introduced and relevant structural and functional neuroanatomy will be reviewed. Cross-listed as PSYC 373. Prerequisite: 12 credits PSYC at the 200-level; PSYC 230 recommended but not required. Three credits.

381 Selected Topics
The topic for 2019-2020 is Comparative Endocrinology. This course provides an introduction to the major endocrine and neuroendocrine systems and their involvement in the control of physiological function in vertebrates. An emphasis will be on mammalian systems, however, examples from other vertebrate taxa will also be discussed. Areas of exploration will include the regulation of feeding and metabolism, ion homeostasis, stress, and reproduction. Prerequisites: BIOL 251 and 252 or BIOL 304. Three credits and a lab.

382 Selected Topics
The topic for 2019-2020 is Insect Biology. Insects represent a significant portion of the planet’s biological diversity and make up the vast majority of animal species.
This course provides a comprehensive introduction to this extraordinary diversity, and explores key features of insect structure, function, behaviour, ecology, and classification, integrating appropriate molecular studies throughout. A comparative and evolutionary approach is employed to examine the various adaptations that have allowed insects to become the most successful group of animals on the planet. The numerous ways in which insects impact human life and health will be discussed. Prerequisite: BIOL 201. Three credits and a lab.

391 Junior Seminar
This course will assist students in choosing a career, gaining admission to graduate or professional schools and help honours students choose a supervisor and prepare for their honours thesis work. Required for all biology advanced major and honours students in their third year. Recommended but not required for major students in their third year. No credit.

395 Cell Biology
An introduction to the eukaryotic cell, including relationships between biochemical mechanisms and organelle functions, and techniques used to study cell function. Prerequisites: BIOL 201, 204; CHEM 221/222(220) or 255. Three credits and lab.

407 Integrated Resource Management
An introduction to integrated resource management planning and land-use decision-making in an industrial landscape, using the principles of landscape ecology, ecosystem management and conservation biology. Lectures examine the challenges of biodiversity conservation, and wildlife and water management using these methods within the context of forest management. Guest lecturers from industry and other land user groups will discuss the opportunities, constraints, and problems presented by multi-stakeholder approaches. Prerequisite: BIOL 203. Three credits and lab.

411 Evolutionary Developmental Biology
This course is a contemporary discipline that examines the interplay between how organisms reproduce and how they evolve. This course explores several themes, including (i) how natural selection acts on development, (ii) whether development constrains evolution, (iii) developmental mechanisms of evolutionary change, (iv) environmental regulation of development and (v) developmental genetics. Prerequisites: BIOL 302 or 335 or permission of instructor. Three credits. Not offered 2019-2020; next offered 2020-2021.

415 Biogeography
A lecture and seminar course on the description and interpretation of past and present distributions of plants and animals. There will be integration of evolutionary, ecological and historical concepts, and both aquatic and terrestrial organisms will be considered. Prerequisite: BIOL 203 or permission of the instructor. Three credits and tutorial.

416 Immunology
This course provides an overview of human innate and acquired immune responses. Development of inflammation, vaccine protection, specific aspects of cancer immunology as a well as immunopathology in relation to allergy, and select autoimmune diseases will be addressed. Credit will be granted for only one of BIOL 416 or BIOL 417. Prerequisite: BIOL 315. Three credits and lab.

419 Microbial Pathogenics
This course explores host-pathogen interactions at the cell and molecular level, describing various strategies of bacteria, virus, parasites, and fungi used to evade human defenses and establish a disease state. Credit will be granted for only one of BIOL 419 or BIOL 417. Prerequisite: BIOL 416. Three credits and lab.

452 Bioinformatics
Biology is now in the digital age. DNA and protein sequences are accumulating at an exponential rate. Bioinformatics uses computers to archive, organize, retrieve and analyze biological information. This course will focus on how data are generated, accessed and managed, how to retrieve particular types of data and what some of the end users of these data are. No computing background required. Prerequisite: BIOL 317 or permission of the instructor. Three credits. Offered 2019-2020 and in alternate years.

453 Advanced Behavioral Neuroscience I: Neurobiology of Psychological Disorders
Topics in the field of behavioural neuroscience will be considered. The precise topics covered in the seminar will change from year to year, however the focus of the course content will be on various aspects of the behavioural neuroscience, including, but not limited to the etiology, diagnosis and treatment of neurological disorders, broadly defined. Credit will be granted for only one of BIOL 453 or BIOL 450. Cross-listed as PSYC 431. Three credits. Not offered 2019-2020.

454 Advanced Behavioral Neuroscience II: Contemporary Issues
This is a seminar course in which current topics in the field of behavioural neuroscience are considered. Credit will be granted for only one of BIOL 454 or BIOL 450. Cross-listed as PSYC 432. Three credits. Offered 2019-2020 and in alternate years.

468 Restoration Ecology
This integrative course introduces students to the variety of ways that degraded ecosystems, terrestrial and aquatic, can be restored by the application of ecological principles. These ideas are illustrated with Nova Scotia case studies involving invasive species, stream restoration, reforestation and contaminated sites. Prerequisites: BIOL 201, 202, 203; BIOL 345 recommended. Three credits. Offered 2019-2020 and in alternate years.

472 Freshwater Ecology
A study of the structure of freshwater ecosystems and how aquatic communities are shaped by the unique physical and chemical properties of flowing and standing fresh waters. Field trips to local streams and lakes illustrate the distributions and adaptations of freshwater organisms, while providing hands-on experience with limnological methods. Prerequisites: BIOL 201, 202, 203. Three credits and lab.

474 Environmental Biology of Soils
An introduction to the diversity of soil organisms and their roles in ecosystem processes. The nature of soil as habitat for bacteria, fungi, and animals, and the connections between soil and the aboveground environment will be considered along with the role of soils and soil organisms in decomposition, nutrient cycling, plant nutrition and ecosystem succession. Students must complete a semester-long lab project. Prerequisite: BIOL 203. Three credits and lab. Not offered 2019-2020; next offered 2020-2021.

475 Accessing the Biological Literature
Library resources and on-line databases will be used to write an essay relevant to the honours student’s interest or thesis. Restricted to honours students. Three credits.

481 Selected Topics
The topic for 2019-2020 is Animal Minds. An introduction to the study of non-human animal cognition and the problem of animal minds. Incorporating perspectives from biology, psychology, and philosophy, this course will outline the methods researchers use to understand how animals think while avoiding the pitfalls of anthropomorphism. Students will review the historical and current research into animal minds, as well as the various arguments for moral status of non-human animals based on their cognitive capacities. Prerequisites: 4th year standing and one of: BIOL 201 or PSYC 220 or PHIL 231. Three credits.

484 Animal Behaviour
An introduction to the principles of ethology drawing on examples from all animal phyla, with an emphasis on vertebrates. Students learn both the physiological and evolutionary bases of behaviour. Topics covered will span simple reflexes through complex social behaviours, including survival, predation, habitat selection, communication, and mating behaviours. Participation in field trips is required. Prerequisite: BIOL 201 or PSYC 230. Three credits and lab. Not offered 2019-2020; next offered 2020-2021.

491 Senior Seminar
Seminars on topics of major biological interest are presented by faculty members and visiting scientists. Required for all biology advanced major and honors students in their final year of study. No credit.

493 Honours Thesis
For details, see the department website or the chair. Honours students must identify a faculty member who will act as a thesis advisor before March 15 of their third year. Three credits.

499 Directed Studies
Students with an average of at least 75 may, on a tutorial basis under the guidance of a professor, pursue an area of interest not normally offered by the department. Three credits and seminar.

GRADUATE COURSES

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Welcome to business administration at StFX, where students graduate with the knowledge, skills and attitudes needed to become effective contributors to a variety of organizational types (including for-profit, not-for-profit, entrepreneurial start-ups, and the public sector) or to begin graduate study. This program puts students on the fast track to careers in a wide range of business capacities, and we are known to produce some of the world’s most influential business and industry leaders.

To attain this objective, the BBA program combines the acquisition of conceptual knowledge with applied and experiential learning approaches that include projects, presentations, simulations, field trips, class discussions, case analyses, lectures, readings, films, guest speakers, service learning, and much more. BBA students work with faculty who blend research excellence with significant practical business experience and whose research interests are relevant to practicing managers.

The BBA program provides three program options of major, advanced major and honours within each of the following seven streams or functional areas: accounting, enterprise systems, entrepreneurship, finance, international business, management and leadership, and marketing. Students can also earn a BBA joint honours degree in the arts and/or sciences. Regardless of program and stream, students may also choose a Co-op work-study option and/or may participate in an international exchange and earn credits abroad that may count toward their BBA degree.

Students who wish to study business administration and another discipline may choose the B.Sc. with advanced major in a science with business administration (see chapter 7), or the BA with major or advanced major in economics and a minor in business administration (see section 9.16).

To earn a BBA degree, students must successfully complete courses with a combined value of 120 credits. All BSAD courses are one-term, three-credit courses. Normally BBA students earn 30 credits per year for each of four years. At least 36 of each student’s 60 BSAD credits must be earned at StFX.

Transfer students should consult with the academic advising office prior to registration to confirm their course selections.

**Admission to the BBA Program**

Admission to the BBA program may be restricted based on quotas, general average, and course grades. See chapter 1 for general admission requirements.

**Advancement in the BBA Program**

BSAD 200-level courses are prerequisites for 300-level courses. Admission to 400-level courses normally requires completion of one or more courses at the 300 level. Permission of the department chair to register in a course may override the normal prerequisites.

**Substitutions**

A BBA student may substitute courses in subjects other than business administration for BSAD electives. Substitutions are not automatic. Students must apply in writing to the department chair indicating the career or program rationale for requesting a substitution. For example, students with credit for MATH 106 or 126 may wish to substitute MATH 106 or 126 for the MATH 105 requirement. ECON 271 may also be substituted for MATH 105 for students who are interested in finance.

**Affiliations with Professional Associations**

The Department of Business Administration maintains ongoing relationships with Chartered Professional Accountants (CPA) Atlantic and graduates may earn credit for most courses that serve as prerequisites for entry into the CPA Professional Education Program. Graduates may also earn credit for courses toward the Canadian Institute of Management designations (e.g. CIM), the Chartered Professional in Human Resources (CPHR) designation, Canada’s association of Information Technology professionals (CIPS) and other professional certification programs.

**300- and 400-Level BSAD Electives**

Many BSAD electives at the 300 and 400 level may be taken in either the third or fourth year. Students should be mindful of the course prerequisites and consider the appropriate sequencing of their courses. Permission of the department chair to register in a course may override the normal prerequisites.

**Co-operative Education Programs in Business Administration**

This optional academic program offers BBA students the opportunity to gain 12 months of professional, paid work experience in a range of opportunities in industry, government and not-for-profit across Canada. Students can gain professional experience within the fields of accounting, finance, marketing, management, enterprise systems and more, to reinforce classroom-based instruction and to increase students’ networks and employability. The Business Co-op Program is accredited by the Co-operative Education & Work-Integrated Learning Canada (CEWIL Canada). COOP 405 can be used as a BSAD elective or as an open elective. For further information on work term sequencing options and professional development training topics see section 9.13.

**BBA Major Degrees**

The BBA program offers majors in accounting, enterprise systems, entrepreneurship, finance, international business, management and leadership, and marketing.

**Accounting**

- **Year 1**: BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives
- **Year 2**: BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives
- **Years 3 & 4**: BSAD 321, 322, 323, 324, 471; 9 accounting credits from list below*: 15 credits BSAD electives; 12 credits arts/science electives; 9 credits open electives
* Accounting credits may be earned from this list of eligible courses: BSAD 342, 345, 346, 351, 424, 425, 426, 427, 428, 454.

**Enterprise Systems**

- **Year 1**: BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives
- **Year 2**: BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives
Years 1 BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives
Leadership
Year 1 BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12
credits arts/science electives
Years 3 & 4 BSAD 358, 361, 363**, 461, 471; 9 management credits
dissertation; 9 credits open electives
* Management and Leadership credits may be earned from this list of
** Students in the Management and Leadership Major along with a Minor in Sport
Management will substitute BSAD 363 for another management elective.
Marketing
Year 1 BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12
credits arts/science electives
Year 2 BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives
Years 3 & 4 BSAD 331, 333, 335, 358, 471; 9 marketing credits
dissertation; 9 credits open electives
* Marketing credits may be earned from this list of eligible courses: BSAD 332,
BBA Advanced Major Degrees
The BBA program offers advanced majors in accounting, enterprise systems,
entrepreneurship, finance, international business, management & leadership,
and marketing. All advanced major degree options require the achievement of a grade
average (specified in chapter 5) and the completion of additional courses within
the stream, including a Consulting Project (BSAD 492; except for advanced majors
in accounting and finance).
Accounting
Year 1 BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12
credits arts/science electives
Year 2 BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives
Years 3 & 4 BSAD 321, 322, 323, 324, 342, 424, 471; 9 accounting credits
from list below of which 6 credits must be from sublist A*; 9
credits BSAD electives; 12 credits arts/science electives; 9
credits open electives
* Accounting credits may be earned from this list of eligible courses: BSAD 345,
346, 351, 454 [plus sublist A: 425, 426, 427, 428].
Enterprise Systems
Year 1 BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12
credits arts/science electives
Year 2 BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives
Years 3 & 4 BSAD 382, 384, 385, 386, 471, 482, 483, 484, 485, 492; 9
credits BSAD electives; 12 credits arts/science electives; 9
credits open electives
Entrepreneurship
Year 1 BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12
credits arts/science electives
Year 2 BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives
Years 3 & 4 BSAD 331, 332, 356, 456, 471; 9 entrepreneurship credits from
list below*; 15 credits BSAD electives; 12 credits arts/science electives;
9 credits open electives
* Entrepreneurship credits may be earned from this list of eligible courses: BSAD
321, 335, 357, 358, 381, 383, 386, 431, 453.
Finance
Year 1 BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12
credits arts/science electives
Year 2 BSAD 221, 223, 231, 241, 261, 281; ECON 201, 202; 6 credits
arts/science electives
Years 3 & 4 BSAD 342, 344, 346, 471; 12 finance credits from the list
below*; 15 credits BSAD electives; 12 credits arts/science electives;
9 credits open electives
* Finance credits may be earned from this list of eligible courses: BSAD 345, 348,
349, 444, 445, 449, 453, 454, 497.
International Business
Year 1: BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12
credits arts/science electives
Year 2: BSAD 221, 223, 231, 241, 261, 281; 6 credits
Year 3 & 4: BSAD 357, 358, 451, 452, 471; 9 IB credits from list below*;
15 credits BSAD electives; 12 credits arts/science electives; 9
credits open electives
* International Business credits may be earned from this list of eligible courses: BSAD
349, 382, 433, 473, 474.
Management and Leadership
Year 1: BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12
credits arts/science electives
Year 2: BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives
Years 3 & 4: BSAD 358, 361, 363**, 461, 471; 9 management credits from
list below*; 15 credits BSAD electives; 12 credits arts/science electives;
9 credits open electives
* Management and Leadership credits may be earned from this list of eligible
** Students in the Management and Leadership Major along with a Minor in Sport
Management will substitute BSAD 363 for another management elective.
Marketing
Year 1: BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12
credits arts/science electives
Year 2: BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives
Years 3 & 4: BSAD 331, 333, 335, 358, 471; 9 marketing credits from list
below*; 15 credits BSAD electives; 12 credits arts/science electives;
9 credits open electives
* Marketing credits may be earned from this list of eligible courses: BSAD 332,

Business Administration
BBA Honours Degrees

The BBA program offers honours in accounting, enterprise systems, entrepreneurship, finance, international business, management and leadership, and marketing, and a joint honours degree in business administration and economics. Honours degree options require the achievement of a grade average (specified in chapter 5) and the completion of an honours thesis (BSAD 494) along with a research methods course as its prerequisite (typically BSAD 391).

Accounting

Year 1

- BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives

Year 2

- BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives

Years 3 & 4

- BSAD 321, 322, 323, 324, 342, 391, 424, 471, 494; 3 accounting credits from list below*; 9 credits BSAD electives; 12 credits arts/science electives; 9 credits open electives

* Accounting credits may be earned from this list of eligible courses: BSAD 425, 426, 427, 428.

Entrepreneurship Systems

Year 1

- BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives

Year 2

- BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives

Years 3 & 4

- BSAD 382, 384, 385, 386, 391, 471, 482, 483, 485, 494; 9 credits BSAD electives; 12 credits arts/science electives; 9 credits open electives

* Entrepreneurship credits may be earned from this list of eligible courses: BSAD 321, 335, 352, 357, 358, 381, 383, 386, 431.

Entrepreneurship

Year 1

- BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives

Year 2

- BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives

Years 3 & 4

- BSAD 331, 356, 391, 453, 456, 471, 494; 9 entrepreneurship credits from list below*; 9 credits BSAD electives; 12 credits arts/science electives; 9 credits open electives

* Entrepreneurship credits may be earned from this list of eligible courses: BSAD 321, 335, 352, 357, 358, 381, 383, 386, 431.

Finance

Year 1

- BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives

Year 2

- BSAD 221, 223, 231, 241, 261, 281; ECON 201, 202; 6 credits arts/science electives

Years 3 & 4

- BSAD 342, 344, 346, 391 (may be substituted with ECON 372), 444, 471, 494; 9 finance credits from the list below*; 9 credits BSAD electives; 12 credits arts/science electives; 9 credits open electives

* Finance credits may be earned from this list of eligible courses: BSAD 345, 348, 349, 445, 449, 453, 454, 497.

International Business

Year 1:

- BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives

Year 2:

- BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives

Years 3 & 4***:

- BSAD 357, 358, 391, 451, 452, 471, 494; 9 IB credits from list below*; 9 credits BSAD electives; 12 credits arts/science electives; 9 credits open electives

* International Business credits may be earned from this list of eligible courses: BSAD 349, 382, 383 (focusing on 2018-19), 471, 474.

** Advanced major and honours students are required to complete 12 credits (one arts pair) in a second language; this requirement will be waived for multilingual students providing acceptable evidence.

*** Advanced major and honours students are required to complete a minimum of one term abroad with an international exchange partner.

Management and Leadership

Year 1

- BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives

Year 2

- BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives

Years 3 & 4

- BSAD 358, 361, 363**, 391, 461, 471, 473, 494; 6 management credits from list below*; 9 credits BSAD electives; 12 credits arts/science electives; 9 credits open electives

* Management and Leadership credits may be earned from this list of eligible courses: BSAD 346, 362, 367, 382, 386, 387, 427, 435, 456, 462, 466, 467, 472, 474.

** Students in the Management and Leadership Major along with a Minor in Sport Management will substitute BSAD 363 for another management elective.

Marketing

Year 1

- BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives

Year 2

- BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives

Years 3 & 4

- BSAD 331, 333, 335, 358, 391, 471, 494; 9 marketing credits from list below*; 9 credits BSAD electives; 12 credits arts/science electives; 9 credits open electives

* Marketing credits may be earned from this list of eligible courses: BSAD 383, 431, 432, 433, 434, 435, 436, 437, 439, 495.

BBA Joint Honours Degree

The normal course sequence for the BBA with joint honours in business administration and economics.

Year 1

- BSAD 101, 102; ECON 101, 102; MATH 106 or 126 or 105; STAT 101; 12 credits arts/science electives

Year 2

- BSAD 221, 223, 241, 281; ECON 201, 202, 301, 302; 6 credits arts/science electives

Years 3 & 4*

- BSAD 231, 261, 391, 471, 494; ECON 493: 12 credits BSAD electives at the 300/400 level; 12 credits ECON electives at the 300/400 level; 18 credits arts/science electives

* If the honours thesis is done in the economics department, BSAD 494 is replaced by ECON 494, BSAD 391 may be replaced by ECON 372, and six credits ECON electives are replaced by six credits BSAD elective.

Business Administration Courses

All BSAD courses are one-term, three-credit courses. Normally students take 200-level courses in second year, primarily 300-level courses in third year and primarily 400-level courses in fourth year. Not all BSAD electives at the 300 or 400 level are offered every year.

101 Introduction to Business

An introduction to the Canadian business environment including exposure to the issues, trends, forces, organizations and personalities affecting businesses in Canada. The course exposes students to the types of teaching/learning experiences they will encounter in the BBA program, including case studies, teamwork, exercises, presentations, simulations, readings and lectures. Three credits and lab.

102 Business Decision-Making

Introduces students to the challenge of making business decisions, to the primary areas of business (management, marketing, operations, finance), and to the role of the general manager. The course provides an introduction to the core vocabulary and analytical tools appropriate to the functional areas, and helps students develop their analytical, presentation, small group management, and self-management skills. Prerequisites: BSAD 101. Three credits and lab.

221 Introductory Financial Accounting

An introduction to the basic concepts, principles and procedures underlying financial accounting and financial statement preparation and interpretation. Prerequisites: BSAD 101, 102. Three credits.

223 Introductory Managerial Accounting

An introduction to the basic concepts of management accounting and the use of accounting information for managerial decisions. Prerequisite: BSAD 221, completed or concurrent. Three credits.

231 Foundations of Marketing

Customers do not buy products: they buy benefits, satisfactions, and solutions to their problems. This course provides students with the customer and marketplace focus central to effective marketing. The course provides an introduction to core marketing concepts, employs exercises and cases to develop students' analytical skills, and provides an opportunity to demonstrate these skills through development of a comprehensive marketing plan. Prerequisites: BSAD 101, 102. Three credits.

241 Financial Management I

Covers fundamental aspects of financial decision-making, including financial analysis and planning, valuing stocks and bonds, capital budgeting, accessing capital markets, the cost of capital, and working capital management. Prerequisites: BSAD 221; MATH 105 completed or concurrent. Three credits.

261 Organizational Behaviour

Organizational behaviour introduces students to the context, concepts, principles and theories of human behaviour in organizations. The topics explored range from...
motivation to teamwork to communication. The objective is twofold: to understand how an organizational member might experience, interpret, and manage human relations as an individual and a group member; and to understand how the influences on human behaviour in turn contribute to organizational effectiveness. Prerequisites: BSAD 101, 102. Three credits.

321 Intermediate Managerial Accounting I
Develops the ability to request and use accounting information in the process of planning and control. Topics include cost accounting, cost and revenue analysis for decision-making, budgeting, and performance analysis. Prerequisite: BSAD 223. Three credits.

322 Intermediate Managerial Accounting II
Examines in greater depth the topics introduced in BSAD 321, applying the concepts to more complex cases. Essential for students pursuing a career in accounting; useful to non-accounting students with an interest in managerial uses of accounting information. Prerequisite: BSAD 321. Three credits.

323 Intermediate Financial Accounting I
An examination of accounting and reporting issues of the public reporting companies as they relate to published financial statements. The course examines controversial aspects of financial accounting with reference to current writings and the pronouncements of professional accounting bodies including IFRS. Emphasis is placed on income measurement and accounting for assets. Prerequisite: BSAD 221. Three credits.

324 Intermediate Financial Accounting II
A continuation of the examination of accounting and reporting issues of the public reporting companies as they relate to published financial statements. Emphasis is placed on accounting for debt, equity and special topics. Prerequisite: BSAD 323. Three credits.

331 Marketing Management
Marketing strategies are developed to capitalize on marketplace opportunities and overcome marketplace problems and threats to create and deliver value. The key components of an overall marketing strategy are segmentation, target market selection, positioning, product-service, pricing, distribution, and advertising/promotion. Students will develop marketing strategies in a variety of settings, using cases and projects. Prerequisites: BSAD 231; 223 completed or concurrent. Three credits.

332 Marketing Research
The role of marketing research is to provide relevant, timely, valid information to reduce uncertainty in decision-making. This course examines the research process, including ethics approval, problem definition, data sources, research designs, sampling, measurement, data collection and data analysis. Although the context is marketing, the research process examined is applicable to all areas of business research. Credit will be granted for only one of BSAD 332 or BSAD 391. Prerequisite: BSAD 231. Three credits.

333 Professional Sales: Building Relationships
This course addresses the nature of professional selling. The course covers changes in the traditional selling process; strategically planning sales within a larger account strategy; strengthening communications; and building partnerships. Prerequisite: BSAD 231. Three credits.

335 Consumer Behaviour
Marketers study consumer behaviour to understand and predict how and why products and services satisfy consumer’s needs. This course examines the internal and external influences on consumers’ purchase decision-making process including perception, motivation, attitude, culture, and reference groups in an interactive class setting. Students will complete exploratory consumer behaviour exercises and assignments and will use theoretical concepts to create marketing solutions to cases. Prerequisite: BSAD 231. Three credits.

341 Financial Management II
Enhances students' knowledge of the financial management topics covered in BSAD 241 through the application of financial decision-making techniques and theories to business cases. Topics include risk and capital budgeting, dividend policy, leasing, and bond refunding. Prerequisite: BSAD 241. Three credits.

344 Investment Management
Examines marketable securities as an investment medium, and the analytical techniques that may be employed in selecting a security and meeting an individual investor’s requirements. Credit will be granted for only one of BSAD 344 or BSAD 443. Prerequisite: BSAD 241. Three credits.

345 Personal Financial Management
This course draws on the principles of finance and applies them to decisions faced by individuals in the management of their personal finances. The course explores the planning process using readings, cases and problems. Prerequisite: BSAD 241. Three credits.

346 Financial Statement Analysis
This course provides participants with the tools to make informed managerial decisions regarding a company’s investments, financings, and operations. Techniques learned in this course will be used to understand the biases, limitations, and messages conveyed via the financial statements of a business. The course will examine issues such as revenue recognition, cash flow, profitability, and business valuation principles. Credit will be granted for only one of BSAD 346 or BSAD 498 (2013-2014). Prerequisites: BSAD 221, 241. Three credits.

348 Financial and Banking Institutions
This course aims at providing students with general understanding of Canadian financial institutions like commercial banks, mutual funds, pension funds, insurance companies, brokerage firms, hedge funds, credit unions, savings institution and their importance for efficient working of the financial markets. The structure of each financial institution and regulations like capital adequacy and deposit insurance pertaining to each institution is explored. Major risk associated with financial institutions include interest rate risk, credit risk, off-balance sheet activities risk, liquidity risk, foreign exchange risk and other operational risks are also discussed. Emphasis is also laid on management of all these risks associated with different financial institution. Credit will be granted for only one of BSAD 348 or BSAD 496 (2014-2015, 2015-2016). Prerequisites: BSAD 241, 342, completed or concurrent. Three credits.

349 International Financial Management
This course focuses on financial management of the firm in the international marketplace. It provides grounding in the academic literature on international financial management, and develops professional decision-making skills. Students will read extensively and class discussions will include current issues and business cases. Credit will be granted for only one of BSAD 349 and BSAD 448. Prerequisite: BSAD 241. Three credits.

351 Business Law
Introduces the legal system in Canada and provides a practical examination of laws affecting Canadian businesses, including: forms of ownership; the management and composition of corporations; the powers and duties of the board of directors; contract law (sale of goods, employment, insurance, real estate); creditor-debtor rights including bankruptcy; and the initiation and conduct of civil court actions. Prerequisites: BSAD 241; third or fourth-year status. Three credits.

352 Social Entrepreneurship
The context, models, trends, opportunities, and challenges associated with social entrepreneurship focus on areas of public concern such as economic development, education, community welfare, and healthcare. These issues are examined using case studies, group projects, and experiential learning. Emphasis is on how entrepreneurship is combined with the tools of business to create effective responses to social needs and innovative solutions to social problems. Credit will be granted for only one of BSAD 352 or BSAD 457. Cross-listed as DEV 352. Prerequisite: BSAD 241. Three credits.

356 Entrepreneurship/New Venture Development
This course uses a new venture context to examine small business and entrepreneurship. Students will develop, operate, and wind down a campus-based business, building the knowledge and skills to launch a new venture successfully, and learning that both technical business knowledge and entrepreneurship are needed to deal effectively with uncertainty and change. Prerequisites: BSAD 221, third or fourth-year status. Three credits.

357 International Business
This course examines the theory and methods of engaging in business internationally. The course involves selected aspects of globalization, culture, international trade theory, political economy, foreign direct investment, regional economic integration, the global monetary system, global strategy and international operations. Prerequisites: BSAD 221, 222, 231, 241, 261. Three credits.

358 Business Ethics
An application of philosophical theory to a variety of current issues relevant to business. By examining the consequences of business decisions upon a wide range of stakeholders, students are provided with an overview of the many ways
in which business interacts with society and the social and moral responsibilities that this interaction may generate. Prerequisite: BSAD 261 or permission of the instructor. Three credits.

361 Organizational Analysis
Introduces students to important organizational theories and organizational design principles. The course focuses on topics ranging from organizational strategy, structure and culture to organizational change. It also addresses the historical development of the modern business corporation and its changing role in society currently as an agent and vehicle of globalization. Classes feature lectures and discussions, student presentations, and case-based applications of the covered material. Prerequisite: BSAD 261. Three credits.

362 Career Dynamics
Introduces students to key concepts, theories, and principles of career management from the perspective of the individual and the organization. The course focuses on topics ranging from occupational choice, individual career patterns, and organizational career systems to career performance. The course provides students with conceptual knowledge which will be helpful not only for developing their own career strategies and tactics but also for making informed decisions as organizational leaders. Classes feature lectures, discussions, and workshops. Prerequisite: BSAD 261. Three credits.

363 Human Resource Management
A review of the many functions of human resource management, including but not limited to employee selection, development, appraisal and compensation, in addition to the broader social and legal context which influences the HR practice. This course makes a case for the strategic role that proper management of human resources plays in successful organizations while providing an important critique of the practice. Credit will be granted for only one of BSAD 363 or SMGT 322. Prerequisite: BSAD 261. Three credits.

374 Geographic Information Systems
Students will learn how GIS tools can be used to analyze, represent and model geographic data derived from censuses, surveys, maps, aerial photographs, and satellite imagery. Topics include cartography and map projections; spatial and attribute data; data capture techniques; vector and raster structure; GIS analysis; data visualization; GIS modelling. Credit will be granted for only one of BSAD 374 or ESMG 367. Prerequisite: BSAD 261. Three credits.

381 Operations Management
This course takes an integrated, systems-oriented approach to the operations function of manufacturing and service organizations. Students will explore operations decision-making using the underlying disciplines: behavioural, quantitative, economic, and systems. Prerequisite: BSAD 281. Three credits.

382 Introduction to Enterprise Systems using SAP
This course introduces enterprise systems and its role in achieving effective business process integration (BPI). The course will discuss enterprise systems theory, the limitations of conventional information systems, and the challenges and business value of effective integration across departments along the supply chain. The SAP enterprise systems will be used to illustrate course concepts, with students receiving exposure to SAP navigation, modelling ontology and administration. Credit will be granted for only one of BSAD 382, INFO 245 or INFO 348. Prerequisite: BSAD 281. Three credits.

383 Mobile Commerce
This course focuses on concepts that will help business managers to take advantage of the evolving world of mobile commerce (m-commerce) and social media opportunities. The various concepts include e-business models, e-business technology infrastructure, building e-commerce mobile presence, social networks and mobile platforms for marketing and advertising, digital content and media, online retail mobile commerce from various industries, supply chain management and collaborative commerce, m-commerce security and payments, and ethical issues in m-commerce. Credit will be granted for only one of BSAD 383 or BSAD 415/INFO 446. Prerequisite: BSAD 281. Three credits.

384 Data Management and Analytics
Databases and database management systems (DBMS) provide the foundation for virtually all modern information systems. In this course, students develop an understanding of databases with a focus on relational database technology. Students learn to use the ‘language’ of relational databases, Structured Query Language (SQL), and how to design and implement databases. The course outlines how databases are designed to support both transaction processing and business intelligence applications. A major component of the course is a group project where student collaborate to conceive, design and build a computer-based application and database. Credit will be granted for only one of BSAD 384 or CSCS/INFO 275. Prerequisite: BSAD 281. Three credits.

385 Management Reporting Using ABAP
This course will focus on how to use the ABAP development suite to better understand a system, create custom management reports, and develop drilldown reports. The course will assume no prior knowledge of programming and will focus on the key knowledge needed for systems analysts to effectively interact with systems developers. Credit will be granted for only one of BSAD 385 or INFO 346. Prerequisites: BSAD 382; 384 (completed or concurrent). Three credits.

386 Project Management and Practice
This course covers the factors necessary for successful management of system development or enhancement projects. Technical and behavioural aspects of project management are discussed. Credit will be granted for only one of BSAD 386 or BSAD 416/INFO 416. Prerequisites: BSAD 261, 281. Three credits.

387 Organizational Design Using SAP
Effective organizational design is critical to enhancing the performance and innovativeness of today's complex and global companies. This skills-based course explores organizational design using SAP. Through a case study, students will use the SAP Human Capital Management module to develop the structure of an organization, with an emphasis on the design of departments, jobs, and positions, and the application of key recruitment and qualification management processes. This course is open to students in all BBA streams. Prerequisites: BSAD 261, 281. Three credits.

391 Foundations of Management Research
An introduction to effective research in business and management. Topics include the scientific method in management research; approaches to issues in management; developing conceptual models and hypotheses; defining a thesis; conducting a literature search; evaluating research; and understanding the limitations of management research. Credit will be granted for only one of BSAD 391 or BSAD 332. Required for all honors students; open to other third- and fourth-year BBA students with an average of at least 70 as a BSAD elective. Three credits.

424 Financial Accounting Theory
A study of the development of accounting theory and the relationship of theory to practice. Major contributions to accounting theory will be examined. Prerequisite: BSAD 323. Three credits.

425 Auditing
An examination of audit strategy, procedures, and risk, as well as reporting standards and ethical and legal considerations in the current business environment. Emphasis is placed upon the theory of auditing in the context of the attest function. Prerequisite: BSAD 323. Three credits.

426 Advanced Accounting I
Develops an understanding of the financial reporting process by examining theory and practice in the management of financial disclosure. The course also deals with the accounting treatment of inter-corporate investments and consolidations. Prerequisite: BSAD 324. Three credits.

427 Management Control Systems
Focuses on managing organizational performance to optimize the implementation of organizational strategies. Within an established framework, this course reviews the process through which an organization manages performance, and specific techniques that are used to control the implementation of strategy. Concepts are reinforced via case analysis. Prerequisite: BSAD 321. Three credits. Not offered 2019-2020.

428 Advanced Accounting II
Examines such accounting topics as the financial reporting of international activities, non-business organizations, and estates and trusts. The reporting requirements for interim and segmented financial statements and bankruptcy and receivership are examined. Prerequisite: BSAD 426. Three credits.

431 Services Marketing
This course augments other marketing electives by focussing on (intangible) services. Services now account for more than 78% of Canada’s GDP and most graduates will work in a service firm. Unlike products, most services are intangible, time constrained, co-produced by the provider and the customer, perishable and highly variable. These characteristics pose unique challenges to services as diverse as insurance, investment advice, banking, entertainment, tourism and hospitality,
healthcare, consulting, transportation and education. Course methods are highly experiential and include presentations, exercises, cases and journals. Prerequisites: BSAD 331, 335. Three credits. Not offered 2019-2020.

432 Retailing
This course focuses on the strategic management of retail institutions using a marketing orientation. Topics include but are not limited to, the retail environment including recent trends, omnichannel considerations, location decisions, merchandise management, pricing, promotion and retail image. Exercises, cases and projects will be used to develop analytic proficiency and emphasize evidence-based solutions. Prerequisites: BSAD 331, 335. Three credits.

433 International Marketing
This course will focus on understanding the application of marketing principles across national borders. Topics to be covered in this course are principles and theories of marketing in International context; segmentation and targeting approaches for International markets, new product development for multiple foreign markets, International pricing, promotional and distribution strategies. Prerequisite: BSAD 357 or 331. Three credits.

434 Integrated Marketing Communications
Focuses on the design and implementation of integrated marketing communication strategies. Advertising and sales promotion activities are emphasized. Topics include defining the roles and objectives of marketing communications; selecting media; creating advertisements; and evaluating results. Prerequisites: BSAD 331, 335. Three credits.

435 Sales Force Management
An introductory course in sales force management. Topics include organizing the sales effort; establishing territories and quotas; hiring, training, compensating and supervising sales people; analyzing and evaluating the sales effort; and the ethical responsibilities associated with a sales career. Prerequisite: BSAD 333. Three credits.

436 Brand Management
This course is designed to teach students about brand strategy and brand management. It will cover the brand strategy development process and help students to understand the possible ways to position or reposition a brand. It will address ways that a brand can be integrated across all consumer touch points. It will also cover key brand management concepts such as brand health tracking, the role of the brand manager and the unique considerations in corporate and product brand management. Credit will be granted for only one of BSAD 436 and BSAD 498 offered from 2016-2018. Prerequisites: BSAD 331, 335. Three credits.

437 Digital Marketing
Focuses on aligning and executing a digital marketing strategy sensitive to the ways in which consumers interact with their brands and make purchasing decisions in today’s hyper-connected media environment. By embracing the changing digital marketing landscape, students will learn to shape a digital strategy that allows insights to come to life in the right channel, for the right consumer, at the right time. Prerequisite: BSAD 331. Three credits.

439 Customer Relationship Management and Loyalty Marketing
Customer relationships are the fundamental element of today’s competitive strategy that is central to marketing activities. This course adopts both a consumer and manager perspective on the strategic implications of customer relationships. This course utilizes a mix of lectures, readings, cases, and projects to explore relationship marketing theory and practices. This course will provide students with the opportunity to discern and understand the role of customer relationships as a core component of marketing strategy and consumer experiences. Prerequisites: BSAD 331, 335. Three credits.

444 Advanced Financial Management
Considers a broad range of financial management issues using the theory and procedural skills developed in earlier courses and applied to comprehensive case situations. Topics include working capital management, capital structure, dividend policy, cost of capital, capital budgeting, and mergers and acquisitions. Prerequisites: BSAD 342, 344. Three credits.

445 Derivatives
This comprehensive course in derivative markets and instruments focuses on analyzing standard derivative instruments such as forwards, futures, swaps, and options. By the end of the course, students will have good knowledge of how these products work, how they are used, how they are priced, and how financial institutions hedge their risks when they trade the products. Additionally, they will better understand the social and economic consequences of derivatives, and their implications for the larger investment community. Prerequisite: BSAD 344. Three credits.

449 Portfolio Management
This course provides an exploration of the theory and practice of portfolio management. Students will learn tools for managing risk, allocating funds among asset classes, and measuring the success of managers. Student will also learn how market factors, at both the macro and micro level, impact portfolio performance. By the end of the course, participants will be able to construct an investment portfolio based on a solid understanding of investment principles and be able to use available financial market information to assess its on-going performance. Prerequisite: BSAD 344. Three credits.

451 Cases in International Business
This course enables students to explore topics addressed in the introductory course BSAD 357 in more detail and requires students to apply the knowledge in a cross-functional manner for decision-making and problem solving. Students are required to systematically work in teams and analyze cross-functional problems from an international business perspective. Course methods: cases; simulations; exercises. Prerequisite: BSAD 357. Three credits.

452 Comparative International Strategy
The course examines topics in international management such as varieties of markets; importing and exporting; licensing and franchising; turnkey operations; strategic alliances and joint ventures; multiregional and global business strategies. The course also includes a comparative analysis of different market systems and national business cultures. Course methods may include lectures, guest speakers, cases, presentations and traditional examinations. Prerequisites: BSAD 357, 471 completed or concurrent. Three credits.

453 Entrepreneurial Finance
Entrepreneurial finance is designed for students who aspire to start or expand an entrepreneurial or small firm as well as others who anticipate working with the Small and Medium Sized Enterprise (SME) sector such as lenders, investors, accountants or suppliers. In combining theory and practice students will gain knowledge and utilize tools in identifying appropriate financing sources, strategies and skills in analysis and forecasting that are distinct from those drawn upon by large established companies in the corporate sector. Prerequisite: BSAD 356 or 342. Three credits.

454 Taxation
Examines the Canadian tax system with emphasis on the Income Tax Act and its effect on business decisions. The course examines the determination of income for corporations and individuals, the taxation of corporate distributions, and the computation of tax. Prerequisite: BSAD 241. Three credits.

456 Small Business Management
This course examines the unique aspects of managing a small firm, its growth and its harvest. The course incorporates current theory and practice in dealing with a variety of general management topics, and students will gain practical decision-making experience in small business management issues. Prerequisite: BSAD 356. Three credits.

461 Leadership
A theoretical and a practical exploration of leadership. Using a range of materials and individual examples, students will develop an understanding of the leadership role in organizations and the behaviours of exemplary leaders. Experiential learning techniques will allow students to perform, observe and reflect upon leadership to gain a better sense of themselves as a leader. Prerequisite: BSAD 361. Three credits.

462 Employee and Labour Relations
This course examines the history, current structure, and future of industrial relations in Canada, including trade unions and management, collective bargaining, and contract administration, plus topics in workplace health and safety and more. Students will benefit from guest lectures and from engaging in negotiation-simulation exercises. Prerequisite: BSAD 363 or SMGT 322. Three credits.

466 Lessons in Leadership from Film & Literature
This course extends students’ knowledge of leadership theory to analyze case studies in leadership. Cases are drawn largely from film, both fiction and non-fiction, and lessons are applied to a modern business context. Prerequisite: BSAD 361; 461 recommended. Three credits. Not offered 2019-2020.

467 Leading Change: The Challenge of Creating and Sustaining Organizational Change
A major challenge facing all organizations is how to adapt to change. Pressures for change come from many areas, including social, technological, demographic, environmental, and political. This course explores the challenge of leading and sustaining organizational change, including starting a change process, the challenges leaders face when initiating change, and sustaining change. Prerequisite: BSAD 361. Three credits.
471 Strategic Management
This is the capstone course in business and is required of all students. The course takes a strategic approach to integrating concepts from management, marketing, accounting, finance and information systems. From the perspective of senior executives, students study vision and mission statements, analyze internal and external environments, and the formulation, implementation and monitoring of business and corporate strategy in order to achieve sustainable competitive advantage. Course methods may include lectures, guest speakers, cases, presentations, simulations and traditional examinations. Prerequisites: BSAD 241; fourth-year standing. Three credits.

472 Environmental Sustainability for Organizations
This course explores the relationship between organizations and the natural environment, how organizations can be both negative and positive actors, both causing environmental degradation and driving sustainability, and how corporations and other types of organizations (NGOs etc) respond to issues of climate change and environmental degradation. Managing change effectively is essential to the long-term survival of an organization, and smart organizations adapt to changing demands and responsibilities. Cross-listed as CLEN 302. Prerequisite: BSAD 358 or permission of the instructor. Three credits.

473 Advanced Topics in Responsible Management
This course introduces students to advanced topics in corporate social responsibility, providing students with deeper insights into management's responsibilities to various stakeholders. Responsible management involves a triple-bottom line approach to business decision-making, which is realized through the organizational culture (e.g. employee selection; training; codes; leadership), operations (e.g. sustainability; outreach; reporting systems; performance measurement) and oversight/governance (e.g. Boards; ethics officers; regulators). Classes feature lectures and discussions, guest speakers, and a team project. Prerequisite: BSAD 358. Three credits.

474 International Human Resource Management
Students will explore the challenges of managing human resources in an increasingly international business context. The course covers a range of topics relevant for HRM practitioners including the role of culture, international business strategies and HRM models, international recruitment, expatriation and repatriation, international compensation, and performance management. A comparative approach to selected topics like employment governance and industrial relations is included. Key international employment regulators and regulatory frameworks are also covered. Methods: lectures, cases, presentations. Prerequisites: BSAD 363 or 357. Three credits.

482 Business Intelligence and Analytics
Organizations must sense and respond to changes internally and externally. Therefore, modern organizations implement business intelligence (BI) and analytics systems that support analysis and decision-making. Through case studies and hands-on labs and assignments, this course helps students understand the value of information to managers and provides an overview of how BI systems are designed and deployed. Topics covered include information-driven decision making, BI system architecture, BI tools and BI development methodology. Prerequisites: BSAD 382, 384. Three credits.

483 Systems Analysis and Design
This course introduces systems analysis as an IT discipline and describes the role of the systems analyst in the development of enterprise systems. The course introduces system development methodologies and key systems analysis and design tools and techniques, including requirements discovery methods and data and process modelling. Credit will be granted for only one of BSAD 483 or INFO 415. Prerequisites: BSAD 384, 385. Three credits.

484 SAP Implementation
This course provides a practical understanding of ERP configuration with reference to SAP. The course familiarizes students with SAP implementation methodologies and tools. Students will learn to configure the financial and materials management functionality enabling a company to do basic procurement, inventory management, and financial accounting activities. The implementation will be expanded to enable the capturing of costs (controlling) and manufacturing (production) functionality. Credit will be granted for only one of BSAD 484 or INFO 448. Prerequisite: BSAD 382. Three credits.

485 Enterprise Systems Strategy
This course provides a strategic perspective on how organizations can effectively deploy information technology (IT) with a specific focus on enterprise systems. IT is a strategic resource that is expensive, risky to implement and changes rapidly. As such, extracting value from IT requires that an organization have the right human resources, develops effective and adaptive strategic plans, and employs a robust implementation process. Credit will be granted for only one of BSAD 485 and BSAD 419 completed beginning in 2016-2017. Prerequisites: BSAD 382; 471 (completed or concurrent). Three credits.

492 Consulting Project for Advanced Majors
Exposes students to applied research in business through completion of a consulting assignment. Required for and restricted to all advanced majors in entrepreneurship, enterprise systems, international business, management and leadership, and marketing. Three credits over the full academic year.

494 Honours Thesis
Under the supervision of a faculty member, honours students will prepare and submit a thesis. Normally students develop and present draft proposals as part of BSAD 391, then complete the proposal, conduct the fieldwork and present/defend their theses as part of BSAD 494. Prerequisite: BSAD 391. Three credits over the full year.

495 Selected Topics
The topic for 2019-2020 is Visual Communications. We live in a visual world. Effective communications include economy of language and powerful visuals, including impact graphics to effectively convey key information. As information overload increasingly becomes a challenge for professionals, the ability to clearly and powerfully convey information, in the simplest terms, is becoming a key success factor. Students in this class will gain strategies for organizing complex information in simple terms and learn approaches for visually presenting information in common business contexts. Prerequisites: BSAD 331, 335. Three credits.

BBA with Minor in Sport Management
BBA students may earn an arts minor in sport management, consisting of 24 credits of students' arts/science and open electives. Course requirements and the normal course progression are as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SMGT 101</td>
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<tr>
<td>2</td>
<td>HKIN 264, 352</td>
</tr>
<tr>
<td>3</td>
<td>SMGT 322, 327; 3 credits SMGT designated courses</td>
</tr>
<tr>
<td>4</td>
<td>SMGT 423; 3 credits SMGT designated courses</td>
</tr>
</tbody>
</table>

101 Introduction to Sport Management
An introduction to sport management. Primary focus is on sport industry, including professional sport entertainment, amateur, for-profit & nonprofit sport participation, sporting goods, and sport services. Students will examine applications of managerial concepts and processes, and look at the ways in which sport organizations interact with each other, and with corporations, the government and non-governmental organizations. Micro aspects of management applied to sport, including human resources, sport marketing, sponsorship, finance, event management, and sport law. Credit will be granted for only one of SMGT 101 and HKIN 241. Restricted to students in BBA and HKIN. May be used in a minor in sport management or as an elective in BBA or HKIN. Three credits.

322 Human Resource Management in Sport Organizations
This course covers the theory and practice of building, developing and optimizing a competitive workforce within the context of sport organizations, teaching students the personnel related knowledge leveraged in the management and leadership of such organizations. Credit will be granted for only one of SMGT 322 and BSAD 363. Restricted to students in the sport management minor program. Prerequisites: SMGT 101; BSAD 261. Three credits.

327 Sport Management Ethics and Law
This course investigates moral issues in sport and judgments about right and wrong behavior amongst all stakeholders in sport. Examination of ethical theories, principles and applications, with case study analyses, and personal and professional ethical issues in sport management. Focus on the three major areas of the law that have a direct impact on the management of sport: tort liability and risk management; contract law, employment law, and constitutional law. Restricted to students in the sport management minor program. Prerequisite: SMGT 101. Three credits.

423 Sport Marketing and Event Management
This course introduces the concepts, theories, and marketing strategies utilized in the context of the sport industry. Topics include, but are not limited to the marketing planning process, components of the marketing mix, branding, event planning, operational logistics, media marketing and sponsorship. Restricted to students in the sport management minor program. Prerequisites: SMGT 101; BSAD 231. Three credits. Not offered 2019-2020.

Sport Management Designated Courses for BBA
Departmental prerequisites will apply.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Description</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ECON 291</td>
<td>Economics of Leisure, Recreation and Sports</td>
<td>3</td>
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<tr>
<td>Human Kinetics</td>
<td>Gender and Sport</td>
<td>3</td>
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<tr>
<td>HKIN 332</td>
<td>Philosophy of Sport</td>
<td>3</td>
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</tbody>
</table>
### 9.7 CATHOLIC STUDIES

G. Lalande, Ph.D., Co-ordinator

<table>
<thead>
<tr>
<th>Advising Faculty</th>
<th>Department</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>S. Baldner, Ph.D.</td>
<td>Philosophy</td>
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<tr>
<td>J. Cormier, Ph.D.</td>
<td>Chemistry</td>
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<tr>
<td>S. Gregory, Ph.D.</td>
<td>Art</td>
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<tr>
<td>L. Groarke, Ph.D.</td>
<td>Philosophy</td>
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<tr>
<td>J. Khoury, Ph.D.</td>
<td>English</td>
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<tr>
<td>A. Kolen, Ph.D.</td>
<td>Human Kinetics</td>
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<tr>
<td>K. MacAulay, Ph.D.</td>
<td>Business Administration</td>
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<tr>
<td>B. MacKenzie, MA</td>
<td>History</td>
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<tr>
<td>B. Murphy, Ph.D.</td>
<td>Earth Sciences</td>
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<tr>
<td>M. Sastri, MA</td>
<td>Philosophy</td>
<td></td>
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<tr>
<td>S. Stewart, Ph.D.</td>
<td>English</td>
<td></td>
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<tr>
<td>W. Sweet, Ph.D., D.Ph.</td>
<td>Philosophy</td>
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</tbody>
</table>

Catholicism stands essentially for a universal order in which every truth of the natural or social order can find a place.

- Christopher Dawson

Catholic studies is an interdisciplinary program in the history, art, theological, literature, philosophy, and institutions associated with Roman Catholicism.

Students who major in Catholic studies must take CATH 101 and 102; 18 additional credits from the following core courses in Catholic studies; and 12 credits from the designated courses listed below.

#### 101 The Catholic Story

An introduction to Catholic studies, the course focuses on a survey of major developments in the history of the Catholic Church: Early Christianity, the Papacy, Ecumenical Councils, Mission, Internal Reforms, Reformation and Counter-Reformation, the Enlightenment, World Wars, and the Catholic Church today. Intertwined in this chronology are several themes: Freedom, Faith and Reason, Concepts of History, Sacraments, Spirituality, and Faith. Credit will be granted for only one of CATH 101 or CATH 100. Three credits. Not offered 2019-2020.

#### 102 The Catholic Imagination

Through a study of key texts of the Catholic intellectual tradition, students will investigate and examine themes such as: persecution, martyrdom, sin, moral life, death, faith, and divine love. Texts used will draw from different historical periods, a range of genres (autobiography, drama, poetry, fiction and non-fiction prose), and various types of authors (male, female, saints, mystics, religious, and secular). Credit will be granted for only one of CATH 102 or CATH 100. Three credits.

#### 241 Sin and Salvation

This course will study the themes of sin and salvation as they appear in the Bible, in literature, and in two great theological controversies, the Pelagian controversy of the 5th century, and the Protestant Reformation of the 16th century. Three credits.

#### 245 Christ in the Catholic Tradition

This course will examine the person, nature, and work of Christ as these are understood in the Catholic tradition. Topics and texts will include: the Bible, theological works from different historical periods, literary presentations of Christ, and artistic depictions of Christ. Three credits. Offered 2019-2020.

#### 251 The End of the World

The purpose of this course is to give students an interdisciplinary understanding of eschatology, which is the study of theological and religious views about ‘last things’ (death, heaven, purgatory, hell). This topic will be presented from three points of view: historical sources, including scripture; doctrinal issues; artistic depictions. Three credits. Offered 2019-2020.

#### 261 Angels & Demons

This course will trace the evolution of the Catholic doctrine of angels, or ‘angiology.’ As a parallel to angelology, we will also study the nature and role of demons in Catholicism. By the end of the course, we will examine what the contemporary Church teaches about the role of angels in everyday life, about demons, and exorcism. Consideration of the testimony of other faiths – particularly Judaism and Islam – will also help us to cultivate a complete understanding of angels in Catholicism. Three credits.

#### 297 Selected Topics

The topic for 2019-2020 is Saints and Sinners II: The Popes in the Modern World. The papacy is the second oldest institution in the world and, therefore, it deserves to be studied. This course will look at some of the popes of the last two centuries and at the answers they provided to the many complex problems that they faced. Topics will include the following: the French revolution, the Napoleonic era, liberalism, nationalism, the industrial revolution, imperialism, World War I, fascism and nazism, World War II, communism, decolonization, and the environment. No prerequisite. Three credits.

#### 322 Contemporary Issues in Christianity & Science

This course examines the contemporary interaction between the sciences and Christianity. Topics may include: recent Christian responses to methodologies in the sciences; evolutionary theory and the interpretation of creation narratives in the book of Genesis; the meaning of human embodiment and its relevance to understanding sexuality and issues in bioethics; neuroscience and the phenomenon of religious experience; the impact of contemporary cosmology, technology, and biology on Christian theology. Credit will be granted for only one of CATH 322 or CATH 320. Three credits.

#### 331 Catholicism and the Arts I

This course will trace Catholic themes and ideas about Catholicism in literary, musical, architectural, or artistic works from the beginnings of Christianity to the early Renaissance. Cross-listed as ART 331. Credit will be granted for only one of CATH 331 or CATH 330. Three credits.

#### 332 Catholicism and the Arts II

This course will trace Catholic themes and ideas about Catholicism in literary, musical, architectural, or artistic works from the Renaissance until the contemporary era. Credit will be granted for only one of CATH 332 or CATH 330. Cross-listed as ART 332. Three credits.

#### 341 Catholic Social Thought

Rooted in scripture, philosophy, and theology, Catholic social thought proposes principles of justice that emphasize the dignity of the person, the value of economic and political institutions, and the importance of a common good. This course explores these principles and their application to contemporary social, political, and economic issues with reference to official documents of the Catholic Church. Three credits.

#### 398 Selected Topics

Three credits.

### CATHOLIC STUDIES DESIGNATED COURSES

The following courses may be chosen as designated courses to complete the program in Catholic studies. Normally a student will take no more than 9 credits from any one of these subject areas. Should a student take CATH 331 and 332, only six further credits may be taken from the art electives.

<table>
<thead>
<tr>
<th>Department</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Art</td>
<td>ART 251 Medieval Art</td>
<td>3</td>
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<tr>
<td></td>
<td>ART 252 Baroque Art</td>
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<tr>
<td></td>
<td>ART 371 Italian Renaissance Art I</td>
<td>3</td>
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<tr>
<td></td>
<td>ART 372 Northern Renaissance Art</td>
<td>3</td>
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<tr>
<td></td>
<td>ART 373 Italian Renaissance Art II</td>
<td>3</td>
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<tr>
<td></td>
<td>ART 435 Seminar in Italian Renaissance Art</td>
<td>3</td>
</tr>
<tr>
<td>Celtic Studies</td>
<td>CELY 230 Celtic Christianity</td>
<td>3</td>
</tr>
<tr>
<td>English</td>
<td>ENGL 207 World Masterpieces II: Medieval and Renaissance</td>
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<td>ENGL 388 Heroic Literature of the Middle Ages</td>
<td>3</td>
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<td>ENGL 389 Chaucer’s Contemporaries</td>
<td>3</td>
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<tr>
<td>French</td>
<td>FREN 318 Classical French Theatre</td>
<td>3</td>
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<td>FREN 319 Literary Works of the grand siecle (Les Moralistes)</td>
<td>3</td>
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<tr>
<td></td>
<td>FREN 410 Medieval French Literature</td>
<td>3</td>
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<tr>
<td></td>
<td>FREN 415 Renaissance French Literature</td>
<td>3</td>
</tr>
<tr>
<td>History</td>
<td>HIST 363 Reformation Europe</td>
<td>3</td>
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<tr>
<td>Philosophy</td>
<td>PHIL 245 Philosophy of Religion</td>
<td>3</td>
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<td>PHIL 361 Early Medieval Philosophy</td>
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<td></td>
<td>PHIL 362 Philosophy in the High Middle Ages</td>
<td>3</td>
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</tbody>
</table>
9.8 CELTIC STUDIES

R. de Vries, Ph.D.
M. Linkletter, Ph.D.
Professor Emerita
Sr. M. MacDonell, Ph.D.

Celtic studies encompasses a wide range of history, geography, and culture; from the ancient Celts of continental Europe to the modern Celtic peoples of Scotland, Ireland, Wales, Cornwall, Brittany, and the Isle of Man. The program focuses primarily on the Gaelic language, history, and culture of Scotland, Nova Scotia, and Ireland.

Interest in Celtic studies has grown in recent years. Some graduates have pursued advanced degrees in Celtic or related fields. Others have found employment in the region involving Gaelic.

Students may count courses in Celtic history (CELT 131, 132, 321, 331, 332) as courses in the Department of History. Students may count SOCI 373 as a credit in Celtic studies.

Major Program
See chapter 4.

Honours Program
Honours candidates are required to complete: CELT 101 and 102; 131 and 132, or 327 and 328; 201 and 202; 309; 490 (thesis); 33 credits CELT.

Master of Arts
The Master of Arts degree may be offered in Celtic studies. See chapter 8.

101 Gaelic Language and Culture I
This course is an introduction to the Gaelic language and culture of Scotland and Nova Scotia for students with no prior knowledge of the language. Students will learn the basics of spoken and written Gaelic as well as aspects of Gaelic culture rooted in the language. Credit will be granted for only one of CELT 101 and CELT 100. Three credits. Offered 2019-2020.

102 Gaelic Language and Culture II
Through a variety of written, oral, and audio-visual activities, students will build on their listening, speaking, reading, and writing skills from the first semester. Students will also acquire a more advanced foundation in Gaelic grammar. Discussion of select Gaelic customs, practices, and traditions from Nova Scotia and Scotland will also form part of this course as they arise in the process of learning the language. Credit will be granted for only one of CELT 102 and CELT 100. Prerequisite: CELT 101 or permission of instructor. Three credits. Offered 2019-2020.

131 Celtic Civilizations I
This course will provide an introduction to the Celtic peoples from the earliest times to the Middle Ages. Topics will include history, language, art, literature, mythology and early Celtic Christianity. Acceptable as a course in history. Three credits. Offered 2019-2020.

132 Celtic Civilizations II
This course covers the Celtic cultures of Scotland, Ireland, Wales, Brittany, Isle of Man and Cornwall from the medieval to modern period. Topics will include history, language, music, folklore, and literature. Acceptable as a course in history. Three credits. Offered 2019-2020.

201 Gaelic Language and Culture III
Building on the communication skills and grammatical concepts learned at the 100 level, students will work on acquiring greater comfort and fluency in the language in the context of Gaelic culture in Nova Scotia and Scotland. Resources from the song and storytelling tradition will be used. Credit will be granted for only one of CELT 201 and CELT 200. Prerequisite: CELT 102 or permission of instructor. Three credits. Offered 2019-2020.

202 Gaelic Language and Culture IV
Through a variety of written, oral, and audio-visual activities from Gaelic Nova Scotia and Scotland, students will build on their listening, speaking, reading, and writing skills acquired in CELT 101, 102, and 201. Students will also acquire a more advanced foundation in Gaelic grammar. Credit will be granted for only one of CELT 202 and CELT 200. Prerequisite: CELT 201 or permission of instructor. Three credits. Offered 2019-2020.

219 Celtic Music

220 Celtic Paganism
This course examines the religious practices and beliefs of the ancient Celtic peoples that we can glean from archaeology, reports of Greek and Roman commentators, place-name evidence, and the mythology in medieval Irish and Welsh narrative tradition. Other topics include syncretism, the adaptation of pagan festivals into Christian holidays, the persistence of elements of paganism into the Christian era, witchcraft in Scotland and Ireland in the context of the European phenomenon and neo-paganism today. Cross-listed as RELS 229. Three credits. Offered 2019-2020.

230 Celtic Christianity
This course is an exploration of the development of Christianity amongst the Celtic peoples. A major facet will be the medieval hagiographic tradition and saints’ cults from the fourth to the twelfth centuries. Other topics include monasticism, peregrini, the Hiberno-Scottish mission to the continent, conflict with Roman Catholicism, material culture, the modern use of the term “Celtic Christianity”. Cross-listed as RELS 229. Three credits. Offered 2019-2020.

300 Third-Year Scottish Gaelic
An advanced-level course with emphasis on attaining fluency. The course will concentrate on the Gaelic of Nova Scotia with readings from local publications. The class will also work on transcribing recordings of local speakers. Prerequisites: CELT 100, 200. Six credits. Not offered 2019-2020.

321 Celtic Art
Weave your way through Celtic knots and “horror vacui” fear of empty space,” and discover the art of the Celts. From the Battersea Shield to the Book of Kells, we will trace our way through the extraordinary legacy of weaponry, jeweller, illuminated manuscripts, Celtic crosses, and Sheela-na-Gigs to arrive at a deeper understanding of the people who made them. Acceptable as a course in history. Cross-listed as ANTH 321 and ART 321. Three credits. Offered 2019-2020.

325 The Celts in Popular Culture
Shamrocks, banshees, leprechauns, fairies, magic, and white robed druids cutting mistletoe by moonlight. These are only some of the popular images associated with the Celtic peoples. Through a selection of media (including film, television, and novels) this course will explore the complexities of identity and the popular perception of Celtic culture, broadly defined. Among other topics, students will examine the pervasive association between Celtic culture and the supernatural. Credit will be granted for only one of CELT 325 and CELT 361 (2013-2014). Three credits. Offered 2019-2020.

327 Celtic Kings, Heroes and Monsters- Medieval Ireland
From hot-headed heroes to terrifying monsters and death-tales, this course will examine topics and texts from medieval Irish literary tradition in detail. Credit will be granted for only one of CELT 327 and CELT 221. Cross-listed as ENGL 327. Three credits. Not offered 2019-2020.

328 Celtic Kings, Heroes and Monsters-Medieval Wales
From King Arthur to Culhwch and from dragons to giants, this course will examine topics and texts from medieval Welsh tradition in detail. Credit will be granted for only one of CELT 328 and CELT 222. Cross-listed as ENGL 328. Three credits. Not offered 2019-2020.

331 Scottish History
This course is a survey of the history of Scotland from the earliest times to the present with special emphasis on the role of the Gael. Topics that will be covered include the Dalriadic Scots and the consolidation of the kingdom of Alba, the early Gaelic church, the Kingdom and Lordship of the Isles, the rise of the clans, the decline of Gaelic, the Scottish Wars of Independence, the Reformation and union with England. Acceptable as a credit in history. Credit will be granted for only one of CELT 331 or CELT 333. Three credits. Not offered 2019-2020.
332  The Scots in North America
This course will follow the fortunes of the Gaels of the Highland diaspora. Emphasis will be placed on studying the Highland settlements of North America with an in-depth look at the history of the Gaels in the Maritime Provinces, particularly Nova Scotia, from the earliest settlements to more recent times. Acceptable as a credit in history. Credit will be granted for only one of CELT 332 or CELT 333. Prerequisite: CELT 331. Three credits. Not offered 2019-2020.

341  Scottish Gaelic Poetry I
This course familiarizes students with some of the masterpieces of Gaelic literature from medieval to early modern times and provides a grounding in the historical and cultural aspects of literary production in the Scottish Gaelic world. Topics to be considered include the uses of poetry, the role of the poet in medieval Gaelic society, and the origins and flowering of vernacular Gaelic verse in Scotland. Three credits. Not offered 2019-2020.

349  Medieval Medicine
This course examines the history of medicine in Western society, with particular emphasis on medieval Ireland, Wales and Scotland. During the course, we will look at specific diseases, including leprosy, the plague, and dancing mania; and at specific cures, including diet, charms and surgery. This course is of particular interest for students in Celtic studies, history, and those interested in the history of medicine. Credit will be granted for only one of CELT 349 and CELT 361 offered in 2015-2016. Three credits. Offered 2019-2020.

351  Irish Folklore
Studies in the oral traditions of Gaelic Ireland including the folktales, the storyteller, folklore collectors, folksong tradition, fairy tales and calendar customs. Credit will be granted for only one of CELT 351 or CELT 350. Three credits. Not offered 2019-2020.

352  Folklore of Scotland and Nova Scotia
An introduction to the Gaelic folklore of Scotland and Nova Scotia, with an emphasis on wonder tales, clan sagas, Fenian tales, calendar customs, rites of passage, the supernatural and the history of folkloreists. Credit will be granted for only one of CELT 352 or CELT 350. Three credits. Offered 2019-2020.

361  Selected Topics
The topic for 2019-2020 is Medieval Manuscripts: From Book of Kells to Book of Hours. Medieval manuscripts often took years of effort to complete. How were these beautiful works of art and scholarship created, and by whom? In this course, you will learn not only how medieval manuscripts were put together, but gain skill in transcribing some of the most iconic manuscripts ever compiled; special focus will lie on insular Celtic manuscripts, produced in Wales, Scotland and Ireland. This course is particularly suitable for students in Celtic Studies, English, French, and History who have an interest in medieval manuscript culture, and a desire to be able to consult primary medieval sources. Three credits.

362  Selected Topics
The topic for 2019-2020 is Medieval Sport and Entertainment. This course focuses on the types and (social) functions of sport and entertainment throughout history, with particular focus on medieval Ireland and Wales. In the sports component, we will examine different sports, including racing, throwing and ball games, and sports injuries. Lecture topics for the entertainment component include different kinds of music, instruments, entertainers and board-games. Texts will be read in translation. This course is of particular interest for students in History, Celtic studies, and students interested in sport and entertainment. Three credits.

490  Honours Thesis
Three credits.

499  Directed Study
A directed study course in advanced topics in Celtic studies. Possible topics include: Old Gaelic (Old Irish), Middle Welsh, Advanced Scottish Gaelic, Gaelic poetry, etc. Consult with the department chair. See section 3.5. Three or six credits.

GRADUATE COURSES

521 – Old Irish I
This course focusses on acquiring Old Irish grammar for the purposes of translating early Irish texts and obtaining a foundation in the historical and linguistic basis of the modern Gaelic languages. Emphasis will be placed on discussing written exercises and/or translations of Old Irish texts, mastering grammatical concepts, as well as demonstrating an understanding of prepared readings on Old Irish grammar. Three credits.

522 – Old Irish II
This course, which is a continuation of Old Irish I, focusses on acquiring further Old Irish grammar, and on translating basic Old Irish saga-texts and poetry. Three credits.

9.9  CHEMISTRY
M.A.S. Aquino, Ph.D.
J.F. Cormier, Ph.D.
G. Hallett-Tapley, Ph.D.
D. Leaist, Ph.D.
D.G. Marangoni, Ph.D.
B.J. MacLean, Ph.D.
G. Orlova, Ph.D.
S. Razul, Ph.D.
Professor Emeritus
E. J. McAliduff, Ph.D.
Senior Research Professor
T. Smith-Palmer, Ph.D.

Chemistry deals with matter at the molecular and atomic levels, seeking to explain structures, properties, and reactions, and to develop syntheses of new substances and new uses for known substances. The study of chemistry prepares graduates for advanced work in biology, engineering, geology, medicine, and other professions; for careers in industry, government agencies, science journalism, and teaching. SFX chemistry graduates can be found carrying out tasks as varied as art conservation, pharmaceutical research, and industrial product development.

Faculty members are actively engaged in pure and applied chemistry research, and opportunities exist for students to participate. Chemistry laboratories are equipped with a wide range of modern instrumentation, including spectroscopic equipment chromatographic analyzers; and instrumentation to carry out calorimetry, capillary electrophoresis, differential thermal analysis, polargraphy, and thermogravimetric analysis. Junior and senior courses involve frequent practical experience with this equipment.

The department offers honors, advanced major and major programs at the B.Sc. level. Joint honours and advanced major programs are offered in conjunction with other science departments and business administration. General requirements are given in chapter 7.

Department Requirements
Students must choose their courses in consultation with the department chair; programs and required courses are listed below. Students considering an advanced major or honours degree must complete the physics and second mathematics requirements (see below) by the end of their second year and take CHEM 221, 321, 222, 421, 245, 265 in their second year. Potential honours students should also take CHEM 231, 232 in their second year. All chemistry students are required to take CHEM 325 in the first term of their junior year. For the recommended course sequence, see the department’s website at sites.stfx.ca/chemistry/

Chemistry students are required to attend all department seminars during their third and fourth years. Credit for a course may not be earned if the lab component is not reasonably completed. Students who are concerned that their health may be adversely affected by a lab should consult the professor or department chair. As well, students who are subject to a medical condition, e.g., frequent fainting, seizures, that may endanger them or others in a lab setting, are required to inform the professor, in confidence, so that steps can be taken to minimize the danger to the student and others in the lab.

Major
The course pattern for major in chemistry is:
CHEM
6 credits introductory (101, 102 or 121, 122); 3 credits analytical (265); 3 credits inorganic (245); 6 credits organic (221, 222); 3 credits physical (231); 3 credits structural (325); 6 credits electives from 255, 321, 322, 331, 332, 341, 342, 355, 361, 362, 421, 422; 6 credits CHEM (or other science with permission of the department chair); for a total of 36 credits; plus 391, 491 (department seminars); if 331 is taken then CHEM 232 is also required

Science B
12 credits in another science

Science C
6 credits in another science (science B or C must be MATH and include MATH 106 or 121 or 126; MATH 107 or 122 or 127)

Arts X
12 credits in a humanities or social science discipline

Arts Y
6 credits in a humanities or social science discipline

Approved Elec
18 credits approved electives; unless it is taken as a science B or C course, these electives must include PHYS 121, 122. The balance must come from science, MATH, or CSCI courses or PHIL 213

Open Elec
30 credits
Advanced Major
The course pattern for advanced major in chemistry is:

**CHEM** 6 credits introductory (101, 102 or 121, 122); 9 credits analytical (265, 361, 362); 6 credits inorganic (245, 341, 342); 12 credits organic (221, 222, 421, 422); 12 credits physical (231, 232, 331, 332); 3 credits biochemistry (255); 6 credits electives from 333, 334, 421, 422; for a total of 42 credits; plus 391 and 491

**Science**
12 credits in another science

**Science C**
6 credits in another science (science B or C must be MATH and include MATH 106 or 121 or 126; MATH 107 or 122 or 127)

**Arts X**
12 credits in a humanities or social science discipline

**Arts Y**
6 credits in a humanities or social science discipline

**Approved Elect**
18 credits approved electives; unless it is taken as a science B or C course, these electives must include CHEM 325 (structural), PHYS 121, 122, and 6 credits must be from MATH 253, 254, 267, 367 (or 221). The balance must come from science, MATH, or CSCI courses or PHIL 213

**Open Elect**
24 credits

Honours
The course pattern for honours in chemistry is:

**CHEM** 6 credits introductory (101, 102 or 121, 122); 9 credits analytical (265, 361, 362); 6 credits inorganic (245, 341, 342); 12 credits organic (221, 222, 421, 422); 12 credits physical (231, 232, 331, 332); 3 credits biochemistry (255); 3 credits honours thesis (493); 6 credits electives (may be in another science with permission of the department chair); for a total of 60 credits; plus 391 and 491

**Science B**
12 credits in another science

**Science C**
6 credits in another science (science B or C must be MATH and include MATH 106 or 121 or 126; MATH 107 or 122 or 127)

**Arts X**
12 credits in a humanities or social science discipline

**Arts Y**
6 credits in a humanities or social science discipline

**Approved Elect**
18 credits approved electives; unless they are taken as science B or C courses, these electives must include CHEM 325 (structural), PHYS 121, 122, and 6 credits must be from MATH 253, 254, 267, 367 (or 221). The balance must come from science, MATH, or CSCI courses or PHIL 213

**Open Elect**
6 credits arts or science electives

The honours and advanced major degrees are accredited by the Canadian Society for Chemistry.

**B.Sc. with Joint Honours and B.Sc. with Joint Advanced Major Degrees**
Joint honours and joint advanced major degree programs are available between chemistry and each of the following: biology, computer science, Earth sciences, mathematics, physics, and business administration (advanced major only). Please note that a joint program may take more than four years to complete, and, where applicable, the physics and second six credits of mathematics must be completed by the end of the sophomore year. Interested students should consult the chair of the chemistry department.

**Chemistry and Environmental Sciences**
See section 9.19

**Master of Science**
Research fields available include various aspects of analytical, environmental, inorganic, organic and physical chemistry. General requirements for graduate degrees are outlined in Chapter 8. For specific requirements, consult the chemistry faculty or department chair.

Note: All 200-level and higher chemistry courses require CHEM 101/102 (100) or 121/122 (120) as prerequisites.

**101 General Chemistry I**
Fundamental principles of chemistry, including the nature of atoms, ions and molecules, stoichiometry, and basic thermo-chemistry. Chemistry of aqueous solutions including oxidation-reduction reactions, equilibrium and acid/base chemistry with a focus on buffer solutions. The application of chemical principles in areas of interest to students in the life sciences, human nutrition and human kinetics are emphasized. Credit will be granted for only one of CHEM 101, CHEM 100, CHEM 120 or CHEM 121. Three credits and lab/tutorial.

**102 General Chemistry II**
Chemical kinetics, thermochemistry, and the electronic structure and properties of atoms and ions and bonding models used to determine molecular geometry. Basic concepts of organic chemistry, materials and environmental chemistry. Intended for students in the life sciences, human nutrition and human kinetics. Credit will be given for only one of CHEM 102, CHEM 100, CHEM 120 or CHEM 122. Prerequisite: CHEM 101. Three credits and lab/tutorial.

**121 Principles of Chemistry I**
Fundamental properties of matter and their correlation with modern principles of chemistry. Topics include: atoms, molecules, and ions; chemical formulae and equations; reaction types and stoichiometry; the gaseous state; energy changes in chemical systems; electronic structure of atoms; models of chemical bonding; and change of state. Credit will be granted for only one of CHEM 121, CHEM 101 or CHEM 121. Three credits and lab/tutorial.

**122 Principles of Chemistry II**
Topics covered include a description of the solution state and intermolecular forces in solutions; rates of reaction, reaction mechanisms, equilibrium, acid-base reactions, electrolytes and voltaic cells, nuclear chemistry, and an overview of organic chemistry. Credit will be granted for only one of CHEM 122, CHEM 100, CHEM 102 or CHEM 120. Prerequisite: CHEM 121. Three credits and lab/tutorial.

**151 Fundamentals of General Organic, Biological Chemistry**
Topics include basic concepts of general chemistry; introduction to organic nomenclature and the reactivities of functional groups; coverage of the fundamentals of biological chemistry. May not be used as a prerequisite for any other chemistry course. Open to students in nursing, human kinetics, and arts; may not be taken for credit by other science students. Restricted enrolment. Three credits and lab.

**221 Introductory Organic Chemistry I**
The properties, reactions and synthesis of hydrocarbons, alkyl halides and alcohols; relationships between the structures of organic compounds and their physical and chemical properties; reaction mechanisms, and stereochemistry. Credit will be granted for only one of CHEM 221, CHEM 220 or CHEM 225. Prerequisites: CHEM 101, 102 or CHEM 121, 122. Three credits and lab.

**222 Introductory Organic Chemistry II**
Continuation of CHEM 221, including the properties, reactions and synthesis of ethers, aromatics and carbonyl compounds; spectroscopy with an emphasis on nuclear magnetic resonance. Credit will be granted for only one of CHEM 222, CHEM 220 or CHEM 225. Prerequisite: CHEM 221. Three credits and lab.

**225 Principles of Organic Chemistry**
An introduction to organic chemistry. The course focuses on the properties and reactions of common classes of organic compounds; the relationship between the structures of organic compounds and their physical and chemical properties. Some reaction mechanisms are also covered. Credit will be granted for only one of CHEM 225, 220, 221, 222. Prerequisites: CHEM 101, 102 (100) or 121/122(120). Three credits and lab.

**231 Physical Chemistry I**
An introduction to physical chemistry, this course begins with the properties of ideal and real gases; covers the fundamental principles of thermodynamics (the three laws of thermodynamics) and their application to physical and chemical transformations, and chemical reaction equilibrium and concludes with the chemical potential and its application to phase equilibria. Prerequisites: CHEM 101, 102 (100) or 121/122(120); MATH 106/126 and 107/127 or 121 and 122. Three credits and lab.

**232 Physical Chemistry II**
Building upon the principles developed in CHEM 231, this course describes the thermodynamics of real systems. Students will learn the applications of chemical thermodynamics, including phase equilibria in multi-component systems, ideal and real solutions, and electrochemistry; the principles governing the dynamics of systems, including the kinetic molecular theory of gases, transport properties, and the rates of chemical reactions. Prerequisite: CHEM 231. Three credits and lab.

**245 Basic Inorganic Chemistry**
An introductory course on the properties and uses of the main group elements; the practical and commercial uses of various inorganic compounds and elements; and the factors contributing to the energies and types of chemical bonds. Prerequisite: CHEM 101, 102 (100) or 121/122(120). Three credits and lab.

**255 Introductory Biochemistry**
Areas of study include the chemistry of carbohydrates, fats, proteins, nucleic acids and some enzymes. Biochemical energetics, metabolism pathways and some commonly used experimental biochemical techniques are also examined. Prerequisite: CHEM 220 completed (recommended) or concurrent or CHEM 225 or 221. Three credits and lab.

**265 Basic Analytical and Environmental Chemistry**
An introductory course which includes a survey of aqueous titration methods, the evaluation of analytical data, and an introduction to electrochemistry, UV visible
321 Intermediate Organic Chemistry
A continuation of CHEM 220, this course covers: addition and condensation polymerization; di-valent carbon compounds; pericyclic reactions; Woodward Hoffmann rules; mass spectrometry of organic compounds; organic chemistry of sulfur, phosphorus, and silicon compounds; mechanisms of nucleophile substitutions. Prerequisite: CHEM 220. Three credits and lab.

325 Organic Structural Methods
Methods for deducing the structural features of organic compounds will be examined, with emphasis on the use of spectroscopic techniques. While the theory and instrumentation of each technique will be presented, the course will focus on the interpretation of spectral data to provide information on functional groups, bonding, and stereochemistry. Use will be made of spectral data correlation charts, compilations and databases. Prerequisites: CHEM 220, PHYS 121, 122 (120). Three credits and tutorial.

331 Introduction to Quantum Mechanics
The course deals with quantum mechanics and its applications to the structure of atoms and molecules. The topics covered are: the postulates of quantum mechanics and their applications to simple physical systems, including particle in a box; the quantum mechanical model for vibration and rotation of molecules; the hydrogen atom and many electron systems; introduction to the Variation Principle and Hückel's molecular orbital method. Credit will be granted for only one of CHEM 331 or CHEM 330. Prerequisite: CHEM 232. Three credits and lab/tutorial.

332 Introduction to Molecular Spectroscopy & Statistical Thermodynamics
The course deals with the characterization of patterns of molecular quantized energy levels in rotational, vibrational and electronic spectra of both linear and non-linear molecules. Other topics include photoelectron spectroscopy and magnetic resonance spectroscopy; introduction to statistical thermodynamics including partition functions and calculations of various thermodynamics properties, equilibrium constants and rate constants. Credit will be granted for only one of CHEM 332 or CHEM 330. Prerequisite: CHEM 331. Three credits and lab/tutorial.

341 Inorganic and Theoretical Chemistry I
An introduction to molecular symmetry and group theory and its applications to vibrational spectroscopy. Also included are basic coordination chemistry of the transition metals, including discussion of some common inorganic techniques, as well as electronic magnetic properties of transition metal compounds. Prerequisite: CHEM 245. Three credits and lab.

342 Inorganic and Theoretical Chemistry II
Electronic and magnetic properties of transition metal compounds. Introduction to organometallic chemistry, homogeneous and heterogeneous catalysis, inorganic reaction kinetics and mechanisms and bio-inorganic chemistry. Prerequisite: CHEM 341; CHEM 232 recommended. Three credits and lab.

355 Advanced Biochemistry
The course focuses on the biosynthesis and metabolism of important biological molecules. Topics include lipids, amino acids, nucleotides, other carbohydrate metabolism pathways, and plant hormones. Prerequisites: CHEM 220, 255. Three credits and lab.

361 Instrumental Analytical Spectroscopy
The course deals with instrumental design and the analytical application of UV/visible, atomic, and infrared absorption spectrometers, Raman spectrometers, and fluorimeters. Topics include sample preparation, data analysis, method optimization and radiochemistry. Credit will be granted for only one of CHEM 361 or CHEM 360. Prerequisite: CHEM 265. Three credits and lab/tutorial.

362 Instrumental Separations & Analysis
This course deals with liquid and gas chromatography, capillary electrophoresis and electrochemistry. Included are sample preparation, data analysis, and method optimization. Credit will be granted for only one of CHEM 362 or CHEM 360. Prerequisite: CHEM 361. Three credits and lab.

391 Chemistry Seminar I
Introduction to seminar techniques using topics in modern chemistry, chemical information sources, basic molecular modeling and drawing. Required for, and restricted to, students in degree programs where chemistry is science A. Required in the first term of the junior year. No credit.

421 Physical Organic Chemistry
A survey of theoretical models and experimental tools to correlated data related to the structure, property, and reactivity of organic compounds. This course is intended for advanced majors and honors students in chemistry. Topics include qualitative models (resonance, hybridization, VSEPR, qualitative molecular orbital theory), quantitative computational chemistry methods (Hartree-Fock, semi-empirical and density functional theory methods), and spectroscopic methods (IR and NMR). Extensive use is made of theoretical and spectroscopic studies in assignments, computational and experimental labs. Credit will be granted for only one of CHEM 421 or CHEM 420. Prerequisites: CHEM 220, 232; PHYS 121, 122 (120). Three credits and lab.

422 Advanced Organic Chemistry: Structure & Mechanism
Building on the structures and energetics of organic reactive intermediates, this course will examine their role in reaction mechanisms. Several important classes of reactions will be analyzed in detail with respect to stereoelectronic effects. This course will also examine some of the methodology used to determine organic reaction mechanisms. The synergy between experimental and computational results will be discussed. Credit will be granted for only one of CHEM 422 or CHEM 420. Prerequisite: CHEM 220; CHEM 421 recommended. Three credits and lab.

423 Industrial Organic and Inorganic Chemistry
An introduction to the manufacture and use of common organic and inorganic materials. Sources, manufacturing processes and applications will be discussed. Credit will be granted for only one of CHEM 423 or CHEM 471 (offered in 2018-2019) Prerequisites: CHEM 220 (completed or concurrent), CHEM 231. Three credits.

432 Electrochemical Methods
This course investigates modern electrochemical techniques, including potential step and potential sweep methods, pulse voltammetry, controlled-current experiments, hydrodynamic voltammetry, and AC impedance. Particular attention will be given to processes that occur at the electrode-solution interface in the use of these techniques (mass transport, charge transport kinetics, current-time and current-potential profiles). Topics of current interest, such as fuel cells, chemically modified electrodes, corrosion, ion-selective electrodes, ultramicroelectrodes, and catalysis are included. Prerequisite: CHEM 232, 361, 362 (concurrent). Three credits and lab.

434 Colloids and Interfaces
Covers the properties of colloids, surfaces, interfaces, and polymers, and provides a qualitative description of the colloidal state, including colloids and their preparation and properties. Topics include experimental techniques used to determine colloidal properties; interfacial phenomena; the properties of surface active agents; the stabilization of colloidal systems. Prerequisites: CHEM 231, 232. Three credits and lab.

435 Introduction to Polymer Chemistry
This course introduces the basic principles and techniques employed in polymer chemistry. The following topics are emphasized: polymerization reactions and mechanisms; kinetics of polymerization; molecular mass methods; molecular sizes and shapes; polymer morphology; thermal, mechanical and rheological properties; and the thermodynamics of polymer solutions. Prerequisites: CHEM 220, 231, 232. Three credits.

445 Introduction to Photochemistry and Applications in Sustainable Catalysis
An introduction to photochemistry with a focus on current catalytic applications. The course will focus on the fundamental concepts of photochemistry and light-induced chemistry of common organic functional groups. Modern applications of photochemistry in catalysis involving transition metals, semiconductors, supramolecular materials, and nanomaterials will also be discussed. Prerequisites: CHEM 220 (221, 222) CHEM 225. Three credits and tutorial.

455 Medicinal Chemistry
Topics include the drug development process, receptors, drug interaction, pharmacodynamics, pharmacokinetics and quantitative structure activity relationships. Chemical properties and mode of action of some of the following classes of drugs will be discussed: antibacterial drugs, drugs that work on the central nervous system, anticancer drugs, antiviral drugs, and analgesics. Case studies of current drugs going through approval processes will be included. Prerequisites: CHEM 220, 255. Three credits and lab.

491 Chemistry Seminar II
Presentations by visitors, faculty, staff, senior honours and advanced major students on aspects of chemical science. Attendance is mandatory for students in all B.Sc. and M.Sc. degree programs where chemistry is science A. No formal credit is given for this course, but satisfactory completion of senior essays for students in the major program, senior essays and presentations for students in the advanced major program, and presentations based on their theses for students in the honours program are requirements for the B.Sc. degree.
499 Directed Study
Designed for students with high academic standing. Explores current topics in chemistry and new methods in chemical research. See section 3.5. Three credits.

9.10 CLASSICAL STUDIES

S. Baldner, Ph.D., Co-ordinator
D. Al-Maini, Ph.D.
E. Carty, M.Litt.
K. Penner, Ph.D.

Students in arts, science, and applied programs may take any of the courses listed below as electives or use 12 credits for a pair in classical studies.

111 Introductory Latin I
For students with no knowledge of Latin, this course introduces students to Latin grammar and vocabulary. Recommended for students interested in classical languages, literature, philosophy, history, and religious studies. Credit will be granted for only one of CLAS 111 and CLAS 110. Three credits.

112 Introductory Latin II
This course is the sequel to CLAS 111, providing the second third of Latin grammar and vocabulary. Recommended for students interested in classical languages, literature, philosophy, history, and religious studies. Credit will be granted for only one of CLAS 112 and CLAS 110. Three credits.

120 Introductory Greek
The aim of this course is to familiarize students with the basic structural features of classical Greek. In addition to grammar and vocabulary, the class will consider simple texts from classical Greek philosophy and literature as well as from the New Testament. Six credits.

215 Introductory Latin III
This course is the sequel to CLAS 112, providing the final third of Latin grammar and vocabulary. At the completion of this course, students will be ready to read classical Latin texts. Recommended for students interested in classical languages, literature, philosophy, history, and religious studies. Credit will be granted for only one of CLAS 215, CLAS 230, and CLAS 398 offered in 2014-2015. Prerequisites: CLAS 111, 112. Three credits. Not offered 2019-2020.

216 Classical Latin Texts
In this course, students who have learned Latin grammar and vocabulary, begin to ready classical Latin texts. Authors such as Cicero, Caesar, Catullus, and Ovid will be read. Recommended for students interested in classical languages, literature, philosophy, history, and religious studies. Credit will be granted for only one of CLAS 216 and CLAS 230. Prerequisite: CLAS 211. Three credits. Not offered 2019-2020.

240 Greek Literature in Translation
The study of selected works of ancient Greek literature, read in translation, concentrating on the principal figures and themes of ancient Greek mythology. Texts will include the epic poetry of Homer and the tragedies of Aeschylus, Sophocles, and Euripides. Six credits. Not offered 2019-2020.

9.11 CLIMATE AND ENVIRONMENT

L. Kellman, Ph.D., Co-ordinator

Advising Faculty
H. Beltrami, Ph.D.  Canada Research Chair in Climate Dynamics
C. Cash, Ph.D.  Coady International Institute
A. MacDougall, Ph.D.  Climate and Environment
D. Risk, Ph.D.  Earth Sciences
P. Withey, Ph.D.  Economics

The Bachelor of Arts and Science in Climate and Environment is an interdisciplinary offering that seeks to support student development and intellectual capacity in problem-solving and academic discourse pertaining to climate and environment. The complexity of environmental issues facing societies across the planet as a result of the growth of technology, globalization of economies, and rapid increases in population and per capita consumption requires an integrative approach provided by the BASc structure.

While there is an obvious link and some overlap between the two fields of study, they are distinct, both in terms of their focus, and their methodological approaches. The field of environment focuses on the physical and chemical composition, nature, and the societal relationship we maintain with our physical setting, while the field of climate focuses on how the Earth’s energy balance affects our environment. The BASc in climate and environment will appeal to students whose interest in the environment is partially or wholly motivated by their awareness of climate issues.

Students are required to meet with their program coordinator or an academic advisor every year to assess their academic progress.

Bachelor of Arts and Science in Climate and Environment
a) 24 credits of core courses: CLEN 101, 102, 201, 202, 301, 302, 401, 402.
b) BIOI 112; ECON 101; SOCI 101, 102; CSCI 161 or MATH 108; or of RGEO 101, PSCI 101, PSCI 102; CHEM 101, 102 or PHYS 101, 102 or PHYS 101 and MATH 107. These 24 credits are included in the climate concentration and the environment concentration in any combination, subject to the 100-level restrictions noted in (i) below.
c) BIOI 203, to be included in the environment concentration (whether primary or secondary)
d) ECON 281; ESCI 265; SOCI 202. These courses are included in the climate concentration and/or the environment concentration in any combination.
e) 48 credits in primary concentration: some credits from requirement (b); credits from (c) and/or (d), as preferred; remaining credits from designated courses.
f) 24 credits in primary concentration: some credits from requirement (b); credits from (c) and/or (d), as preferred; remaining credits from designated courses.
g) 12 credits from humanities designated courses.
h) 12 credits of open electives.
i) 100-level restriction: in the primary concentration, a maximum of 18 credits at the 100-level; in the secondary concentration, a maximum of 12 credits at the 100-level.
j) 300- and/or 400-level requirement: a combined minimum of 12 credits of 300- and/or 400-level courses in the primary and secondary concentrations.
k) In addition to the 12 credits of humanities, a minimum of 24 credits of arts courses. The arts courses in requirements (b), (c), and (d) fulfill 18 of these required credits.
l) A minimum of 24 credits of science courses. The science courses in requirement (b) fulfill 12 of these required credits. 12 credits must be courses with laboratory components at the 200-level or above; the science courses in requirements (c) and (d) fulfill 6 of these credits.

Bachelor of Arts and Science with Honours in Climate and Environment

The requirements are the same as those for the program above, with the following exceptions:

a) CLEN 490 is required in the primary concentration, for a total of 54 credits.
b) There are 6 credits of open electives.
c) The honours program requires a combined minimum of 18 credits of 300- and/or 400-level courses (including CLEN 490) in the primary and secondary concentrations.
Climate as Primary Concentration
Year 1: CLEN 101, 102; BIOL 112; CSCI 161 or MATH 106; ECON 101; SOCI 101, 102; one of PGOV 101, PSCI 101, 102; CHEM 101, 102 or PHYS 101, 102 or PHYS 101/MATH 107.
Year 2: CLEN 201, 202; 6 credits environment to include BIOL 203; ECON 281; 15 credits climate including ESCI 265 and SOCI 202; 3 credits humanities.
Year 3: CLEN 301, 302; 12 credits climate; 6 credits humanities; 3 credits environment; 3 credits open electives.
Year 4: CLEN 401, 402, 490; 6 credits climate; 3 credits environment; 3 credits humanities; 9 credits open electives.
Physics is highly recommended with climate concentration.

Honours with Climate Concentration
Years 1 & 2: same as program above
Year 3: CLEN 301, 302, 15 credits climate; 6 credits humanities; 3 credits open electives.
Year 4: CLEN 401, 402, 490; 6 credits climate; 6 credits environment; 3 credits humanities; 3 credits electives.
Physics is highly recommended with climate concentration.

Environment as Primary Concentration
Year 1: CLEN 101, 102; BIOL 112; ECON 101; SOCI 101, 102; CSCI 161 or MATH 106; one of PGOV 101, PSCI 101, 102; CHEM 101, 102 or PHYS 101, 102 or PHYS 101/MATH 107.
Year 2: CLEN 201, 202; 3 credits humanities; 15 credits environment including BIOL 203, ECON 281; 6 credits climate to include ESCI 265, SOCI 202.
Year 3: CLEN 301, 302; 12 credits environment; 6 credits humanities; 3 credits climate; 3 credits open electives.
Year 4: CLEN 401, 402; 9 credits environment; 3 credits climate; 3 credits humanities; 9 credits open electives.

Honours with Environment Concentration
Years 1 & 2: same as program above
Year 3: CLEN 301, 302; 15 credits environment; 6 credits humanities; 3 credits open electives.
Year 4: CLEN 401, 402, 490; 6 credits environment; 6 credits climate; 3 credits humanities; 3 credits open electives.

Minor (for BA, BSc, BBA, HKIN programs)
A) CLEN 101, 102, 201
B) one of CLEN 202, 301, 302, 303, 304
C) additional 12 credits of CLEN core and/or designated courses, only crosslisted or designated courses at the 200-leveler above can be counted toward the minor. No more than six credits of CLEN cross-listed or designated courses may be from a single department. None of the cross-listed or designated courses may be in the student's declared major subject.

Co-operative Education Program in Climate and Environment
This optional academic program allows BASc in Climate & Environment students the opportunity to gain 12 months of professional, paid work experience in a firm, as well as initiatives pursued outside the firm (such as through partnerships). Students will also have the opportunity to gain 12 months of professional, paid work experience in a firm, as well as initiatives pursued outside the firm (such as through partnerships).

101 Introduction to the Climate System
This course introduces the climate system. It provides students with an overview of the Earth energy balance and the mechanisms for energy transfer among climate subsystems. Specifically, it focuses on understanding the physical processes determining Earth’s climates and how the current Earth energy imbalance affects the dynamics of the climate system (climate change). The course is intended for students who are new to the study of climate. Three credits and lab.

102 Introduction to Environmental Systems
This course introduces students to the global environmental systems and processes necessary to address scientifically complex and diverse issues associated with environmental change. Through the study of interconnected global biogeochemical, atmospheric, landscape scale, and hydrological processes, students will learn about the science that underpins many environmental issues associated with resource availability and contamination. Case studies will be used to illustrate concepts, and students will develop an understanding of the fundamentals of environmental measurement, and an introduction to major groups of environmental contaminants. Credit will be granted for only one of CLEN 102, ENSC 265 or ESCI 271. Three credits and lab.

201 Climate Change and People: Issues, Interventions, Citizen-led Actions, and Solutions
Conducted from a global perspective, this course is intended for students who wish to broaden their understanding of the present and future impacts of climate change on societies, including the social justice elements of the issues. The course also focuses on the interventions that are being made to combat the impacts of climate change - from global policies to community-level actions. Students will be equipped to articulate the world-wide impacts of climate change, how it impacts people at a community level, and how citizen led action can lead to positive change. Cross-listed as DEV 203. Prerequisite: CLEN 101, or permission of the coordinator. Three credits.

202 Understanding Climate Change
An understanding of the impacts of climate change has become crucial for areas of governance, business, engineering and diverse fields of science. This course will provide students with a qualitative understanding of climate processes and climate models as well as an understanding of uncertainty in future climate change and limitations to model simulations. In addition, the impacts of climate change to many aspects of human societies will be explored. Cross-listed as ESCI 272. Prerequisite: CLEN 101 or ESCI 172. Three credits and lab.

301 Introduction to Science Policy and Science-Based Public Policy Decision-Making
This course introduces concepts, approaches, and trends associated with science policy and science-based policy decision making in Canada. Students will be introduced to key concepts and structures in Canadian public administration, the evolution of key policy actors and organizations that have contributed to science policy decisions in Canada with a focus on the federal level of government, and the development of science policy in Canada, as well as understand Canadian approaches to science-based policy decisions with a focus on environment-related examples and case studies. Credit will be granted for only one of CLEN 301 and PSCI 389 offered from 2016-2018. Cross-listed as PGOV 307. Prerequisite: PGOV 101 or 3 credits PSCI; ECON 101, or permission of the coordinator. Three credits.

302 Environmental Sustainability for Organizations
Managing change effectively is essential to the long-term survival of an organization, and smart organizations will strategically adapt to changing demands and responsibilities. This course looks at organizational strategy through the ‘lens’ of sustainability. It explores how corporations and other types of organizations are re-aligning and in some cases re-inventing their corporate strategies to move toward more sustainable business models. This includes initiatives undertaken within the firm, as well as initiatives pursued outside the firm (such as through partnerships). Several frameworks are offered for assessing the degree to which principles of sustainability are embraced within an organization’s strategies. In addition, tools for formulating and implementing a sustainability strategic plan are presented. Cross-listed as BSAD 472. Prerequisite: third year CLEN standing. Three credits.

303 Climate Dynamics
An exploration of the fundamental properties of the Earth systems that generate planetary climate. The course explores the intricate links between the hydrosphere, atmosphere, cryosphere and biosphere. It includes an introduction to the fundamental theories of the properties and dynamics of ocean and atmosphere systems. Earth system models are examined with emphasis on simple intuition-building mathematical models as well as discussion of large computer models. Prerequisites: CLEN 101 or ESCI 172, MATH 106, PHYS 101 or 121, ESCI 265 or 246 or permission of the coordinator. Three credits and lab.

304 Regional Weather and Climate
An introduction to the micro-meteorological and land surface processes which generate micro, local and regional scale climate and weather. Topics include: surface energy and mass balance, atmospheric stability and exchange, turbulence, climates of non-vegetated surfaces and soils, the control of vegetation on local climate, land surface models and air pollution. Prerequisites: CLEN 101 or ESCI 172, PHYS 101 or 121, ESCI 246 or 265 or 224 or permission of the coordinator. Three credits and lab.

401 Strategies for Addressing Climate and Environmental Issues
This course provides students with the tools and strategies necessary to solve problems in climate and environment. Through case studies students will learn about best practices for addressing interdisciplinary problems in climate and environment. Students will then apply these principles to develop and workshop a proposal. Restricted to fourth-year students in the BASc Climate and Environment program. Three credits.
402 Addressing Climate and Environmental Issues – Senior Practicum

This capstone course is designed to empower students with interdisciplinary and skills to deploy ideas. In this course, interdisciplinary groups of students will work to launch initiatives and take a project from conception to an outcome. The students will work closely with faculty advisors, and in some cases other outside experts, to define goals, methods, outcomes, and indicators of success. Restricted to fourth-year students in the BASc Climate and Environment program. Prerequisite: CLEN 401. Three credits.

403 Advanced Topics in Climate Dynamics

An advanced examination of current topics in climate science intended to acquaint students with the state-of-the-art in climate science and modelling. Topics include: the stability of meridional overturning circulation, permafrost carbon cycle feedbacks to climate change, climate ice-sheet interactions and sea-level rise, abrupt climate change, and climate intervention. The laboratory component will include practical exercises intended to introduce the students to handling, analyzing and displaying large data sets from global and regional climate model simulations. Prerequisite: CLEN 303 or 304. Three credits and lab.

490 Honours Thesis

Students undertake an independent research project related to climate or environment, under the supervision of a faculty member associated with the CLEN program. Students will have the opportunity to gain hands-on experience in conducting original research. Students will also develop skills in written and oral communication by submitting a scholarly paper, and defending their Thesis by presenting the results of their research in a public presentation. Restricted to students in BASc Climate and Environment honours program. Six credits.

FOUNDATION COURSES

Students complete 24 credits of foundation courses as per the progression outlined above. It is recommended that students complete these 24 credits during their first 30 credit hours in the program. Students may complete more than the required 24 credits of foundation courses so long as they do not violate any of the degree regulations listed above.

Biology

BIOL 112 Diversity of Life
CHEM 101 General Chemistry I
CHEM 102 General Chemistry II
CSCI 161 Introduction to Programming
ECON 101 Introductory Microeconomics
ECON 102 Introductory Macroeconomics
MATH 106/126 Calculus I
MATH 107/127 Calculus II
PHYS 101 Physics for the Life and Health Sciences I
or
PHYS 121 Physics for the Physical Sciences and Engineering I
PHYS 102 Physics for the Life and Health Sciences II
or
PHYS 122 Physics for the Physical Sciences and Engineering II
SOCI 101 Foundations of Sociology
SOCI 102 Key Issues in Contemporary Sociology

CLIMATE CONCENTRATION

Departmental prerequisites will apply.

Co-operative Education

COOP 405 Work Term and Integrated Learning

Dynamics

CLEN 303 Climate Dynamics
CLEN 304 Regional Weather and Climate
CLEN 403 Advanced Topics in Climate Dynamics
ESCI 472 Ocean-Atmosphere Interactions

Modelling

MATH 253 Matrix Algebra
MATH 287 Natural Resource Modelling
MATH 367 Differential Equations

Quantitative Measurements

ESCI 265 Data Analysis in Earth and Environmental Sciences
ESCI 374 Geographic Information Systems
ESCI 376 Environmental Earth Science Field Course
PHYS/ESCI 278 Introduction to Atmospheric Physics

Water Resources

AQUA 201 Rivers, Lakes and Freshwater Governance
AQUA 202 The Ocean’s Commons and Society
ESCI 266 Hydrology
ESCI 386 Oceanography

Socio-Political Perspectives

PSCI 325 Indigenous Politics
SOCI 202 Social Research Methods
SOCI 307 Qualitative Research Methods

Demography and Overconsumption

HNU 405 Food Availability
SO CI 243 Consumerism
SO CI 364 Food and Society

Resource Management and Policy

ECON 281 Environmental Economics
SO CI 245 Environmental Social Science II: Power and Change

ENVIRONMENT CONCENTRATION

Departmental prerequisites will apply.

Co-operative Education

COOP 405 Work Term and Integrated Learning

Chemistry, Monitoring and Contaminants

CHEM 265 Basic Analytical and Environmental Chemistry
ESCI 305 Geochemistry
ESCI 406 Environmental Biogeochemistry

Communities, Ecologies, and Ecosystems

BIOL 203 Ecology
BIOI 311 Coastal Marine Ecology
BIOI 345 Communities and Ecosystems
BIOI 360 Global Change Biology
BIOI 468 Restoration Ecology
BIOI 472 Freshwater Ecology

Geosciences

ESCI 171 Understanding the Earth
ESCI 215 Sedimentology
ESCI 216 Earth History
ESCI 265 Data Analysis in Earth and Environmental Sciences
ESCI 365 Geomorphology
ESCI 373 Remote Sensing
ESCI 465 Hydrogeology

Socio-Political Perspectives

DEVS 321 People and Development
PSCI 325 Indigenous Politics
SO CI 202 Social Research Methods
SO CI 307 Qualitative Research Methods

Demography and Overconsumption

HNU 405 Food Availability
SO CI 243 Consumerism
SO CI 364 Food and Society

Resource Management and Policy

BIOL 407 Integrated Resource Management
ECON 281 Environmental Economics
MATH 287 Natural Resource Modeling
SO CI 248 Environmental Social Science II: Power and Change

Issues in Environment and Sustainability

BIOL 221 Issues in Resource Management
ESCI 273 Health and the Environment
ESCI 274 Health Impacts of Climate Change
IDS 305/306 Service Learning
PHIL 333 Environmental Ethics
SOC 247 Environmental Social Science I: Problems and Paradigms
SOC 433 Advanced Problems in Environment and Society

HUMANITIES

ENGL 100 Introduction to Literature and Critical Writing
ENGL 111 Literature and Academic Writing I
ENGL 112 Literature and Academic Writing II
HIST 111 Introduction to Global History 1300-1795
Computer science is the study of computation. For any given problem, a central question is whether a solution can be computed, and, if so, what are the most efficient and practical ways to carry out the computation. Computer science also involves questions that have the potential to change how we view the world. What is the nature of intelligence and can we reproduce it in a machine? How do we represent the knowledge we have about the world and apply this knowledge to help make better decisions?

A computer is a mechanical device that manipulates symbols according to specified rules. As a discipline, computer science lies at the intersection of mathematics, science, and engineering, but it also has very strong ties to many other disciplines. Bioinformatics employs computers for storing and analyzing protein and genome sequences in order to interpret and predict biological structure and function. Business is served by providing the means to perform complex calculations and to interpret large amounts of data to make informed business decisions. The film industry relies on computer-generated graphics for three-dimensional animation. Psychology and philosophy share with computer science the desire to understand the nature of reasoning, learning and intelligence. Computer science has many subfields, such as algorithms, artificial intelligence, automated theorem proving, databases, graphics, high-performance computing, networking, programming languages, robotics, security, and verification. A common misconception is that computer science is equivalent to programming. Programming is a necessary tool, but it is not the focus.

The Department of Computer Science offers courses leading to BA and B.Sc. degrees with major, advanced major, and honours in computer science as well as a B.Sc. Advanced Major degree in Computer Science with Business. The Department of Computer Science also offers courses leading to research-based M.Sc. and course-based M.A.Sc. degrees in Computer Science. Students must meet the general requirements of both the faculty and the department in which they are registered.

Students completing a program in computer science have a wide variety of options, including graduate studies in emerging areas of computer science such as big data, robotics, computer-aided vision, and artificial intelligence; and employment in areas such as systems and network analysis, software engineering and computer programming, database, information technology consulting, and data communications. Students are advised to choose their program of study in consultation with faculty and the chair of the Department of Computer Science.

Students pursuing a major or advanced major or honours degree in computer science must take certain core courses: CSCI 161, 162, 255, 275, 277, 491. B.Sc. students are required to complete MATH 106 or 126 and 107 or 127. BA students may replace MATH 106 or 126, 107 or 127 by MATH 101 and 102. For advanced major and honours students MATH 106/126 or MATH 107/127 and MATH 101, 102 cannot be counted in the advanced major or honours credits. For advanced major and honours B.Sc. students CSCI 128, 135(235), may be available only as approved or open electives.

Those students planning a career in secondary education with computer science as their second teachable must take at least 18 CSCI credits; it is recommended that these credits be chosen from: CSCI 128, 135, 161, 162, 215, 255, 263, 275, 277, 364. In addition, it is highly recommended that they take either MATH 101 and 102, or MATH 106 or 126 and MATH 107 or 127.

### Degrees Offered

**BA with Major, Advanced Major, Honours**

**BA with Joint Major, Joint Advanced Major, Honours with Subsidiary**

**B.Sc. with Major, Advanced Major (including an option with Business Administration), Honours**

**B.Sc. with Joint Advanced Major, Joint Honours; see sections 7.1.6 and 7.1.7 for options**

**B.Sc. with Minor, Major or Advanced Major concurrently with a Diploma in Engineering**

**M.Sc.**

**M.A.Sc.**

Students interested in any of these programs should consult with the relevant department chairs.

### General requirements

General requirements for these degrees are in chapters 4 and 7.

### Department Regulations

The following pairs or groups are considered so similar that a student may only receive credit for 1 in each group: CSCI 125, 161, ENGR 147; CSCI 275, BSAD 384.

### Minor or Subsidiary in Computer Science

Students pursuing a minor or subsidiary degree in computer science must take 24 credits in CSCI.

### Major in Computer Science (Computing Concentration)

In addition to the core requirements, students must take CSCI 263, 375, and an additional 9 credits chosen from CSCI.

### Major in Computer Science (Analytics Concentration)

In addition to the core requirements, students must take CSCI 263, 368, 375, 485; MATH 253; 3 credits of STAT, plus an additional 3 credits of CSCI at the 300- or 400-level. B.Sc. students require an additional 6 credits chosen from CSCI.

### Major in Computer Science (Pre-education Concentration)

In addition to the core requirements, students must take CSCI 263, 368, 375, 485; MATH 253; 3 credits of STAT, plus an additional 3 credits of CSCI at the 300- or 400-level. B.Sc. students require an additional 6 credits chosen from CSCI.

### Advanced Major in Computer Science (Computing Concentration)

In addition to the core requirements, students must take CSCI 263, 368, 375, 485; MATH 253; 3 credits of STAT, plus an additional 3 credits of CSCI at the 300- or 400-level. B.Sc. students require an additional 6 credits chosen from CSCI.

### Advanced Major in Computer Science (Analytics Concentration)

In addition to the core requirements, students must take CSCI 223, 263; STAT 101 or 231, STAT 331; MATH 253 or 223 and 3 credits chosen from CSCI. In addition, BA students must take 3 credits, and B.Sc. students must take 9 credits, chosen from: CSCI 215, 335, 355, 364, 368, 455, 467, 495; MATH 254, STAT 357(435), 445. Typical Pattern:

- **Year 1** CSCI 161, 162; MATH 106 or 126, 107 or 127 (B.Sc. or BA) or MATH 101, 102 (BA)
- **Year 2** CSCI 255, 263, 275, 277; MATH 253; STAT 101 or 231
- **Year 3** CSCI 368, 375; additional CSCI courses
- **Year 4** CSCI 485, 491; additional CSCI courses

### Advanced Major in Computer Science (Business Administration)

In addition to the core requirements, students must take CSCI 263, 368, 375, 485; MATH 253; 3 credits of STAT, plus an additional 3 credits of CSCI at the 300- or 400-level. B.Sc. students require an additional 6 credits chosen from CSCI.

### B.Sc. Advanced Major in Computer Science with Business Administration

Science A  
CSCI 161, 162, 255, 263, 275, 277, 368, 375, 485, 491; 3 credits of CSCI at 300/400 level; 6 additional CSCI credits

BSAD  
BSAD 101, 102, 471; 12 credits from BSAD 221, 223, 231, 241, 261, 281; 9 additional BSAD credits

Science B  
MATH 106/126, 107/127, 253; STAT 231

Arts X  
12 credits humanities or social science (could be ECON)

Arts Y  
6 credits (could be ECON)

Approved electives  
CSCI 135; 9 credits from MATH/STAT, CSCI, BIOL, CHEM, ESCI, PHYS

Open electives  
6 credits (must be ECON if not in arts X or arts Y)

The degree awarded is a Bachelor of Science with Advanced Major.

### Honours in Computer Science (Computing Concentration)

In addition to the core requirements, students must take CSCI 263, 355, 396, 388, 375, 485, 493; MATH 253; 3 credits STAT; 6 credits chosen from CSCI 455, 467, 487, 495; and an additional 12 credits chosen from CSCI.
Typical Pattern:
Year 1  CSCI 161, 162; MATH 106 or 126, 107 or 127 (B.Sc. or BA) or MATH 101, 102 (BA)
Year 2  CSCI 255, 263, 275, 277; MATH 253; STAT101 or 231
Year 3  CSCI 355, 356, 368, 375; additional CSCI courses
Year 4  CSCI 485, 491, 493 and 6 credits of 455, 467, 487, 495; additional CSCI courses

Honours in Computer Science (Analytics Concentration)
In addition to the core requirements, students must take CSCI 215, 223, 263, 455, 495, 493; STAT101 or 231, STAT 331; MATH 253 or 223; 9 credits chosen from CSCI and 9 credits chosen from: CSCI 345, 355, 364, 368, 467; MATH 254; STAT 357(345), 445. Students are encouraged to take as many courses from the previous list as possible; a 400-level STAT course is recommended.

Typical Pattern:
Year 1  CSCI 161, 162; MATH 106 or 126, 107 or 127 (B.Sc. or BA) or MATH 101, 102 (BA)
Year 2  CSCI 215, 255, 263, 223 or 275, 277; MATH 223 or 253; STAT101 or 231
Year 3  STAT 331; additional CSCI/MATH/STAT courses
Year 4  CSCI 491, 493; additional CSCI/MATH/STAT courses

Co-operative Education Program in Computer Science
This optional academic program allows BA or BSc in CSCI students the opportunity to gain 12 months of professional, paid work experience in a range of opportunities in industry, government and not-for-profit across Canada. Students can gain valuable technical and professional experience in areas including (but not limited to) various programming languages and systems analysis to reinforce classroom-based instruction and to increase students’ networks and employability. The Computer Science Co-op Program is accredited by the Co-operative Education & Work-Integrated Learning Canada (CEWIL Canada). COOP 405 can be used as a CSCI elective or as an open or approved elective. For further information on work term sequencing options and professional development training topics see section 9.13.

Master of Science (M.Sc.)
This research-based M.Sc. program is designed to equip graduate students with the necessary skills to either work in industry or to continue with academia in a research career. The focus is on research under the supervision of a faculty member. Students must earn a total of 36 graduate credits. Course work counts for 12 credits. Research and thesis work count for 24 credits. General requirements for graduate degrees are outlined in chapter 8. For specific requirements, consult the department chair or visit department website.

Master of Applied Science (M.A.Sc.)
The M.A.Sc. in Computer Science is a course-based master’s program designed to equip graduate students with the necessary skills to work in industry. Students have the flexibility to select from numerous elective courses to meet their professional interests and aspirations. Students complete 36 credits of graduate-level courses. Students have the option to complete an elective, project-course course in a workplace environment. General requirements for graduate degrees are outlined in chapter 8. For specific requirements, consult the department chair or visit department website.

128  Computing Literacy and Coding for Problem Solving
This course introduces coding for everyday problem solving. Coding is introduced through multimedia computing including manipulation of images, sound and video. Intuitive programming languages, constructs and environment are used to introduce basic coding structures. The prevalence of computing in modern society is discussed. Students from all disciplines can develop their powers of coding for problem solving. B.Sc. Advanced Major and Honours students may only count this course as an approved or open elective. Three credits.

135  Computer Application Technology
This course enables students to use a variety of software tools to assist in their post-secondary studies and future careers. The course covers a broad range of information and communication tools essential for analyzing and presenting data, communicating information, organizing and writing papers, and preparing talks, slide presentations and posters. Webpage management is introduced. Topics covered support students in education, business, humanities and the health/social/physical sciences. B.Sc. Advanced Major and Honours students may only count this course as an approved or open elective; there is no such restriction for students in Arts or Business programs. Credit will be granted for only of CSCI 135 or CSCI 235. Three credits.

161  Introduction to Programming
An introduction to computers, algorithms and programming. Topics include problem analysis, algorithm development, data representation, control structures, arrays, and file manipulation. Credit will be granted for only one of CSCI 161, CSCI 125, ENGR 144 or INFO 255. Cross-listed as ENGR 147. Three credits and a two-hour lab.

162  Programming and Data Structures
Continuing from the material in CSCI 161, this course covers memory management and data abstraction via classes and objects, and introduces the linear data structures lists, stacks, and queues. Structured programming is encouraged via modular development. Credit will be granted for only one of CSCI 162 and INFO 256. Prerequisite: CSCI 125 or 161 or ENGR 147. Three credits and a two-hour lab.

215  Social Issues in the Information Age
This course exposes students to the various impacts of technology on modern society with the goal of further developing their critical thinking and their ability to make informed decisions in this rapidly changing information age. Topics covered include privacy and security, biotechnology, cybercrime, genetic engineering, artificial intelligence, digitization and intellectual property, ethical issues in computing. Other topics and their emphasis may vary by semester. Students from every background will benefit from this course. Three credits.

223  Introduction to Data Science
The course will provide students with the basic understanding of the theory and practice of data science and its applications in different real-world domains. Student will also gain practical skills in handling structured and unstructured data, analyzing and visualizing data, data mining, as well as gain hands-on experience of software tools and apply the basic techniques to their own different scientific, engineering and business applications. Prerequisite: One of CSCI 125, 128, 161 or 225. Three credits.

225  Coding for Health Analytics
Technological development has transformed modern healthcare. The large amounts of health data currently acquired and analyzed has the potential to positively affect a patient’s quality of life. This interdisciplinary course focuses on developing practical coding skills used in the healthcare domain, a rapidly growing field of computing that can have a beneficial impact on patient care and public health. Suitable for students from a variety of backgrounds planning a career involving health-related data. Open to students in all degree programs. Prerequisite: CSCI 128 or CSCI 125 or CSCI 161 or with permission of department chair. Three credits. Offered 2019-2020 and in alternate years.

255  Advanced Data Structures
This course provides a deep investigation of foundational data structures and algorithms. Criteria for selecting appropriate data structures and algorithms for a given problem are presented. General problem solving is emphasized throughout the course. Specific topics include stacks, queues, lists, trees, searching, sorting, traversals, recursion, graphs, hashing, and complexity analysis. Prerequisite: CSCI 162. Three credits and a two-hour lab.

263  Computer Organization
This course covers basic computer arithmetic, architectures, and instruction sets; in-depth study of the central processing unit, memory and input/output organization; and microprogramming and interfacing. Credit will be granted for only one of CSCI 263 or INFO 225. Prerequisite: CSCI 162. Three credits and a two-hour lab.

275  Database Management Systems
An introduction to the theory and practice associated with the design and implementation of databases. Topics include database models (relational model in detail), design, normalization, transactions, SQL, and a DBMS (Oracle). Credit will be granted for only one of CSCI 275, BSAD 384 or INFO 275. Prerequisite: CSCI 162. Three credits and a two-hour lab.

277  Discrete Structures
An introduction to sets, binary relations and operations; induction and recursion; partially ordered sets; simple combinations; truth tables; Boolean algebras and elementary group theory, with applications to logic networks, trees and languages; binary coding theory and finite-state machines. Cross-listed as MATH 277. Prerequisites: MATH 101, 102 or 107 or 127 or 122 or CSCI 162. Three credits.

335  Management Science
This course prepares students for careers as analysts and consultants in industries with a focus on enhancing business value through operations, logistics and supply chain management. A variety of successful implementations of management science/operations research tools in different application areas will be studied. Tools such as linear programming, project scheduling with uncertain activity times, various inventory models and simulation will be introduced and coupled with application in the fields of managing operations in manufacturing, long term financial planning and management of healthcare systems. Cross-listed as MATH 335. Prerequisite: MATH 105 or 106/126 or CSCI 161. Three credits. Offered 2019-2020 and in alternate years.
340 Evolutionary Computation
Evolutionary computation is a family of powerful optimization algorithms often used to find solutions to computationally intractable problems. The study of these algorithms and their application to problems is a large research area within computer science. Course topics include combinatorial optimization, genetic algorithms, particle swarm optimization, search space analysis, multi-objective optimization, and neuroevolution. Research practices and technical writing will be emphasized for course assignments/projects. Prerequisites: CSCI 255, CSCI 223 or 275, or permission of chair. Three credits. Offered 2019-2020 and in alternate years.

345 Computer Graphics
Covers fundamental mathematical, algorithmic, and representational issues in computer graphics. Topics include graphics programming, geometrical objects and transformations, 2-D and 3-D data description, manipulation, viewing projections, clipping, shading and animation. Prerequisites: MATH 253, CSCI 255. Three credits and a two-hour lab. Not offered 2019-2020; next offered 2020-2021.

350 Biomedical Computation
Technological development has transformed modern biomedical data analysis. The large amounts of biomedical data currently acquired has the potential to have real world positive impacts, however, the underlying nature of the data presents major challenges for computational biomedical analysis techniques. This course focuses on advanced technologies applied to biomedical computation, a rapidly growing field with tremendous potential for having a beneficial impact on patient care and public health. Three credits. Not offered 2019-2020; next offered 2020-2021.

355 Data Structures and Algorithm Analysis
Analysis and design techniques are applied to non-numerical algorithms for data structures. Algorithmic analysis is used to select methods of manipulating data. Prerequisites: CSCI 255, 277. Three credits and a two-hour lab.

356 Theory of Computing
An introduction to the theoretical foundations of computer science, examining finite automata, context-free grammars, Turing machines, undecidability, and NP-completeness. Abstract models are employed to help categorize problems as undecidable, intractable, tractable, and efficient. Prerequisites: CSCI 255, 277. Three credits. Offered 2019-2020 and in alternate years.

364 Mobile Application Development
A mobile application (mobile app) is a software application designed to run on smartphones, tablet and other mobile devices. The android mobile platform has become one of the most popular mobile platforms used by millions around the world. This course introduces application development for the Android OS that can run on mobile devices. The course covers the Android system, the Android development tools, Activity Lifecycle, User Interfaces in Android, and Android application development that uses SMS, databases, location tracking, and/or multimedia. Credit will be granted for only one of CSCI 364 or CSCI 471. Prerequisite: CSCI 162 or INFO 256. Three credits and a two-hour lab. Offered 2019-2020 and in alternate years.

368 Data Communications and Networking
This course covers communication systems; environments and components; common carrier services; network control, design and management; distributed and local networks. Credit will be granted for only one of CSCI 368 or INFO 465. Prerequisite: CSCI 255. Three credits and a two-hour lab.

371 Selected Topics
This course explores current topics in computer science, such as big data, distributed computing, bioinformatics and machine learning. Three credits.

375 Operating Systems
An overview of operating systems functions: file management, CPU scheduling, process management, synchronization, memory management, and deadlock handling. UNIX will be introduced and used in this course. Prerequisite: CSCI 263, completed or concurrent. Three credits and a two-hour lab.

455 Parallel and Distributed Computing
Introduces parallel programming techniques as a natural extension to sequential programming. Students will learn techniques of message-passing parallel programming; study problem-specific algorithms in both non-numeric and numeric domains. Topics will include: numeric algorithms; image processing and searching; optimization. Prerequisites: CSCI 263; 375 recommended. Three credits and a two-hour lab. Offered 2019-2020 and in alternate years.

467 Cyber Security
Covers the theory and practice of computer and network security, including cryptography, authentication, network security, and computer system security. Topics include secret and public key cryptography; message digests; authentication, including password-based, address-based, and cryptographic; network security; system security, including intruders, malicious software, and firewalls. Students will use and implement algorithms. Prerequisite: CSCI 368, completed or concurrent. Three credits. Not offered 2019-2020; next offered 2020-2021.

471 Topics in Computer Science
This course explores current topics in computer science, such as big data, distributed computing, bioinformatics and machine learning. Three credits. See http://sites.stfx.ca/mcsc/cs_courses for more information.

483 Interactive Programming with Java
This course introduces the object-oriented language Java and its application to interactive programming. Topics include Java syntax and object inheritance structure, exception handling, GUI and Applet programming, Java networking and multithreading. Credit will be granted for only one of CSCI 483 or INFO 355. Prerequisite: CSCI 162; 255 is recommended. Three credits and a two-hour lab. Not offered 2019-2020; next offered 2020-2021.

485 Software Design
The course covers techniques for the design and management of large software projects, including structured programming, debugging, and testing methodologies. Examples of large systems will be provided and a programming project will be completed. Prerequisite: CSCI 162; 483 is recommended. Three credits.

487 Organization of Programming Languages
Topics include structure of language definitions, control structures, data types and data flow, compilers vs interpreters, introduction to lexical analysis and parsing. Prerequisite: CSCI 263, and 375 completed or concurrent. Three credits and a two-hour lab. Not offered 2019-2020; next offered 2020-2021.

491 Senior Seminar
Cross-listed as MATH 491 and STAT 491. The purpose of this non-credit course is to assist students in carrying out research, composition, and oral presentation. Students will present a project topic in the fall term and their project in the spring. Attendance at departmental seminars is mandatory. No credit.

493 Senior Thesis
Students will prepare and present a thesis based on original research conducted under the supervision of a faculty member. Required for honors students; permitted for advanced major students. Three credits.

495 Artificial Intelligence
An introduction to the core concepts of artificial intelligence, including state space, heuristic search techniques, knowledge representation, logical inference, uncertain reasoning, and machine learning. Specific methods covered include neural networks, genetic algorithms, and reinforcement learning. Prerequisites: CSCI 255, 263, 277. Three credits.

GRADUATE COURSES
Credit will be granted for only one of an undergraduate or graduate level course in each group: CSCI 455, 522; CSCI 485, 523; CSCI 364, 524; CSCI 356, 541; CSCI 495, 545; CSCI 350, 546; CSCI 340, 547; CSCI 467, 561; CSCI 345, 562; STAT445, CSCI 555.

521 Real Time Systems
This course covers analysis techniques and development methodology for real-time systems. Topics include: real-time process and control, soft and hard real time systems, real-time scheduling algorithms, schedulability analysis theory, resource access control, real-time operating systems, real-time communications, performance analysis, requirement specification and system specification, verification of real-time systems, and formal development process of time critical real-time systems. Three credits.

522 High Performance Computing
This course is designed for graduate level parallel computing courses. This course is not only a course which is linked to real parallel programming software, but also a course which covers many theoretical aspects on architectures, algorithms and applications. This course concentrates on parallel program to be executed not only on special multiprocessor systems or supercomputers, but also on networked workstations (Linux) or PCs using freely available parallel software tools such as Message Passing Interface (MPI) and Parallel Virtual Machine (PVM). Some emerging topics such as cluster computing, grid computing, cloud computing, peer-to-peer computing, as well as multicore systems will be introduced. Three credits.

523 Software Engineering
This course covers major concepts in software engineering. The fundamental characteristics of the software life cycle as well as tools and techniques for development and maintenance of large software systems will be presented. A major objective of this course is to give the student real-life software development experience. This objective is accomplished through the student's participation on a team that will develop a single software product over the course of the term. Product
development will follow the full software life cycle from requirements analysis through product delivery. The focus will be on an object-oriented development strategy. Three credits.

524 Mobile Application Design/Development
Mobile applications are software applications designed to run on mobile devices. The Android mobile platform has become one of the most popular platforms used by millions of devices around the world. This course introduces App development for the Android OS. The course covers the Android system, fundamental components of Android Apps, how to create user interfaces in Android, and how to create Android Apps that use databases, location, and networking, multimedia and/or other services. Three credits.

526 Embedded Systems
This course will study embedded programming with a focus on wireless sensor networks, and the state of the art in mobile communication research. Students are expected to present research papers from the recent literature, and to learn TinyOS programming with NesC and application development in MICA2 platform. Three credits.

527 Big Data
The emphasis of this course is to introduce big data technology. Course topics include reliable and big data storage, efficient big data processing and analytics, and important Spark APIs. Students will gain abilities to design highly scalable systems that can store, process, and analyze a big volume of unstructured and/or semi-structured data in batch mode and/or real time. Three credits.

528 Advanced Data Analytics
The course will introduce advanced algorithms for structured data analytics and their applications in real-world problems. Course topics include classification, cluster analysis, association analysis, and anomaly detection. Students will learn these algorithms with hands-on implementation and gain abilities to derive value from collected data by applying the advanced data analytics algorithms. Three credits.

541 Theory of Computing
This course focuses on three areas central to the theory of computation: automata, computability and complexity, to investigate the question: What are the fundamental capabilities and limitations of computers? We study automata (models of computation) e.g., finite state machines, pushdown automata and Turing machines and the languages recognized by them. We investigate complexity theory, to classify problems as easy or hard and computability theory to classify problems as solvable or not. Three credits.

542 Representation & Reasoning
This course provides a survey of general methods for analyzing knowledge about the real world and mapping it to a computable form. Principles of knowledge representation and their role in adapting logic and ontolgy to the task of constructing computable models of an application domain are introduced. Methods for representing dynamically changing processes and events are presented. Ways of dealing with vague, uncertain, imprecise or inconsistent facts are discussed. Three credits.

543 Specification and Verification
Topics covered include: introduction to formal methods; propositional and predicate logic; verification and model checking; Hoare-style program verification; modeling systems; specification using temporal (e.g., CTL, LTL), and other modal logics; various model checkers; partial order reduction; compositional reasoning and abstraction; automated theorem proving using tableau; problems/challenges to effective verification of large scale systems. Three credits.

544 Computational Logic
This course focuses on automated theorem proving. We start with a rigorous treatment of propositional and first order calculus (with equality) and the method of natural deduction, giving a thorough investigation of the soundness and completeness proofs and decidability. Then we compare and contrast several automated theorem proving methods such as tableau, resolution, sequent style calculus and rewrite systems. Extensions to other logics will be discussed. Students will implement one of the automated theorem proving methods. Three credits.

545 Artificial Intelligence
This course covers advanced core concepts in artificial intelligence (AI). Topics covered include intelligent agents, uninformed and informed (heuristic) search, logical and probabilistic knowledge representation, logical and probabilistic inference, essentials of machine learning, neural networks, reinforcement learning, and evolutionary computation. Project requires and in-depth study of a topic related to AI. Three credits.

546 Biomedical Computation
Technological development has transformed modern biomedical data analysis. The large amounts of biomedical data currently acquired has the potential to have real world positive impacts, however, the underlying nature of the data presents major challenges for computational biomedical analysis techniques. This course focuses on advanced technologies applied to biomedical computation, a rapidly growing field with tremendous potential for having a beneficial impact on patient care and public health. Three credits.

547 Evolutionary Computation
Evolutionary computation is a family of powerful optimization algorithms often used to find solutions to computationally intractable problems. The study of these algorithms and their application to problems is a large research area within computer science. Course topics include combinatorial optimization, genetic algorithms, particle swarm optimization, search space analysis, multi-objective optimization, and neuroevolution. Research practices and technical writing will be emphasised for course assignments/projects. Three credits.

554 Matrix Computation
Through the use of lectures, discussions, the text, assignments, and labs, this course will familiarize students with the advanced knowledge of triangular systems, positive definite systems, banded systems, sparse positive definite systems, general systems; Sensitivity of linear systems; orthogonal matrices and least squares; singular value decomposition; eigenvalues and eigenvectors; and QR algorithm with their applications. Three credits.

555 Data Mining and Machine Learning
The course covers the most current techniques used in data mining and machine learning and their background theoretical results. Two basic groups of methods are covered in this course: supervised learning (classification or regression) and unsupervised learning (clustering). The supervised learning methods include Recursive Partitioning Tree, Random Forest, Linear Discriminant and Quadratic Discriminant Analysis, Neural Network, Support Vector Machine. The unsupervised learning methods include Hierarchical Clustering, K-means, K-nearest-neighbour, model-based clustering methods. Furthermore, the course also covers the dimensional reduction techniques such as LASSO and Ridge Regression, and model checking criteria. Three credits.

561 Computer and Network Security
The objective of the course is to provide a broad overview of issues and approaches, while exposing students to recent advancements in computer and network security. This course will cover the theory and practice of computer and network security. While covering the theory of computer communication security, the course will focus on using and in some cases implementing various algorithms as well. Three credits.

562 Computer Graphics

563 Advanced Database Systems
Explores advanced and evolving issues in database management systems. Topics include advanced database design and normalization, database implementations and optimizations, advanced and embedded SQL, ODBC and JDBC, XML, data warehousing, and emerging database trends. A major project is a key component of the course. Three credits.

564 Constraint Processing and Heuristic Search
The course will examine combinatorial problem solving and optimization with constraint processing and heuristic search methods for a variety of real world applications. It contains two main parts. The first part covers basic and advanced search techniques and the second part studies constraint processing techniques and constraint programming. Three credits.

594 Computer Science Graduate Seminar
This seminar course prepares graduates for industry or academia by developing knowledge and skills that will be applicable in a variety of professional contexts. Among these skills will be professional communication with industry and non-industry audiences, social and ethical issues in the field, grant and proposal writing, job search skills, research skills, and current innovations in research. The course is facilitated by computer science faculty members and includes presentations by invited experts. Pass/Fail. Six credits.

595 Project
The main objective of this course is to give the student real-life software development experience. The student will work with an industry or academic partner and develop a computing solution to a real-world problem. The student will be responsible to manage the project from development to execution. The student will gain practical experience on methods, languages, and tools in software design and development. Six credits.
9.13 CO-OPERATIVE EDUCATION

J. MacDonald, MLIS, M.A.Ed., M.Ed., Manager

Co-operative education utilizes experiential learning partnerships between the university and employer to provide students with opportunities for relevant, paid employment while completing academic studies. A combination of professional development training and practical work experience empowers students to apply and further develop the knowledge and skills they have acquired in their degree program. Participation in the co-op education program is an option for students enrolled in biology, business, climate & environment, computer science, health, human nutrition and mathematics. Students enrolled in a BA must commit to a major in computer science or mathematics to continue in the co-op education program. Students enrolled in BSc must commit to a major in biology, computer science, or mathematics to continue in the co-op education program. Students' degree programs and registration will be monitored and academic averages will be assessed annually to determine eligibility to continue in the program. Participation in the cooperative education program is voluntary, obtaining a cooperative education work assignment is competitive, and students are not guaranteed a cooperative education work placement.

Students are eligible to join the co-operative education program after at least one full year of academic study. Students may apply to the program at any time but must apply before the published deadline in early October. Admission to the program is based on academic requirements and also the student’s ability to be flexible regarding work term options. A minimum overall first-year average of 65% is required for students joining the program in their second year. A minimum overall second-year average of 70% is required for students who join in second or third year. To remain in the co-op education program, students must be actively engaged, must be registered in a minimum of 12 credits per term while completing co-op requirements, and maintain a 70% average. The co-op education program begins and ends on an academic term. After completing the minimum of 12 months of co-op work experience, students are required complete a minimum of 12 credits (including COOP 405) at StFX.

Students enrolled in the program complete their professional development training within the first academic semester of joining the co-op education program. The professional development training assists with students’ success within the program and their work terms. Students are notified of the professional development training schedule when they apply to the co-op program. Students must adjust their calendars in order to ensure they are available to complete the training when it has been scheduled. Students must successfully complete mandatory professional development training to be eligible for co-op work terms.

Students have the option to complete their co-op work terms as an alternating or internship model. The alternating model consists of 4-month plus 8-month or 8-month plus 4-month. The 12-16 month work term is considered a co-op internship and must be with one employer. Work terms must occur in at least two of the three “academic semesters” and must be preceded and followed by an academic term(s). “Academic semesters” are January to April, May to August, and September to December. The co-op office and academic advising will help you make a plan that is right for you. All work placements must be approved by the co-op office in advance. Failure to obtain the required approval of the work term from the co-op office may result in the work term not counting toward the program. Successful completion of work term is required to continue in the Co-op program.

Students may withdraw from the co-operative education program by completing the online withdrawal form found on the co-operative education program Moodle page. There will be no refund of fees collected for professional development seminars or work terms completed prior to the date of withdrawal. For students who withdraw during a PDS session or while completing a work term, normal refunding will apply. Students who withdraw from the program while on work term must notify the co-op office of their intention to withdraw. The co-op office will review the student’s employment contract as some roles require the student to be enrolled in a co-op program. The co-op office will notify the student if they must complete their work term and necessary assignments before the formal withdrawal from the co-op program will be processed.

Students who successfully complete all co-op requirements and all academic requirements for their degrees will receive a certificate of completion with their degree parchment. Also, a co-operative education designation will be displayed in the degree awarded section of their official transcripts.

The co-operative education programs in biology, business, computer science, human nutrition are accredited by the Co-operative Education & Work–Integrated Learning Canada (CEWIL Canada). Climate & environment, health and mathematics co-op programs also follow the same guidelines as our accredited programs.

110 Discovering Career Development for a Changing and Complex World

This seminar lays the foundation of career development. Students discover the skills they need for future employability. Through developing career management strategies, students will establish a set of habits that will enable them to achieve their career goals and develop career resiliency. Topics covered in this seminar include, career development, self-assessment, reflection, and mission statements. Students will also be introduced to the electronic portfolio development process and the important role it can play in the career development process. No credit.

120 Achieving your Professional Presence from Vision to Action

In this seminar students will build upon and connect the foundational material addressed in COOP 110. Students will be presented with models for, identifying and assessing their knowledge, skill and abilities, setting goals, developing an effective cover letter, resume, and social media presence and networking. Students will discover and apply effective job search strategies that will assist with building a competitive application that stands out from the crowd. Prerequisite: COOP 110. No credit.

130 Enhancing Your Engagement in the Workplace

Landing a job can be very challenging in the competitive labour market. Typically, the resume gets you in the door, but the interview is where you close the deal. COOP 130 offers students an overview of interviews, (models/questions/techniques) and assists students with developing interview strategies that will lead to employment success. Also, students are introduced to relevant workplace topics that will assist with better or promote positive transitions into the workplace. Prerequisites: COOP 110, 120. No credit.

401-404 Co-operative Education Work Terms

COOP work terms paraly professional development theory and academic knowledge into practice in employment that is related to student’s degree program. While on work term, the co-op program staff and the student’s supervisor will monitor and evaluate the student’s progress. Students will document their work term learning objectives, participate in a work site evaluation by the Co-op staff, submit formal performance evaluation and write a reflective essay. No credit.

405 Co-operative Education Work Term and Integrated Learning

Following the completion of work term requirements, students reflect on, discuss and report on their co-op experience. Three credits used to satisfy major subject elective or open or approved elective requirements in the BA and BSc degrees, and to satisfy BSAD elective or open elective requirements in the BBA degrees. In the BAsc degrees, this course can be used to satisfy primary or secondary concentration designated elective or open elective requirements. Prerequisites: COOP 110, 120, 130, 401, 402 and 403. Three credits.

9.14 DEVELOPMENT STUDIES

J. Langdon, Ph.D., Co-ordinator

Advising Faculty

S. Dodaro, Ph.D.
N. Maltby, Ph.D.
Z. Ozkok, Ph.D.
W. Tokarz, Ph.D.
R. Wyeth, Ph.D.

S. Vincent, Ph.D.

Department

Economics
Business Administration
Economics
Political Science
Modern Languages
Anthropology
Biology

This interdisciplinary program in development studies examines the local and global social, economic, political, and cultural contexts in which development takes place. Students will investigate the theory and practice of development and social justice, and learn about the Antigonish Movement.

Students may complete an honours with subsidiary, a joint advanced major or a joint major in development studies and another subject, a subsidiary or a minor in development studies, pair two courses, or simply take DEV 101, 201 and/or 202 as electives. See section 4.1 for degree regulations. Students who intend to do further courses in development studies are strongly encouraged to take DEV 101 in their first year. Students graduating with honours, joint advanced major or joint major in development studies and another subject must complete ECON 101 and 102 during the course of their degree. Research design and basic statistics may also be useful skills to acquire; a social science research methods course is
required for students graduating with an honours or joint advanced major degree. To satisfy prerequisite requirements, these students should take at least one of the following during their first year: ANTH 111/112, PSCI 101/102, SOCI 101/102. As well, it is recommended that students graduating with honours, joint advanced major or joint major in development studies gain competency in a second language relevant to their studies (e.g., French or Spanish). Note: For honours, joint advanced major and joint major, no more than 12 credits of development studies cross-listed or designated courses (see below) may be in a single subject. Also, none of the development studies cross-listed or designated courses may be in the student’s other declared subject.

Honours in Development Studies with a Subsidiary
See section 4.1 for general regulations on degree requirements.
Requirements:

a) 48 credits in DEVS (subject A) and 24 credits in the subsidiary subject (subject B). Students must complete the following:
   i) DEVS 201, 202, 302, 303, 311, 321, 401, 405, 412 27 credits
   ii) DEVS 490 (thesis) 6 credits
   iii) DEVS cross-listed or designated courses 15 credits
   iv) ECON 101, 102 6 credits
   v) Social Science Research Methods Course* 3 credits
*Social science courses that satisfy the DEVS research methods requirement include ANTH 304, ANTH 305, PSCI 399, SOCI 202, and SOCI 307. Other courses may be considered with the permission of the Development Studies Coordinator.

b) Course Pattern: see section 4.1.3

Joint Advanced Major in Development Studies
Requirements:

a) 36 credits in DEVS (subject A) and 36 credits in another subject (subject B); see definition of subject at 4.1.2) or 36 credits in another subject (subject A) and 36 credits in DEVS (subject B). The program or department requirements for advanced majors are applicable in both subjects.

Students using DEVS as subject A or B must complete the following:
   i) DEVS 201, 202, 302, 303, 311, 321, 401, 405 24 credits
   ii) DEVS core, cross-listed or designated courses 12 credits
   iii) ECON 101, 102 6 credits
   iv) Social Science Research Methods Course* 3 credits
*Social science courses that satisfy the DEVS research methods requirement include ANTH 304, ANTH 305, PSCI 399, SOCI 202, and SOCI 307. Other courses may be considered with the permission of the Development Studies Coordinator.

b) Course Pattern: see section 4.1.3

c) A senior paper is required for all advanced major students. The senior paper will be written in either DEVS 401 or 405 when development studies is subject A. When development studies is subject B, the senior paper will be written for the department or program that is subject A.

Joint Major in Development Studies
Requirements:

a) 36 credits in DEVS (subject A) and 36 credits in another subject (subject B).

The program or department requirements for majors are applicable in both subjects.

Students must complete the following:
   i) DEVS 201, 202, 302, 303, 311, 321 18 credits
   ii) Minimum of 3 credits from 401, 405 3 credits
   iii) DEVS core, cross-listed or designated courses 15 credits
   iv) ECON 101, 102 6 credits

b) Course Pattern: see section 4.1.3

Subsidiary in Development Studies
Requirements:

24 credits in DEVS and 48-60 credits in the honours subject. No more than six credits of DEVS cross-listed or designated courses may be from a single department. None of the development studies cross-listed or designated courses may be in the student’s honours subject.

Students must complete the following:
   i) DEVS 201, 202, 302, 303, 311, 321, 401, 405 9 credits
   ii) Minimum of 3 credits from 303, 311, 321 3 credits
   iii) DEVS core, cross-listed or designated courses 12 credits

Minor in Development Studies
Requirements:

24 credits in DEVS. No more than six credits of DEVS cross-listed or designated courses may be from a single department. None of the cross-listed or designated courses may be in the student’s declared major subject. Students must complete the following:
   i) DEVS 201, 202 6 credits
   ii) DEVS core, cross-listed or designated courses 18 credits

Pair
   i) DEVS 201, 202 6 credits
   ii) DEVS core, cross-listed or designated courses 6 credits

DEVELOPMENT STUDIES CORE COURSES

101 Introduction to Development Studies
This course offers students an introduction to the field of development studies. It explores core concepts about ‘development’ and applies these at the global, national and local level. Along with an introduction to international development institutions, topics covered include colonial legacies and First Nations, gender and development, environment and climate change, human rights and diversity. Discussion of these topics will be situated in the context of country case studies. Three credits.

201 International Development: The Global South
An introduction to development theory and practice as it applies to inequality between countries, and within countries of the Global South. The course provides students with a critical framework for analyzing development policies, programs, trends, and impacts, especially since the formation of the Bretton Woods institutions. Students will explore the concepts of sustainable development and of social and economic justice as they relate to development. Credit will be granted for only one of DEVST 201 or DEVST 202. Prerequisite: 24 credits or permission of the co-ordinator. Three credits.

202 International Development: Canada
In this course, Canada’s place in the world, its path to development, and the challenges it currently faces will be explored. These include the retention of its capacity to generate sufficient wealth to provide a high standard of living to its citizens, the persistence of inequalities that raise questions about the distribution of the benefits of development, and the challenge of sustainability, given the stresses that industrialized societies such as Canada’s place on their physical and social environment. Credit will be granted for only one of DEVST 202 or DEVST 200. Prerequisite: 24 credits or permission of the co-ordinator. Three credits.

302 Globalization and Development
The course provides an analysis of the forces affecting the globalization process, its evolution over time, and its impacts on development. It takes a broad view, from an interdisciplinary perspective, of the factors at work, their nature and their consequences. Topics that are considered include the fact and policy dimensions of globalization, questions that pertain to equity and fairness, issues concerning production, consumption, global markets, governance, and the role of various international institutions. It also analyzes the mechanisms that link the global to the local level. Credit will be granted for only one of DEVST 302 or DEVST 300. Prerequisites: DEVST 201, 202 or ECON 101, 102. Three credits.

303 Topics in Globalization and Development
The course considers in detail a range of topics that pertain to the globalization process that are important to development. It provides an interdisciplinary analysis of such issues as: international trade and finance and their impacts, regionalization versus globalization, the environment and sustainability, culture and ideas, justice and human rights, gender and health issues, migration, MNCS, NGOs and civil society. The course also considers alternatives to the existing reality in terms of changes in institutions, practices, policies, local and grassroots responses (including the Antigonish Movement). Credit will be granted for only one of DEVST 303 or DEVST 300. Prerequisite: DEVST 302 or permission of the instructor. Three credits.

311 Issues in Development Practice
In this seminar course, students make the link between theoretical discussion of development and actual development practice, both locally and internationally. An in-class component addresses the practicalities of development interventions and the major issues that affect them, such as: gender/ethnic/class stratification; power relations within and between localities and external agents; and indigenous versus dominant forms of knowledge. Student will then apply this in an experiential learning component in a local or international context. Credit will be granted for only one of DEVST 311 or DEVST 310. Prerequisites: DEVST 201, 202; or permission of the instructor. Three credits.

321 People and Development
This course critically examines how development policy and practice have affected target populations. Students will develop critical analytical skills and knowledge by examining the strengths and weaknesses of strategies such as those promoting popular participation, gender equality, small-scale business, local knowledge and democratic reform, as well as of different forms of development institutions. The course uses case studies based on long-term, first-hand participant observation that place development processes in larger historical, political and economic
context. Cross-listed as ANTH 320. Prerequisites: ANTH 111, 112 or DEVS 201, 202. Three credits.

391 Selected Topics
Prerequisite: DEVS 201. Three credits.

392 Selected Topics
The topic for 2019-2020 is Global Food Systems and Agriculture. This course will explore the social, economic and environmental relationships underpinning global food and agricultural systems, and benefits and who is harmed in these relationships the ecosystem necessary to supply the human population with the food essential to its survival, and the various movements who are pursuing global food security and agricultural equality. The course will be interdisciplinary, with an emphasis on sustainable and equitable international development, with a focus on food insecurity and rural poverty in the Global South that result from these global systems. Cross-listed as HNU 392. Three credits.

401 Theories of Development
This seminar takes an interdisciplinary approach to the study of theories that have shaped the conceptualization and practice of development around the world. The seminar focuses on current versions of general development theories such as: modernization, structuralism, Marxism, dependency theory, neoclassical and neoliberal theory, alternative development, and post-development. Examples of current theories that focus on key development issues are also covered. Prerequisites: DEVS 201, 202. Three credits.

405 Community-Based Development: Strategies and Practice
This seminar is an examination of community-based development. It explores and evaluates strategies, practices and techniques used to strengthen people’s capacity to build sustainable livelihoods, and examines the role of different agencies (e.g. local citizens, government, non-government organizations, and the private sector) in stimulating development at the community level. The course will include development strategies used in the Global South and practices used in Canada, especially Atlantic Canada. Prerequisites: DEVS 201, 202. Three credits.

412 Internship in Development Studies
This internship builds on DEVS 311. Students may extend their placement from 311 or undertake a new posting. The class will be largely experiential. Students will be required to blog regularly, to submit critical reflection papers, to produce a research product of use to their host organization, to make an oral presentation and to submit a final written report. Students will do their internship during the spring and summer before their senior year and complete this course in the fall term of their senior year. Credit will be granted for only one of DEVS 412, DEVS 300, DEVS 312. Prerequisite: DEVS 311 and permission of the instructor. Three credits.

490 Thesis
Students will work under the supervision of a faculty member who guides the selection of a thesis topic, use of resources, research methodology, and quality of analysis. Restricted to honours students. Six credits.

499 Directed Study
Students will work with a course instructor on a topic which is not available through other course offerings. Prerequisites: DEVS 201, 202 and six additional credits in core development studies courses. See section 3.5. Three credits.

DEVELOPMENT STUDIES CROSS-LISTED COURSES

203 Climate Change and People: Issues, Interventions, Citizen-led Actions, and Solutions
Conducted from a global perspective, this course is intended for students who wish to broaden their understanding of the present and future impacts of climate change on societies, including the social justice elements of the issues. The course also focuses on the interventions that are being made to combat the impacts of climate change—from global policies to community-level actions. Students will be equipped to articulate the world-wide impacts of climate change, how it impacts people at a community level, and how citizen led action can lead to positive change. Cross-listed as CLEN 201. Prerequisite: CLEN 101, or permission of the instructor. Three credits.

211 Local and Community Development Economics
Beginning with theories of local and community economic development and welfare, this course provides an economic analysis of community needs and resources (human resources, capital and natural resources, infrastructure). Students will examine interactions within the community and between the community and the outside world, exploring approaches to local and community economic development and planning. Cross-listed as ECON 211. Three credits.

223 Anthropology of Globalization
Globalization has affected more than the world economy: people, politics and culture all travel globally, with wide-ranging consequences. This course will examine the history of global processes by focusing on how different peoples around the world have engaged in or resisted them. Ethnographic studies will be used to explore global diversity as well as the effects of efforts to impose global uniformity. Cross-listed as ANTH 223. Prerequisite: ANTH 111, 112 or DEVS 201 and 202. Three credits.

257 Canada and the “Global South”: Connections and Disconnections in the 20th Century
This course examines economic, political, military, and cultural ties between Canada and the Global South during the 20th century. The course explores how Canada’s relationships with the Global South was shaped by its own colonial history and then examines different aspects of governmental, organizational, and person-to-person relations. Topics will include: policies on immigration and refugees, business investments, concerns related to human rights, and international aid. Cross-listed as HIST 257. Three credits.

305 Economic Development I
Starting with an overview of the present state of the world, this course explores economic development strategies and prospects for the Third World. Topics include the meaning of economic development: past and present theories of growth; alternate approaches to economic development (including the grassroots approach and sustainable development); the role of agriculture and industrialization; and issues pertaining to development planning, markets and the role of governments. Cross-listed as ECON 305. Three credits.

306 Economic Development II
This course covers economic development prospects and experience in the Third World. Topics include income distribution; population and human resources (including education and health); urbanization, rural-urban migration and the informal economy; labour markets and unemployment; gender and development; savings, taxation and investment; foreign aid and MNCs; the debt problem and structural adjustment; trade and globalization; and the international economic order. Cross-listed as ECON 306. Prerequisites: ECON 101, 102. Three credits.

322 Antigonish Movement as Change & Development
Explores both social change and economic development through the history, philosophy, and practice of the Antigonish Movement as experienced at home and abroad. This movement will be used to examine political systems, labour relations, class conflict, education, co-operative strategies, religion, and ethnicity in the context of social transformation. Cross-listed as SOCI 322. Prerequisites: SOCI 101, 102 or DEVS 201, 202. Three credits. Not offered 2019-2020.

352 Social Entrepreneurship
The context, models, trends, opportunities, and challenges associated with social entrepreneurship focus on areas of public concern such as economic development, education, community welfare, and healthcare. These issues are examined using case studies, group projects, and experiential learning. Emphasis is on how entrepreneurship is combined with the tools of business to create effective responses to social needs and innovative solutions to social problems. Credit will be granted for only one of BSAD 352 or BSAD 457. Cross-listed as BSAD 352. Prerequisite: DEVS 201, 202. Three credits.

354 Global Political Economy
This course examines the politics of international economic relations. Topics include transnational corporations and the globalization of production, the multilateral trade system and regionalism, the global monetary and financial system, and economic development in the global South. Cross-listed as PSCI 354. Prerequisites: PSCI 101/102 (100) or DEVS 201, 202; PSCI 251/252 recommended. Three credits.

355 Global Issues
This course examines the state’s supremacy and its capacity to manage such global issues as: transnational flows of goods, services, money, and ideas; the phenomenon of failed states in the post-Cold War period; global environmental issues; weapons proliferation; terrorism and other forms of transnational crime; and the rise of transnational social activist groups. Cross-listed as PSCI 355. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (251/252 recommended) or DEVS 201, 202. Three credits.

371 Political Economy of Development
Countries in the developing world face a distinct set of political challenges, particularly as they relate to fostering economic growth and providing effective public services. This course will explore the political determinants of development as well as the effect of economic conditions on political outcomes. Key issues include the origins of state weakness, the relationship between political institutions and economic growth, the causes of corruption, and the effect of diversity on governance outcomes. Credit will be granted for only one of DEVS 371 or DEVS 370. Cross-listed as PSCI 371. Prerequisites: PSCI 100 or PSCI 101, 102 or DEVS 201, 202. Three credits.
### DEVELOPMENT STUDIES DESIGNATED COURSES

Departmental prerequisites will apply.

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<th>Field</th>
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<td>Anthropology of Health &amp; Illness</td>
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<td>ANTH 223*</td>
<td>Anthropology of Globalization</td>
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<td>ANTH 234</td>
<td>Introduction to Indigenous Anthropology</td>
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<td>ANTH 310</td>
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<td>The Ocean’s Commons and Society</td>
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<td>Issues in Resource Management</td>
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<td>Health and the Environment</td>
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<td>Canadian Women and Gender History: From Colony to Nation</td>
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Notes: *Cross-listed as DEVS courses.

Other courses, not listed here, may be considered designated courses with permission of the development studies co-ordinator (selected topics courses or on a development theme or issue).
9.15 # EARTH SCIENCES
A.J. Anderson, Ph.D.
H. Beltrami, Ph.D.
J. Braid, Ph.D.
L. Kellman, Ph.D.
M.J. Melchin, Ph.D.
J.B. Murphy, Ph.D.
D. Risk, Ph.D.

The Earth is a dynamic and exciting planet, which has continually evolved over its 4.6 billion-year history. During this time, oceans and mountains were created and destroyed; catastrophic events occurred, such as meteorite impacts, volcanic eruptions and earthquakes; global greenhouses and icehouses developed; life forms evolved and became extinct. Earth science is devoted to understanding the origin, significance and order of these events so that we may more fully understand our planet; this is vital if we are to locate, use, and harness the Earth’s resources and face the environmental challenges that confront us. Earth science employs physical, chemical, biological and mathematical methods to study the Earth’s materials, behaviour, history and environment. An Earth scientist studies and interprets the Earth’s evolution as revealed by its atmosphere, ocean and fresh waters, rocks, minerals and fossils; explores and develops valuable resources; and evaluates the environmental implications of these activities.

A degree in Earth sciences prepares students for graduate studies, as well as a wide range of careers in geology, climatology, oceanography, environmental science, resource exploration and development, government, industry, and financial institutions where geological knowledge is vital for investments and economic planning.

A number of options and concentrations are available for students interested in a B.Sc. in Earth sciences. We offer options in geoscience, environmental geoscience, geochemistry; joint programs with biology, business administration, chemistry, mathematics, and physics; and non-specialist courses for students interested in understanding the planet on which we all live. The most important laboratory instruction is in the field, where studies bridge the gap between textbook descriptions and actual occurrences.

Department Requirements
Recommended course selections for major, advanced major and honours Earth sciences programs are shown below; variations in content require the permission of the department chair and/or the Dean of Science. See chapter 7 for information on the degree patterns, declarations of major, advanced major and honours, advancement and graduation requirements. Approved electives may be in any discipline normally accepted for credit for science students.

Students wishing to pursue a career in Earth sciences or a related field, who wish to register as a Professional Geoscientist (P. Geo) should follow the Professional Geoscience program streams listed below. Students seeking educational requirements for Registration as Professional Geoscientists or Environmental Geoscientists should ensure they have consulted the appropriate professional body to identify the knowledge requirements. Students intending to pursue these streams are required to meet with an academic advisor in the first term of year one and once a year in subsequent years.

Geoscience Concentration
Candidates must follow the degree regulations and program patterns outlined in chapter 7 and complete:

**Foundations:** ESCI 171, 172; MATH 106 or 126, 107 or 127; CHEM 101, 102 or 121, 122; 6 credits of first year PHYS and/or BIOL

**Fundamentals:** ESCI 201, 202, 215, 216, 245, 285, 301, 305, 375

Additional ESCI courses to meet degree requirements.

Professional Geoscience Stream
Candidates must follow the degree regulations and program patterns outlined in chapter 7 and complete:

**Foundations:** ESCI 171, 172; MATH 106 or 126, 107 or 127; CHEM 101, 102 or 121, 122; PHYS 101, 102 or PHYS 121, 122; 9 additional credits in BIOL, CHEM, PHYS, MATH, STATS, computer programming (must spread these credits over 3 subject areas to meet PGeo requirements)

**Fundamentals:** ESCI 201, 202, 215, 245, 285, 301, 305, 365, 372, 373, 375, 446


Environmental Earth Science Concentration
Candidates must follow the following degree regulations and program patterns outlined in chapter 7 and complete:

**Foundations:** ESCI 171, 172; MATH 106 or 126, 107 or 127; CHEM 101, 102 or 121, 122; 6 credits of first year PHYS and/or BIOL

**Fundamentals:** ESCI 201, 215, 265, 266, 376, 406, 472; CLEN 202/ESCI 272

Additional ESCI or designated courses (CLEN 303, 304) to meet degree requirements

Professional Environmental Geoscience Stream
Candidates must follow the following degree regulations and program patterns outlined in chapter 7 and complete:

**Foundations:** ESCI 171, 172; MATH 106 or 126, 107 or 127; CHEM 101, 102 or 121, 122; 6 credits of first year PHYS and/or BIOL; 9 additional credits in BIOL, CHEM, PHYS, MATH, STAT, computer programming course (must spread these credits over 3 subject areas to meet PGeo requirements)

**Fundamentals:** ESCI 201, 202, 215, 245, 285, 305, 365, 372, 373, 375 or 376

Other Geoscience courses: 24 credits of ESCI 265, 272, 278, 285, 301, 302, 374, 386, 408, 426, 435, 446, 465, 472, 476, 493, 499

Geochemistry Concentration
Recommended courses for students in the honours and advanced major programs of the geochemistry concentration are: ESCI 171, 172, 201, 202, 215, 216, 245, 301, 302 or 435, 305, 375, 406, 491 (non-credit), 493 or 499; CHEM 101, 102 or 121, 122, 221, 222, 231, 232, 245, 285; MATH 106 or 126, 107 or 127; PHYS 101, 102 or 121, 122; additional ESCI, arts and elective courses as outlined in section 7.1.

Joint Honours and Joint Advanced Major Programs
Joint honours and joint advanced major programs are offered in biology, chemistry, computer science and mathematics/statistics. Joint advanced major program is offered with the department of physics. For general information on course patterns see section 7.1. Students should consult the appropriate department chair or program co-ordinator. Typical programs are shown below; variations are available at the discretion of the department.

Earth Sciences with Aquatic Resources
ESCI 171, 201, 215, 266, CLEN 202/ESCI 272, 375 or 376, 305, 406, 465. For additional ESCI credits, students should follow either the geoscience or environmental geoscience concentration listed above, and consult the chair of the Earth sciences department, as well as the co-ordinator of aquatic resources.

Earth Sciences with Business Administration
Science A ESCI 171, 172, 201, 215, 216, 266, 305, 365, 12 additional ESCI credits

Science B 12 credits: MATH 106 or 126, 107 or 127; any 6 additional credits MATH or STAT

Science C CHEM 101, 102 or 121, 122

BSAD BSAD 101, 102, 471; 12 credits from 221, 223, 231, 241, 261, 281; 9 credits BSAD electives

CSCI CSCI 135

ECON ECON 101, 102

Arts X 12 credits

Arts Y 6 credits

Approved electives 9 credits BIOL, CHEM, CSCI, ESCI, MATH or PHYS

Earth Sciences and Chemistry
ESCI 171, 201, 202, 215, 216, 375 or 376, 301, 302 or 435, 305, 406; CHEM 101, 102 or 121, 122, 221, 222, 231, 232, 245, 265, 341, 342, 361, 362; MATH 106 or 126, 107 or 127, 253 or 267; 3 additional credits MATH; PHYS 101, 102 or 121, 122; additional ESCI, arts and elective courses as outlined in section 7.1; interdisciplinary thesis and seminar.

Earth Sciences and Mathematics/Statistics
ESCI 171, 172, 201, 215, 216, 245, 265, 375 or 376, CLEN 202/ESCI 272, 475 (for additional credits, consult the Earth sciences department chair); 36 credits MATH; CHEM 101, 102 or 121, 122; PHYS 101, 102 or 121, 122; additional ESCI, arts and elective courses as outlined in section 7.1; interdisciplinary thesis and seminar.

Earth Sciences and Physics
ESCI 171, 201, 215, 216, 245, 265, CLEN 202/ESCI 272, 375 or 306, 302 or 435, 446, 472, 475 (for other credits, consult the Earth sciences department chair); 30 credits PHYS (consult the physics department chair); CHEM 101, 102 or 121, 122, 231 and 232 or 245 and 265; MATH 106 or 126, 107 or 127, 253, 267, 367; additional ESCI, arts and elective courses as outlined in section 7.1; interdisciplinary thesis and seminar.

Minor in Earth Sciences
ESCI 171, 172 and 18 additional ESCI credits.
171 Understanding the Earth
An introduction to the study of rocks and minerals and the materials that make up planet Earth; the Earth's origin and internal structure and composition; the plate tectonic and continental drift theory, crustal processes (the early history of the Earth and its atmosphere, evolution and extinction of life forms; composition and structure of the Earth, origin of continents, oceans, volcanoes, earthquakes, mountains), crustal deformation and mountain building; resources from Earth. Three credits and tutorial.

172 Environment, Climate, and Resources
An introductory treatment of the processes driving Earth's ocean, atmosphere, hydrosphere and cryosphere. Course includes study of the environment and problems such as soil erosion, ozone layer, waste disposal, Earth's energy resources (solar, geothermal, etc.), surface and ground waters, water quality in humanity's future, an introduction to biogeochemical cycles, and a current examination of climate change, future scenarios and issues of impact, migration and adaptation to climate change. Three credits and tutorial.

201 Crystal Chemistry and Mineralogy
Examines the foundations of crystal chemistry and mineralogy. Explores the characterization of and relationship among chemical, physical and optical properties of minerals and other transparent solids. Prerequisites: ESCI 171; ESCI 172 or AQUA 100, or with permission; CHEM 101, 102 or 121, 122, concurrent with permission. Three credits and lab.

202 Introduction to Igneous and Metamorphic Systems
Uses physicochemical and thermodynamic principles to explain the origin and composition of Earth materials, with particular reference to the genesis of igneous and metamorphic rocks. Applies the phase rule and phase equilibria to natural systems using thermo-chemical and experimental data, binary and ternary phase diagrams. Prerequisite: ESCI 201. Three credits and lab.

215 Sedimentology and Stratigraphy
A study of the major processes involved in the origin, transport and deposition of marine and non-marine clastic, carbonate and evaporite sediments. Covers the principles of sedimentation, environmental analysis, marine and non-marine depositional systems and facies models. Basic stratigraphic principles are introduced. Prerequisite: ESCI 171. Three credits and lab.

216 Earth History
An overview of the evolution of planet Earth from its origin some 4.6 billion years ago to the present. Students will examine changes in the distribution and character of continents and ocean basins, mountain ranges, continental glaciers and other features of the Earth's surface in light of plate tectonic theory, while studying the evolution of plant and animal life as revealed by fossils. Prerequisite: ESCI 171. Three credits and lab.

245 Structural Geology
An introduction to rock mechanics, three-dimensional analysis of stress and strain, mechanisms and concepts of deformation; classification and interpretation of folds, faults, fractures; introduction to Earth graphic and stereographic analysis of three-dimensional structures. Prerequisite: ESCI 171. Three credits and lab.

251 Genesis of Igneous Rocks
An advanced treatment of the rheological properties of magma, fluid dynamics, crystal growth, crystal-melt-fluid equilibria, igneous rock suites and their genesis, petrogenetic modeling, applications of thermodynamic principles and phase equilibria to the genesis of igneous rocks and application of microscopic techniques. Prerequisites: ESCI 201, 202. Three credits and lab. Offered in alternate years.

272 Understanding Climate Change
An understanding of the impacts of climate change has become crucial for areas of governance, business, engineering and diverse fields of science. This course will provide students with a qualitative understanding of climate processes and climate models, as well as an understanding of uncertainty in future climate change and limitations to model simulations. In addition, the impacts of climate change to many aspects of human societies will be explored. Cross-listed as CLEN 202. Prerequisite: ESCI 172 or CLEN 101 or 102. Three credits and lab.

273 Health and the Environment
Understanding the relationship between environment and health is a significant challenge for current and future generations. Environmental agents play key roles in the development of many common illnesses and conditions. Most of these environmental agents are the result of human interference in the natural processes and fluxes of elements in the planetary system. This course will explore many scientific aspects of the connections between human and planetary health. Cannot be used as a science credit by students majoring in Earth sciences or environmental sciences. Three credits.

274 Health Impacts of Global Climate Change
Many planetary-scale environmental changes are altering Earth system processes in ways that have direct and indirect consequences for human health. This course will explore some of these issues, with an emphasis upon the scientific causes, projections, and health implications of global climate change. Additional topics include the study of global pollutants, atmospheric composition, climate sensitive diseases, global landuse change, and global water resources. Cannot be used as a science credit by students majoring in Earth sciences or environmental sciences. Three credits.

285 Paleontontology: The History of Life
Covers the principles of paleontology including methods of analysis of fossil individuals, populations and species; biostratigraphy; paleoecology; biogeography; evolution and extinction; the origin and major events in the history of life from an evolutionary and ecological perspective. Laboratory study of selected fossil groups, field and laboratory techniques. Cross-listed as BIOL 285. Prerequisite: ESCI 171, 172 or BIOL 111, 112 or permission of the instructor. Three credits and lab. Offered in alternate years.

301 Genesis of Igneous Rocks
An advanced treatment of the rheological properties of magma, fluid dynamics, crystal growth, crystal-melt-fluid equilibria, igneous rock suites and their genesis, petrogenetic modeling, applications of thermodynamic principles and phase equilibria to the genesis of igneous rocks and application of microscopic techniques. Prerequisites: ESCI 201, 202. Three credits and lab. Offered in alternate years.

302 Genesis of Metamorphic Rocks
Topics include determination of pressure; temperature and fluid conditions of metamorphism; applications of chemical equilibria and thermodynamic principles; Shock wave methods of phase diagram construction; equilibrium and disequilibrium metamorphic textures; kinetics of crystal growth; determination and rates of metamorphic reactions; variations of metamorphism through geological time; pressure-temperature-time relationships. Prerequisites: ESCI 201, 202. Three credits and lab. Offered in alternate years.

305 Geochemistry
Covers the processes of geochemistry, including equilibrium, saturation, precipitation, crystallization, partitioning, fractionation, dissolution, buffering, pH, and redox processes as these relate to the geochemistry of water, the atmosphere, and the solid Earth. Application of thermodynamic principles to geochemistry. Prerequisites: CHEM 101/102(100) or 121/122(120); ESCI 171; ESCI 172 or AQUA 100. Three credits and lab. Offered in alternate years.

365 Geomorphology and Quaternary Geology
Covers landform processes and development; glaciation and glacial deposits; slopes and mass movements; drainage basin form and process; Quaternary stratigraphy,
are presented in lab. Credit will be granted for only one of ESCI 372 and ESCI 475.

472 Ocean-Atmosphere Interactions
This course introduces students to a unified treatment of ocean and atmospheric processes. The mathematical treatment of the phenomena will be central to this course and students will gain an in-depth understanding of the fundamental physical behaviour of large-scale ocean-atmosphere interactions. Prerequisites: ESCI 246, 272 or CLEN 202; one of PHYS 100, 101/102, 121/122 or 120; MATH 106/126, 107/127. Three credits and lab. Offered in alternate years.

476 Advanced Geological Field Methods
A seven-day field camp in an important geological area, followed by structural and petrographic analysis, seminars and report writing during the term. Prerequisites: ESCI 245, 275. Three credits and lab. Offered in alternate years.

491 Senior Seminar
This course will foster discussion and analysis of current topics in Earth sciences with emphasis on student initiative. Each student will select a major problem to work on during the year. No credit.

493 Senior Dissertation
Restricted to honours students. Three credits.

499 Directed Study
Described for advanced students interested in fields of study not normally covered in courses or thesis presentations. The research may be field-, laboratory- or library-based. Under the supervision of a faculty member, students will plan and conduct research, present the results of their research at a department seminar, and produce a research paper. Prerequisite: permission of the department chair. Three credits. See section 3.5.

GRADUATE COURSES

<table>
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<tr>
<th>Credits</th>
<th>Course Title</th>
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<tr>
<td>3</td>
<td>Special Topics in Petrogenesis of Intrusive Rocks</td>
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<tr>
<td>3</td>
<td>Special Topics in Petrogenesis of Metamorphic Rocks</td>
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<td>3</td>
<td>Special Topics in Geochemistry</td>
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<td>Special Topics in Ore Deposits</td>
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<td>3</td>
<td>Special Topics in Tectonics</td>
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<td>3</td>
<td>Special Topics in Structural Geology</td>
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<td>3</td>
<td>Special Topics in Sedimentology and Basin Analysis</td>
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<td>3</td>
<td>Special Topics in Hydrogeology</td>
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<td>3</td>
<td>Advanced Quantitative Methods in Earth Sciences</td>
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<td>3</td>
<td>Special Topics in Earth Systems Science I</td>
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<td>Special Topics in Earth Systems Science II</td>
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<td>3</td>
<td>Special Topics in Geophysics</td>
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<td>3</td>
<td>Field Research Methods in the Earth Sciences</td>
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<td>3</td>
<td>Special Topics in Paleontology</td>
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<td>3</td>
<td>Special Topics in Climatology</td>
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<td>3</td>
<td>Research Methods in the Earth Sciences</td>
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<td>6</td>
<td>Research</td>
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<td>18</td>
<td>Thesis</td>
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Additional courses are available depending on the requirements and interests of the student and the availability of faculty.
Students planning to pursue graduate work in economics are encouraged to take b) a thesis supervised by a department member; When economics is the subsidiary subject, students are required to complete: a) ECON 101, 102, 201, 202, 301, 302, 303; b) normally 18 credits ECON electives with at least 6 credits at the 300 or 400 level; c) ECON electives may include ECON 493 with approval of the department chair; d) A course in quantitative methods (ECON 371; 372; STAT 101, 224, 231) is strongly recommended.

Honours in Economics with a subsidiary in Mathematics and Computer Science
Students must include ECON 401, 402, 471 as ECON electives.

Honours in Mathematics and Computer Science with a subsidiary in Economics
ECON 401, 402, 471 are recommended as ECON electives. Depending on the nature of the individual thesis, joint supervision by an economist and a mathematician may be appropriate.

BBA Joint Honours
In conjunction with the Department of Business Administration, the Department of Economics offers a joint honours program in business and economics. See section 5.1 for degree regulations.

B.Sc. Advanced Major in Economics
See degree regulations in chapter 7. Degree requirements are: a) ECON 101, 102, 201, 202, 301, 302, 371, 372, 493; b) 15 credits ECON electives, including 6 at the 300 or 400 level; c) a minimum of 12 credits in MATH including STAT 231 and 6 credits of calculus. d) the 18 credits of approved electives are normally taken in math or science subjects; e) PHIL 213 is recommended.

B.Sc. Honours in Economics
See degree regulations in chapter 7. Degree requirements are: a) ECON 101, 102, 201, 202, 301, 302, 371, 372, 401, 402, 471, 493, 494 and 21 credits ECON electives with at least 9 credits at the 300 or 400 level; b) a thesis supervised by a department member; c) a minimum of 12 credits in MATH, including 6 credits of calculus. d) the 18 credits of approved electives are normally taken in math or science subjects; e) PHIL 213 is recommended.

Note: ECON 101 and 102 are prerequisites for all other courses unless otherwise stated. Students lacking other prerequisites may request department approval to enrol in a course.

101 Introductory Microeconomics
This course provides an introduction to microeconomic concepts and methodology. Students will learn about basic concepts such as scarcity and opportunity costs, and economic efficiency. The other central themes of the course include theories of supply and demand; the theory of production and costs, the functioning and the performance of competitive markets versus monopolies and oligopolies; labour markets and the markets for public goods. Three credits.

102 Introductory Macroeconomics
The second half of introductory economics provides an introduction to macroeconomic concepts. The course examines pressing problems and issues in the Canadian economy and the world. Students will learn about alternate economic systems, national income accounting and the components of the national economy; the role of money in the economy; inflation; unemployment; international trade and trade policy; and the role of government in managing the economy. Three credits.

201 Intermediate Microeconomic Theory I
An introduction to the basic concepts of microeconomic theory, this course examines the demand-supply model, consumer theory, production theory, and the purely competitive model, using numerical examples and graphs as aids. Prerequisites: ECON 101, 102. Three credits.

202 Intermediate Macroeconomics I
This is the first of two half-courses on intermediate macroeconomics. Students will examine the structure of, and behaviour underlying, contemporary national economies with emphasis on the policies developed to gear them towards the public interest. This course focuses on the Keynesian and classical models of the closed economy for explaining what determines national income, employment, unemployment, prices, inflation, and the interest rate. Prerequisites: ECON 101, 102. Three credits.
211 Local and Community Development Economics
Beginning with theories of local and community economic development and welfare, this course provides an economic analysis of community needs and resources (human resources, capital and natural resources, infrastructure). Students will examine interactions within the community and between the community and the outside world, exploring approaches to local and community economic development and planning. Cross-listed as DEVS 211. Prerequisites: ECON 101, 102. Three credits.

241 Canadian Economic Prospects and Challenges
Covers policy issues and problems in the Canadian economy. Topics include employment and unemployment; poverty and income distribution; productivity, education and the 'brain drain'; health care and the social welfare safety net; trade and globalization; the environment and sustainable development; the primary sectors, regional disparity; and the new economy. Topics that reflect strong student interest and/or new issues may be added. Prerequisites: ECON 101, 102. Three credits.

242 International Economic Prospects and Challenges
This course covers policy issues and problems in the International economy. Topics include: standard international trade theory; barriers to trade (tariffs, quotas, and subsidies); exchange rate policy; immigration and emigration; trade wars; international monetary, economic and political unions; inequality and standards of living; income and purchasing power. Topics that reflect strong student interest and/or new issues may be added. Prerequisites: ECON 101, 102. Three credits.

271 Quantitative Methods in Economics
This course introduces students to quantitative and mathematical tools commonly used in the study of economics and finance. Topics include functions of one or more variables, financial mathematics, differential calculus and linear algebra. Applications include computing elasticities, macroeconomic equilibria, profit-maximization, constrained optimization, interest rates, present value and bond pricing. Prerequisite: ECON 101; completed or concurrent. Three credits.

281 Environmental Economics
As an introduction to the relationship between human economic activity and the environment, this course explores the economic concepts used to analyze the causes, consequences, and possible solutions to local and global environmental issues. Topics include market failure; property rights; externalities; public goods; environmental valuation; environmental policies dealing with pollution and global issues such as global warming, ozone depletion, biodiversity, and sustainability. Prerequisite: ECON 101. Three credits.

291 Economics of Leisure, Recreation & Sports
This course includes topics related to choices about the time individuals do not spend working. It deals with aspects of the economics of leisure and labour supply; the valuation of time; outdoor recreation; the economics of sports; the economics of dating and marriage; the economics of crime and the consumption of addictive goods; the economics of gambling and other addictive behaviour associated with the consumption of leisure, and the economics of the entertainment industry. Prerequisite: ECON 101. Three credits.

301 Intermediate Microeconomic Theory II
An extension of ECON 201, this course covers price determination in monopoly, monopolistic competition, and oligopoly models. Uncertainty and risk, factor pricing, capital investment over time, externalities, and public goods are discussed. The use of micro-economics as a tool in decision-making is illustrated. Prerequisite: ECON 201. Three credits.

302 Intermediate Macroeconomics II
This sequel to ECON 202 explores the new Keynesian and new classical perspectives on the macro economy. Attention is directed to the determinants of investment, consumption, money demand and supply as well as the role of expectations in macro behaviour. Questions of unemployment, inflation, interest rates, the government budget, economic growth and macroeconomic policies are examined in their international setting. Prerequisite: ECON 202. Three credits.

305 Economic Development I
Starting with an overview of the present state of the world, this course explores economic development strategies and prospects for the Third World. Topics include the meaning of economic development: past and present theories of growth; alternate approaches to economic development (including the grassroots approach and sustainable development); the role of agriculture and industrialization; and issues pertaining to development planning, markets and the role of governments. Cross-listed as DEVS 305. Prerequisites: ECON 101, 102. Three credits. Not offered 2019-2020.

306 Economic Development II
This course covers economic development prospects and experience in the Third World. Topics include income distribution; population and human resources (including education and health); urbanization, rural-urban migration and the informal economy; labour markets and unemployment; gender and development; savings, taxation and investment; foreign aid and MNCs; the debt problem and structural adjustment; trade and globalization; and the international economic order. Cross-listed as DEVS 306. Prerequisite: ECON 101, 102. Three credits. Not offered 2019-2020.

312 Industrial Organization
This course deals with the behaviour of firms in imperfectly competitive markets and with the role of competition policies. Business practices such as price discrimination, product differentiation, advertising, and investment in research and development will be explained using both traditional models of industrial organization and more recent ones, which emphasize issues of strategic interaction. Prerequisite: ECON 201. Three credits. Not offered 2019-2020.

335 Money Banking & Financial Markets I
The course uses basic economic principles to organize students' understanding of and thinking about money, the functions and structure of financial markets and financial institutions. Topics covered include: the necessity, the nature, and the future of money; the determinants of interest rates; the term structure of interest rates, the pricing of government securities; what banks do and how their operations affect the economy. Credit will be granted for only one of ECON 335 or ECON 330. Prerequisites: ECON 101, 102. Three credits.

336 Money Banking & Financial Markets II
The course introduces students to the role of imperfect information in financial markets. Topics covered include: asymmetric information and its consequences; the necessity of regulations of financial institutions and the role of domestic regulators and policy makers; comparative analysis of financial system regulations; financial market instabilities and the elements for the conduct of monetary policy. The course helps students understand the causes of financial instability and crises, and what policy makers can do to alleviate or avoid them. Credit will be granted for only one of ECON 336 or ECON 330. Prerequisite: ECON 335, ECON 202 is recommended. Three credits. Not offered 2019-2020.

361 Human Resources and Labor Economics
The course analyzes the essential elements of the labour market: labour demand and labour supply, and their interaction to determine wages, employment and unemployment. Topics include fertility, education, regional wage disparities, income maintenance schemes, wage discrimination, the unemployment insurance program, unions and collective bargaining, and the distribution of wealth. Prerequisite: ECON 201. Three credits. Not offered 2019-2020.

364 Health Economics
The course introduces students to the role of economics in health, health care, and health policy. The course focuses on individual’s choice pertaining to health, and economic evaluation of various methods of health care delivery. Students will learn how the market for health care differs from other markets, especially with regards to uncertainty and asymmetric information, and understand health insurance markets and their interrelationship with the market for health care services, as well as the role of the government. Prerequisite: ECON 201. Three credits. Not offered 2019-2020.

365 International Trade
Covers the theory of international trade and its policy implications, including: comparative advantage; gains from trade, terms of trade; trade and growth; trade and economic development; commercial policy (tariff and non-tariff barriers, effective protection, trade liberalization); economic integration (with emphasis on NAFTA and the EC); migration and trade in service; and intellectual property rights. Prerequisite: ECON 201. Three credits.

366 International Payments and Finance
Covers the theory and policy implications of international payments and finance. Topics include the exchange rate and the foreign exchange market; balance of payments problems and policies; fixed versus flexible exchange rate regimes and common currency areas; the Eurocurrency market; open economy macro-economics; international finance, financial liberalization and globalization; capital flows and multinational corporations; and the international monetary system. Prerequisites: ECON 201, 202. Three credits.

371 Econometrics I
This course develops the simple and multiple classical regression models, interval estimation and hypothesis testing. The problems of estimation, inference, mis-specified structures, multicollinearity, heteroskedasticity, and serial correlation are presented. Students will be exposed to STATA or other relevant econometric software. The course requires some proficiency in calculus and basis statistics. Prerequisites:
MATH 107 or 127 or ECON 271; STAT 101 or 231 or permission of the instructor. Three credits.

372 Econometrics II
This course is a continuation of ECON 371 and deals with various estimation methods, including least squares and maximum likelihood, specification tests, dynamic models and simultaneous equation models as well as limited and qualitative dependent variables. Students will be exposed to MATLAB or other matrix-based analytical software. Prerequisite: ECON 371. Three credits.

381 Natural Resource Economics
Examines the role of natural resource industries in the Canadian and world economies, including minerals, oil and gas, forest resources, fisheries and endangered species, and water resources. The course introduces students to the use of economic tools in analyzing problems of renewable and non-renewable resource management. Topics include welfare and inter-temporal analysis of resource exploitation; ownership and property rights issues in resource use and management; the nature of resource markets; resource taxation; biodiversity conservation; and sustainability. Prerequisites: ECON 201; MATH 106 or 126 recommended. Three credits.

391 Public Finance I: Expenditures
An analysis of the role of government in the economy, focusing on expenditure and with emphasis on the Canadian situation. Starting with an introduction to the public sector, the course covers: the rationale for government participation in the economy; the growth of the public sector over time; the theory of collective decision-making; cost-benefit analysis; fiscal federalism; specific spending programs. Prerequisite: ECON 201. Three credits.

392 Public Finance II: Taxation
An analysis of the role of government in the economy, focusing on revenue and with emphasis on the Canadian situation. Starting with an introduction to taxation and tax policy, the course covers: individual income taxes; corporation taxes; consumption; value-added and sales taxes; property and other taxes; tax reform; the revenue side of fiscal federalism; and the international dimensions of taxation and taxation policies. Prerequisite: ECON 201. Three credits. Not offered 2019-2020.

401 Advanced Microeconomics
An advanced treatment of micro-economic concepts and topics, such as consumer choice and demand analysis, production technology and cost, market structure and pricing, factor markets and shares, general equilibrium and economic welfare. Credit will be granted for only one of ECON 401 or ECON 412. Prerequisites: ECON 301; MATH 107 or 127 or ECON 271. Three credits.

402 Advanced Macroeconomics
An advanced treatment of macroeconomic theory and how macroeconomic policy is conducted. The course offers deeper insights into economic growth processes, business cycles, international macroeconomic stabilization policies, and alternative approaches to building macroeconomic models. Students are introduced to the use of two-period models. Credit will be granted for only one of ECON 402 or ECON 411. Prerequisites: ECON 302; MATH 107 or 127 or ECON 271. Three credits.

415 Introduction to Game Theory
Game theory is the mathematical analysis of strategic interactions between players, such as competing firms, nations at war, or between a job-seeker and employer. This course will sharpen your ability to think strategically, and to apply game theory with clarity and precision. Applications of game theory to the real world will be studied. Prerequisite: ECON 201. Three credits. Not offered 2019-2020.

471 Mathematical Economics
An introduction to mathematical reasoning in economics and business, this course covers: the methodology of operations research; profit and cost analysis; resource use and production decisions; input-output and macro-analysis; pricing and inventory decisions; capitalization of cash flows and growth; portfolio selection and investment. Prerequisites: MATH 107 or 127 or ECON 271. Three credits. Not offered 2019-2020.

493 Seminar
This is a capstone course designed to introduce students to current research issues in various fields of economics. Students will read and critically analyze significant historical or recent research papers, and to complete assignments related to these readings. They will also be exposed to the art of presenting research findings, as department faculty and visiting speakers will present some of their latest research. In the past, students have been exposed to topics such as: macroeconomic data revisions; economic impact of climate change; European financial integration; matching models; and the economics of the non-profit sector. Three credits.

494 Thesis
Each student works under the supervision of a professor who guides the selection of a thesis topic, the use of resources, the methodological component, and the quality of analysis. Restricted to honours students. Three credits over full year.

499 Directed Study
A directed study course in advanced topics in economics. See section 3.5. Students wishing to take this course must consult the department chair. Three credits.

9.17 EDUCATION
A. Foran, Ph.D. R. White, Ph.D.
C. Gilham, Ph.D. M. Williams, Ph.D.
D. Graham, Ed.D. D. Young, Ph.D.
L. Kearns, Ph.D.
L. Lunney Borden, Ph.D.
L. MacDonald, Ph.D.
K. MacLeod, Ph.D.
L. McKeever, Ph.D.
J. Mitton-Kukner, Ph.D.
A. Murray Orr, Ph.D.
J. Orr, Ph.D.
D. Robinson, Ph.D.
I. Robinson, Ph.D.
R. Ryan, M.Ed.
E. Throop-Robinson, Ph.D.
J. Tompkins, Ed.D.
R. Thomas, Ph.D.
W. Walters, Ph.D.

See chapter 6 for B.Ed. regulations and chapter 8 for M.Ed. regulations. Candidates are required to complete all of the courses shown below for the elementary or secondary division.

9.17.1 Bachelor of Education

Program Dates 2019-2020

Thursday, September 5 Year 1 orientation
Monday, September 9 B.Ed. registration
Tuesday, September 10 First day of classes, B.Ed. program
Friday, September 13 Last date to change first-term courses
Thursday, October 24 Fall pause
Wednesday, November 6 Last day of classes for B.Ed., first term
Thursday, November 7 Building bridges to practicum
Wednesday, November 13 First day of B.Ed. practicum
Friday, December 20 Last day of B.Ed. practicum
Monday, January 13 First day of classes, second term
Friday, January 17 Last date to change second term courses
Thursday, February 27 Winter pause
Wednesday, March 11 Last day of classes for B.Ed.
Thursday, March 12 B.Ed. Synthesis Day
March 16-20 B.Ed. mid-term recess
Monday, March 23 First day of B.Ed. practicum
Tuesday, April 28 Last day of B.Ed. practicum

Elementary Program
Year 1 (E1) EDUC 411, 412, 413, 416, 433, 435, 439, 471, 472;
Year 2 (E2) EDUC 414, 415, 434, 436, 463, 468, 481, 482; 9 credits EDUC electives with at least 3 from EDUC 418, 426, 442 and 458.

Secondary Program
Year 1 (S1) EDUC 432, 433, 435, 471, 472; a first curriculum and instruction course taken from EDUC 421 to 429; 6 credits EDUC electives
Year 2 (S2) EDUC 434, 436, 438, 440, 481, 482; a second curriculum and instruction course taken from EDUC 421 to 429; 6 credits EDUC electives.

Mi’kmaq Language Focus
A student in either the elementary or secondary program can achieve a focus on Mi’kmaq language by earning credit for EDUC 454 and 455.

French Language Specialization
A student in either the elementary or secondary program may specialize in teaching French. Students who complete EDUC 459 and 460 may achieve a core French specialization. Students with demonstrated French fluency can, after successfully completing 459 and 460, take EDUC 428A and B in their second year to qualify to teach in French immersion.

Physical Education Specialization
A student in either the elementary or the secondary program may specialize in teaching physical education by earning credits for EDUC 457, 425A and B, and 444. These courses prepare the teacher for a K-12 physical education where the
emphasis is on the development of a physically active lifestyle, and includes such topics as movement education, fitness and dance, outdoor education, health education, personal development. Students pursuing this specialization would take EDUC 425A in the fall of year one, EDUC 425B in winter year one; EDUC 444 in the fall of year two, and EDUC 457 in the fall of year two.

Core Courses for Elementary and Secondary Programs

Year One

433 Sociology of Education
This course will examine the social-political context of education in Canada, particularly contemporary structures. Students will explore the relationship between educational opportunity and conditions of inequality. Three credits.

435 Inclusive Practices I
This course discusses educational, practices and procedures, past and present, affecting pupils who have been marginalized socially and/or physically. These policies have evolved from an ideology of exclusion to inclusion. Preservice teachers will learn curriculum and instructional approaches to assist in meeting the academic and socio-emotional needs of students with diverse learning needs. Three credits.

471 Internship I
Students are placed in schools for five and one-half weeks of supervised practicum. Three credits.

472 Internship II
Students are placed in schools for five and one-half weeks of supervised practicum. Three credits.

Year Two

434 Contemporary Issues in Public Education
This course examines the historical, legal, and philosophical underpinnings of contemporary issues facing public schooling. Goals, purposes, and dilemmas that have affected such facets of education as the structure of Canadian schooling, political and policy making processes, educational law, the work of teachers’ organizations, and educational standards are explored. Three credits.

436 Inclusive Practices II (E2 & S2)
This course provides preservice teachers with an understanding of the learning strengths and challenges of students with exceptionalities. Emphasis will be placed on collaborative team planning, professional supports provided for students with diverse learning needs, the assessment and education referral process, and the development of individualized educational plans. Three credits.

481 Internship III
Students are placed in schools for five and one-half weeks of supervised practicum. Three credits.

482 Internship IV
Students are placed in schools for five and one-half weeks of supervised practicum. Three credits.

Required Elementary Courses

411 Curriculum and Instruction in Language and Literacy I (E1)
This course is designed to prepare prospective elementary teachers to teach the language arts: reading, writing, speaking, listening, and viewing. Also included is comprehensive literacy programming, children’s literature, authentic assessment, and organizing the classroom for language instruction across the curriculum. Throughout this course, the practical influence of various language arts theories is emphasized with a particular focus upon early literacy in the lower elementary grades. Three credits.

412 Curriculum and Instruction in Mathematics (E1)
This course includes an examination of the elementary school mathematics program, and of various approaches to teaching mathematics to children, with emphasis on exploring strategies for the development of conceptual understanding through multiple representations. Three credits.

413 Curriculum and Instruction in Science (E1)
The focus of this course is an emphasis on the process approach to teaching science, on the inquiry method, and on special techniques in the teaching of scientific concepts. The elementary science curriculum is examined. Three credits.

414 Curriculum and Instruction in Language and Literacy II (E2)
This course is a continuation of Language Arts I with emphasis on the upper elementary years. Three credits.

415 Integration of Curriculum (E2)
This course provides an understanding of the content of the elementary school curriculum and of the potential for the integration of elementary subjects into language arts and mathematics, and the development of a rationale and strategies for teaching an integrated approach. Three credits.

416 Curriculum and Instruction in Social Studies (E1)
A review of the social studies programs used in elementary school, with emphasis on the development of skills, methods and approaches involved in teaching these programs. Three credits.

439 Principles and Practices of Elementary Education (E1)
This course emphasizes the foundations of becoming an elementary school teacher. Topics include the professional and ethical role of the teacher, educational planning, the professional development process, reflective practice, teaching strategies, learning experiences, classroom environment, and management. Six credits.

463 Elementary Assessment for and of Learning
This course examines current research and practices in classroom assessment, evaluation, record keeping and communication of student achievement. Three credits.

468 Teaching Mathematics in Middle Schools
Students will learn the process, content, and assessment of middle school mathematics. They will make connections, communicate, reason mathematically, and complete problems. Students will explore strategies for the development of conceptual understanding through multiple representations. Three credits.

Required Secondary Courses

420 to 429 Curriculum and Instruction in Secondary Education (S1 and S2)
Curricular and instructional concepts will be described, demonstrated, evaluated, and applied in relation to the following subject fields of the school curriculum:

420 A & B Gaelic
421 A & B English
422 A & B Social Studies
423 A & B Mathematics
424 A & B Diverse Cultures (First Nations and African-Canadian Studies)
425 A & B Physical Education
426 A & B Music
427 A & B Science
428 A & B French
429 A & B Fine Arts

Students normally register for one of these eight courses in year one, and a second in year two. The choice is determined by each student’s two subject fields of study. For students pursuing a French or physical education specialization, please consult that section of the Calendar for more details of course sequence. Students with more than two teachable subjects may take additional courses from this list as electives. Six credits per pair.

432A & B Principles and Practices of Secondary Education (S1 and S2)
This course emphasizes the foundations of becoming a secondary school teacher. Topics include the professional and ethical role of the teacher, educational planning, the professional development process, reflective practice, teaching strategies, learning processes, classroom environment, and management and pedagogy. Three credits each.

438 Assessment for and of Learning (S2)
This course explores issues surrounding the assessment for and of learning from a variety of perspectives. Basic principles of learning theory will be emphasized in the context of curricular examples from different teachable subject areas. Students will gain the skills necessary to critically evaluate and develop effective assessment approaches. Three credits.

440 Literacy in the Content Areas (S2)
This course explores and models teaching strategies that are consistent with the philosophy and background theory of content literacy. Students use the associated theories of literacy and the five recognized tools (reading, writing, speaking, listening, viewing) to develop their knowledge of, and skill in applying, these concepts. Three credits.

Electives

417 Curriculum and Instruction for Diversity
This course provides preservice teachers with an overview of curricular approaches and content for representing the cultural diversity of Canadian society in the elementary curriculum. Multicultural, anti-racist, feminist and Aboriginal approaches to curriculum content, teaching, assessment, classroom management and learning are emphasized. Three credits.
418 Physical Education and Health for Elementary Teachers
This course is designed to provide pre-service elementary/middle school pre-service teachers with foundational knowledge and practical experiences related to health education and physical education in elementary/middle school communities. Additionally, this course will introduce concepts related to physical literacy, daily physical activity (DPA), cross-curricular planning, and Health Promoting Schools (HPS). Three credits.

419 Curriculum and Instruction in Middle School Science
This course examines curriculum and instructional strategies appropriate in middle years’ science classrooms, including an emphasis on the process approach to teaching science, the inquiry method, and special techniques in the teaching of scientific concepts. The grade six to grade nine science curriculum is examined. Three credits.

437 Guidance (S2)
This course focuses on the development and knowledge of interpersonal relationships and interpersonal skills required by the classroom teacher in providing guidance for his/her students. It addresses specific strategies and frameworks for meeting the needs of at-risk students and those with other special needs in a variety of contexts. The basic principles and practices of guidance will be emphasized. Three credits.

441A Curriculum and Instruction in Business I
This is an introductory course in methodology for teaching business and related subjects in the public school curriculum. Attention will be given to the teaching of accounting techniques, business management, and technology. This is a required course for students with a business teachable. Three credits.

441B Curriculum and Instruction in Business II
This is a second course of methodology for teaching business and related subjects in the public school curriculum. Attention will be given to the teaching of entrepreneurship, business law, economics, and business ethics. This is a required course for students with a business teachable. Three credits.

442 Learning through Drama
This course provides pre-service, K-12 teachers with concepts and ideas for drama lesson plans; approaches to drama; basic drama and drama education theory; a working knowledge of theatre production; an introduction to the Nova Scotia curricular guidelines; and play selection guidelines for elementary and secondary student productions. Three credits.

444 Outdoor Experiential Education
Students will explore strategies to encourage their pupils to achieve, appreciate, and maintain a physically active lifestyle in the outdoors. They will learn to develop strategies that foster a life-long commitment to outdoor education, as a part of a physical education program in public school. They will experience a range of outdoor pursuits: paddling (canoe/kayak), navigation, Geocaching, hiking and backpacking, mountain biking, Nordic skiing, snowshoeing, archery, and camping (including winter camping). Each pursuit will include an overview of risk management and emergency procedures to support a skills progression that is challenging, fun, safe, and inclusive. Three credits.

445 Curriculum & Instruction in Comprehensive School Health
This course provides students with an interest in health and wellness an opportunity to acquire the knowledge, skills and attitudes necessary to teach a comprehensive health education curriculum in the public school system. An overview of the main components of a comprehensive school health curriculum and associated pedagogical approaches will be explored. Three credits.

447 Mental Health Education
This course will develop an understanding of mental health education as both well-being and the experiences of children and youth who are living with poor mental health in schools. Pre-service teachers will develop their awareness of how such issues as anxiety, depression, addictions and bullying can be addressed to create greater well-being for all students and staff. The course will also analyze school policies and various support services related to mental health education. Three credits.

448A Curriculum and Instruction in Family Studies I
Students will be introduced to the three strands of the family studies curriculum: foods and nutrition; textile arts; family dynamics. They will have the opportunity to acquire the knowledge, skills and attitudes necessary to teach a comprehensive family studies program with an emphasis on junior high. The course will be offered in facilities made available in a public school setting. Three credits.

448B Curriculum and Instruction in Family Studies II
Students will be introduced to the three strands of the family studies curriculum: foods and nutrition; textile arts; family dynamics. They will have the opportunity to acquire the knowledge, skills and attitudes necessary to teach a comprehensive family studies program with an emphasis on senior high. The course will be offered in facilities made available in a public school setting. Three credits.

453 Teaching English Language Learners
Provides student teachers with a thorough understanding of the theoretical and methodological aspects of learning and teaching a second language, focusing on the learning/teaching of English (ESL). Students will become familiar with relevant research and will examine the prevalent theories in different ESL areas. Three credits.

454 Mi'kmaq Language Arts I
This course will focus on language acquisition theories and the methodologies that support these theories. Students will examine current approaches to bilingual language learning, especially reclaiming and revitalizing aboriginal languages. Topics include early literacy strategies linked to oral tradition; immersion strategies; promoting oral and written language; different writing systems used by Mi’kmaw over time, including the Smith-Francis orthography. Three credits.

455 Mi'kmaq Language Arts II
This course combines theories of language acquisition with their practical application in first- and second-language classrooms. Topics include materials and lesson development; using community resources; bringing elders into the classroom; making links with parents and other community members for language revitalization; connecting language communities using technology. Students will continue to perfect their ability to use the Smith-Francis orthography. Three credits.

456 Curriculum and Instruction in Music
This course provides an examination of music methods, materials, and curricula, using the Kodaly and other systems currently in use in the elementary school system. Three credits.

457 Curriculum and Instruction in Elementary Physical Education
This course is designed to introduce beginning pre-service teachers to the theoretical knowledge, practical experiences, and professional responsibilities of a successful elementary school physical education teacher. This course focuses on establishing structure for elementary physical education, writing unit plans, applying a teaching model based on skill themes and movement concepts, understanding developmentally appropriate instructional approaches, and implementing interdisciplinary practices. Three credits.

458 Curriculum and Instruction in Visual Arts
The aim of this course is to introduce the student to the visual and creative arts, and to discover ways to integrate these with the other subjects of the elementary school curriculum. Three credits.

459 French Education I
This course surveys several theories of language learning and the methodologies that reflect these theories. Students will learn how the National Core French Study (NCFS) brought about a change in French curriculum throughout Canada, and how the four syllabi of the NCFS are incorporated into all aspects of French second-language teaching and learning. Three credits.

460 French Education II
This course combines theories of language acquisition with their practical application in the second-language classroom. Topics will include: unit planning and implementation; materials and lesson plan development in the four skill areas; co-operative grouping strategies; graphic organizers as learning strategies; learning centres and authentic evaluation techniques. Three credits.

461 Entrepreneurship Education
Entrepreneurship is defined as a dynamic process throughout which a person, alone or with others, actualizes her or his potential (i.e., values, attitudes, knowledge and skills) to initiate a venture. This course will explore curriculum through economic, entrepreneurial and problem-solving processes. Three credits.

462 Teaching Religious Education in a Catholic School
Students will learn about the Canadian Catholic catechism and its setting within the doctrinal foundations of the Catholic faith. Related topics of religious philosophy and spirituality and their roles in people’s lives will be explored. Three credits.

464 Environmental Education
Beginning with the assumption that solutions to environmental problems require well-designed environmental education programs, students will develop a conceptual framework and practical strategies for creating an environmental education curriculum for grades K-12. Three credits.

467 21st-Century Teaching and Learning
This course examines the effective implementation of technological options for teaching and learning in the 21st century for P-12 teachers. Students will explore legal, social, and ethical issues; selection and design of learning experiences
that incorporate technology, and analyses of the use of emerging technologies to improve teaching and learning. Three credits.

469 Selected Topics in Education
Three credits.

491 Advanced French Grammar
Available exclusively to education students and educators, this course will lead participants to a critical and analytical review of functional grammar as applied to the field of education. Special focus will be placed on French linguistic structures related to material development, correspondence with parents, teachers and other professionals in the field and the development of additional curriculum resources. A major objective of the course will be to encourage and enable participants to learn to self-correct written and oral communication. Restricted to Year 2 French students only. Three credits.

493 Directed Study
In consultation with the department and with permission of the chair, students may undertake a directed study in an approved area of interest not available through other course offerings. See section 3.5. Three credits.

Certificate in Elementary Mathematics Education
This program has been developed in response to a need identified by the Nova Scotia Department of Education and school board partners. The Certificate in Elementary Mathematics Education is recognized for a licensing upgrade in Nova Scotia. The certificate consists of a sequence of ten courses focusing on content and pedagogy suitable for the elementary and middle years and is offered to cohorts of in-service teachers on a part-time basis.

In addition, to EDUC 401, 402, 403, 404A and 404B, students will also complete EDUC 468, 513, 518, 520C and 544.

401 Pedagogical Foundations for Elementary Mathematics Education I: Numeracy
This course is a survey of curriculum topics, which supports teachers’ delivery of the elementary mathematics curriculum. Selected topics in the pedagogy of numeracy are designed to help pupils develop their mathematical thinking in relation to numerical reasoning. In-service teachers will investigate and explore topics of relevance for the effective teaching of elementary school mathematics including number systems, operation sense, rational and irrational numbers, counting principles, and statistics. Three credits.

402 Pedagogical Foundations for Elementary Mathematics Education II: Mathematical Modelling
This course is a survey of curriculum topics, which support teachers’ delivery of the mathematical modelling components of the elementary mathematics curriculum. Selected topics in the pedagogy of mathematical modelling are designed to help develop their mathematical thinking in relation to modelling real-world contexts and solve mathematical problems. In-service teachers will investigate and explore selected topics for the effective teaching of elementary school mathematics including functions, algebraic modelling, statistical modelling, and graph theory. Three credits.

403 Pedagogical Foundations for Elementary Mathematics Education III: Geometric Reasoning
This course is a survey of curriculum topics, which supports teachers’ delivery of the elementary mathematics curriculum. Selected topics in the pedagogy of modern geometries are designed to help pupils understand the application of geometric reasoning. In-service teachers will investigate and explore topics of relevance for the effective teaching of elementary school mathematics including Euclidean and non-Euclidean geometry, topology, transformational geometry, and geometric constructions. Three credits.

404A Curriculum and Instruction in Early Childhood Mathematics I
This course includes an examination of the elementary school mathematics program focusing on appropriate content and pedagogy from pre-kindergarten to grade two. Students in this course will focus on various approaches to teaching mathematics to young children, with emphasis on exploring strategies for the development of conceptual understanding through multiple representations including concrete models, pictures, symbols, words and contextual situations. Three credits.

404B Curriculum and Instruction in Upper Elementary Mathematics II
This course includes an examination of the elementary school mathematics program focusing on appropriate content and pedagogy for grades three to six. Students in this course will focus on various approaches to teaching mathematics to children in upper elementary, with emphasis on exploring strategies for the development of conceptual understanding through multiple representations. Three credits.

Certificate in Outdoor Education
This program is designed to fulfill a need identified by practitioners across the province in response to curriculum changes in the physical education curriculum in Nova Scotia. The Certificate in Outdoor Education is recognized for a licensing upgrade in Nova Scotia and consists of a sequence of eleven courses which focus on the skills and pedagogy required to offer outdoor pursuits to students of all ages in Nova Scotia schools. This certificate is offered to cohorts of in-service teachers on a part-time basis.

405A Teaching Co-operative Games & Leadership in Public Schools
This course is designed to provide teachers with the skills and teaching strategies for enacting student leadership development through experiential strategies that focus upon co-operative games and team building initiatives primarily for outdoor settings. Teachers will learn to create an experiential-based program to meet the needs of various groups of students by developing strategies for delivering activity-based initiatives for individual and group learning. Teachers will learn to facilitate initiatives ensuring student connections to curricular outcomes. Three credits.

405B Teaching Cycling in Public Schools
This course provides teachers with the knowledge and skills for teaching the fundamental skills and safety practices for urban cycling and mountain biking. It also helps teachers to understand how to teach their students knowledge about active transportation. Active transportation in this course is specific to cycling and based on teaching children road awareness, rules of the road, cycling skills, and cycling safety to help them consider cycling as a potential life-long activity. Three credits.

405C Teaching Archery in Public Schools
This course is designed to provide teachers with the teaching strategies following the skill progression of the National Archery in the Schools Program. The course will guide the development of safe-range practices, tournament play, inclusion adaptations, and how to develop a comprehensive unit plan, supported by outcome specific lesson plans, with current assessment practices. Furthermore, this course will also address yearlong planning that targets cross-curricular applications and inclusion strategies that are essential for teaching in schools. Three credits.

405D Teaching Canoe Tripping in Public Schools
This course is designed to provide teachers with the skills and teaching strategies for planning a skill-ability appropriate canoe trip for public schools. It prepares teachers to lead canoe excursions as day trips, as well as extended canoeing expeditions (multiple day and night trips). The focus will be on-water safety, environmental hazards, adaptive equipment, portage management, and in-camp preparations. Embedded into all the units taught in this course are practices attuned to wilderness travel and cross-curricular connections and Indigenous knowledge. Three credits.

405E Teaching Canoeing in Public Schools
This course is designed to prepare teachers to be able to engage in flat water canoeing instruction and to help them learn the pedagogical approaches that will assist them in promoting paddling as a life-long activity. The course includes on-water and dockside safety, environmental hazards, adaptive equipment, skill-based games, and helps attune teachers to on-water risks. Teachers will also develop skills and strategies for planning a progression of paddling skills for students in elementary and secondary schools. Three credits.

405F Teaching Core Camping in Public Schools
This course is designed to provide teachers with the skills and strategies for planning and teaching a progression of core camping skills from primary to grade 12. The focus of the course is to prepare teachers in the areas of trip planning, on-the-land skills and managing outdoor risks associated with leading students. Leave-no-trace approaches are embedded throughout all dimensions of the course to assist teachers to provide a curriculum with an ethic of sustainability and environmental preservation. Three credits.

405G Teaching Kayaking in Public Schools
This course is designed to prepare teachers to be able to engage in flat water kayaking instruction and to help them learn the pedagogical approaches that will assist them in promoting paddling as a life-long activity. The course includes on-water and dockside safety, environmental hazards, adaptive equipment, skill-based games, and helps attune teachers to on-water risks. Teachers will also develop skills and teaching strategies for planning a progression of paddling skills for students in secondary schools. Three credits.

405H Risk Management in Outdoor Education
This course provides teachers with the skills and strategies for emergency planning, conducting risk assessments for their outdoor program. Supporting the preplanning is learning about injury movement in wilderness/remote contexts and training to respond to environmental hazards. The course is structured to include outdoor lesson preparation, safety plans, and emergency response plans. Teachers will
review provincial safety guidelines that govern outdoor teaching, as part of the outdoor pursuits listed in the Public Schools Program. Three credits.

405I Teaching Navigation & Orienteering in Public Schools
This course is designed to provide teachers with the skills and strategies for teaching basic and advanced elements of navigation, GPS, and orienteering, as part of their curriculum for public school teaching. In addition to the course hours devoted to development of lessons and assessment skills, additional study will also be completed in general and specific inquiry-based methodologies related to the teaching of the curricular topics to meet P-12 learning expectations. Three credits.

405J Teaching Winter Trekking in Public Schools
This course is designed to develop the skills and knowledge associated with the winter trekking activities of the physical education curriculum which are Nordic skiing, snowshoeing, and winter trekking camp skills. Teachers will also develop their abilities for teaching these trekking activities as part of their physical education curriculum while taking into account seasonal realities. Teachers will develop their ability to engage in comprehensive yearlong unit, and lesson planning including assessment practices that target progressive fundamental movement skills. Three credits.

9.17.2 Master of Education
Graduate courses in education are offered in the fall, winter, spring and summer terms, primarily online. Students are required to complete a residential component during the month of July following acceptance into the program. As the majority of M.Ed. candidates study part time, the fall, winter, and spring courses are offered in evenings and occasionally on weekends.

Candidates for the M.Ed. program are normally required to take EDUC 505 and EDUC 534 as their first two courses in Antigonish during the summer session after acceptance into the program. EDUC 505 is a prerequisite for EDUC 506, 507, and 508. Normally, EDUC 506, 507, and 508 are taken after the core courses are completed. EDUC 506 or 507 is required in the thesis and project routes.

Educational Administration and Policy Stream

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<td>505</td>
<td>Introduction to Educational Research</td>
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<td>506</td>
<td>Quantitative Research Methods in Education</td>
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<td>507</td>
<td>Qualitative Research Methods in Education</td>
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<td>508</td>
<td>Critical Research Literacy in Education</td>
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<td>534</td>
<td>Introduction to the Foundations of Education</td>
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<td>561</td>
<td>Leadership and Administrative Theories</td>
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<td>599</td>
<td>Thesis</td>
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Electives: in the thesis option 6 in the course-based option 18

Electives are to be selected from the graduate courses offered in education and should reflect the focus of study chosen by the student.

Curriculum and Instruction Stream

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<td>527</td>
<td>Principles of Learning</td>
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<td>532</td>
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<td>536</td>
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Electives: in the thesis option 6 in the course-based option 18

Electives are to be selected from the graduate courses offered in education and should reflect the focus of study chosen by the student. No substitution or transfer of credit will normally be allowed in the core courses.

501 Program Evaluation and School Data Management
This course will explore the purposes, procedures, and strategies inherent in the design and implementation of effective program evaluations. Three credits.

505 Introduction to Educational Research
This introductory course covers reading and understanding educational research. Students will explore research issues and critically interpret the main types of research, including descriptive research, qualitative research, case studies, and empirical studies. Three credits.

506 Quantitative Research Methods in Education
An introduction to fundamental statistical concepts and methods, together with practical advice on their effective application to real-world problems. Students will explore the basic components of a research proposal. Prerequisite: EDUC 505. Three credits.

507 Qualitative Research Methods in Education
This course explores current qualitative methodologies used in educational contexts. Students will explore the components of a research proposal, and develop an understanding of methodologies such as phenomenology, ethnography, critical theory, narrative, and action research. Prerequisite: EDUC 505. Three credits.

508 Critical Research Literacy in Education
This course examines educational research issues and trends from the perspective of professional practice. Students will explore a variety of educational research publications in relation to their own educational context. Prerequisite: EDUC 505. Three credits.

509 Trauma Informed Practice
This course will promote teacher understanding and effective teaching to support students who have or are experiencing single trauma, complex trauma and/or intergenerational trauma. Educators will examine the impact of trauma on students and families and explore ways to respond to student needs. The impact of trauma on the concepts of locus of control, self-image and resilience will be studied from the perspective of how teachers can make a difference through building trust and relationships, and utilizing classroom adaptations. Credit will be granted for only one of EDUC 509 and EDUC 569 offered with a similar focus. Three credits.

510 Restorative Approaches in Educational Settings
This course helps educators understand the principles of restorative approaches and the wider peace building movement in education. Educators will critically consider restorative approaches as a way to create safe, engaging and inclusive educational settings. Educators will learn how to create a school climate that is relational and restorative and takes into account the contexts and causes of situations surrounding interpersonal interactions. Credit will be granted for only one of EDUC 510 and EDUC 569 offered with a similar focus. Three credits.

511 Mindfulness and Social Learning
Mindfulness is the ongoing practice of being awake and aware to what is inside and around us in the present moment, nonjudgmentally. In this course students will explore and engage with practices and research related to mindfulness in education. This course will also explore the concept of social emotional learning with a particular emphasis on how to implement social emotional learning through mindfulness in education. Credit will be granted for only one of EDUC 511 and EDUC 569 offered with a similar focus. Three credits.

512 Play-Based Curriculum for Lifelong Learning
This course provides graduate students with a deep understanding of the research and practice of incorporating play in early elementary grades in public schools. Planning, assessing and enacting a play-based curriculum are key course outcomes. Credit will be granted for only one of EDUC 512 and EDUC 569 offered with a similar focus. Three credits.

513 Problems and Issues in Special Education
Covers current theories of, and practices in, the education of children with special needs from pre-school through adolescence. Research relevant to assessment, instruction, counselling, and vocational programming practices will be examined. Proposals to modify program models will be included. Three credits.

514 Teaching Children with Learning Difficulties I
This course presents an overview of the historical and philosophical approaches to teaching children with learning difficulties. Students will examine the learning difficulties children can bring to the classroom. Three credits.

515 Culturally Responsive and Relevant Pedagogy
This course will provide graduate students with an understanding of the vital role culturally responsive and relevant pedagogy plays in creating equitable learning experiences for primary and secondary students. Within this course the students will critically analyze the root of academic failure among marginalized groups across North America, examine the impact of educator belief systems on student achievement. Students will gain an understanding of systemic racism, recognize the central role culture plays in classroom instruction, and identify culturally responsive and relevant instructional strategies appropriate for their own school contexts. Credit will be granted for only one of EDUC 515 and EDUC 569 offered with a similar focus. Three credits.

517 Teaching Children with Learning Difficulties II
This course focuses on the development of individualized instruction for children with learning difficulties who are in the regular classroom. Students will analyze the effectiveness of various approaches. Three credits.
518 **Assessment for/as Learning**
The course explores research that informs how appropriate assessment impacts student motivation, engagement and achievement. Formative assessment will be presented as a process that directly involves both students and teacher in generating quality information that informs the decisions teachers and students make before, during, and after instruction. Practical classroom examples and/or case studies will be explored. The course will also explore summative assessment and critically analyze a variety of tools used to evaluate learning with the aim of finding those that align with current research in assessment. Credit will be granted for only one of EDUC 518 and EDUC 569 offered with a similar focus. Three credits.

520 **Current Research in Curriculum**
A critical exploration of recent theories and research related to current issues in curriculum with a concentration in one of: 520A English Language Arts 520B French 520C Mathematics 520D Diverse Cultures 520E Science 520F Social Studies 520G Physical Education 520H Arts 520I Health 520J Outdoor/Experiential 520K Second Language 520L Drama 520M Music 520N Visual Arts Three credits each.

521 **Current Research in Instruction**

527 **Principles of Learning**
This course examines theories of learning and development and their implications for instruction. In addition to the general cognitive and behaviourist theories, the course will focus on the aspects of cognitive learning that are relevant to understanding the diversity of learners. Three credits.

529 **School and Teaching Effectiveness**
An examination of research on school and teaching effectiveness and the implications of this research for school improvement. Three credits.

532 **Curriculum Theory**
In this course, the ideas of major curriculum theorists will be examined and the implications of each position for program development for schooling will be explored. Three credits.

533 **Dynamics of Change**
This course examines major concepts in the successful implementation of change. Students will learn to recognize and understand the ways in which change can have an impact on education. Three credits.

534 **Introduction to the Foundations of Education**
Students are asked to critically examine their own practice and its context. Issues of power and privilege as they operate in the field of education are central unifying themes of the course. The investigative approach includes ethical reasoning, autobiographical reflection, arts and esthetics, deconstruction and sociological analysis. Three credits.

536 **Program Development**
Program development is investigated from the practitioner’s perspective using narrative inquiry to explore relationships among the four curriculum commonplaces of students, teacher, curriculum, and milieu. Three credits.

537 **Philosophical Foundation of Curriculum**
This course examines the philosophical foundations, criteria, and principles underlying the choice of subjects and curricula in educational institutions. Three credits.

538 **Nature of the Reading Process**
This course will examine models related to our understanding of the reading process and will explore the contributions of current literary theories to the development of contemporary literacy theories and practices. Three credits.

540 **Educational Finance**
While providing students with the opportunity to explore public and private funding of education, this course will also examine the moral, political, and economic bases for decisions in educational finance in the context of current educational and societal trends. Three credits.

541 **Administration of First Nations Education**
An introduction to the historical, legal, and philosophical bases of First Nations education. The course will explore issues related to the roles, responsibilities, and duties of administrators in band-controlled schools. Three credits.

543 **Internship**
Under faculty supervision, student interns will develop their practical and theoretical knowledge and competence in a particular area of education. Three credits.

544 **Cross-Cultural Issues in Education**
Students will examine various issues and theories related to cultural and race relations policies and practices in the education system. Three credits.

545 **English as a Second Language**
The course will cover theoretical and methodological aspects of learning and teaching a second language, focusing on the learning and teaching of English. Students will become familiar with the relevant research and examine the prevalent theories in different ESL areas. Three credits.

553 **Assessment for Teaching Students with Learning Challenges I**
This course will review trends and practices in assessment. Students will appraise various types of assessment, both standardized and informal, paying attention to characteristics, areas of usefulness, and limitations. Three credits.

554 **Assessment for Teaching Students with Learning Challenges II**
Students will develop the ability to choose formal and informal measures for assessing individual student achievement. They will learn how to administer, interpret, and communicate the results of these assessments. Relating the results of the assessment to the provincial outcomes suitable for the students will be a critical component of the course. Prerequisite: EDUC 553. Three credits.

561 **Leadership and Administrative Theories**
This course is an introduction to theory, research and practice in educational administration. Emphasis is placed on the evolutionary nature of administrative theory and its role in the operation of public education systems. Three credits.

562 **Contemporary Issues in Educational Administration Theory**
This course further explores contemporary issues in the theory, research, and practice of educational administration. Building upon EDUC 561, students will discuss topics such as post-modernism, feminist theory, chaos theory, and critical theory. Prerequisite: EDUC 561. Three credits.

564 **Administration of Inclusive Schools**
Many Canadian educational systems have inclusive schooling as a priority. This course will provide an overview of the movement towards inclusive schools and will explore proven practices in the administration of these schools. Three credits.

567 **School Law**
An examination of legal principles and procedures pertaining to school boards, administrators, and teachers. Consideration will be given to legislation and court decisions relative to the organization, policy, and administration of school districts in Nova Scotia. Three credits.

569 **Selected Topics in Education**
Students will explore in detail the theoretical underpinnings and practical implications of various topics and issues in education. Course content will vary from year to year. Three credits.

571 **Specific Issues in School Administration**
This course examines recurring and emerging issues in educational administration from the perspective of their theoretical roots. Students will address problems identified in the literature and in their own practice, develop an understanding of the
issues involved, examine the theoretical assumptions influencing these problems, and create alternative solution strategies. Three credits.

573 Professional Development and Supervision
This course addresses the role of supervision in an instructional program, focusing on human resources and the professional development process for instructional and support staff. Three credits.

576 Specific Issues in Curriculum Development
This course will examine selected contemporary educational controversies and explore their implications for curriculum decision-making. Students will examine current issues and problems. Three credits.

577 Computers in Humanities Education
This online course provides an overview of the role of computers in elementary and secondary education. By reading articles and books on selected topics, students will have a starting point for online discussions about the issues associated with computer technology in the classroom. Students also study a variety of software packages and Internet websites and create web lessons. Some prior knowledge of computers and basic keyboarding skills is required. This course will be of interest to K-12 teachers who are interested in using computers in language arts, social studies and the arts. Three credits.

578 Computers in Science Education
This online course provides an overview of the role of computers in elementary and secondary education. By reading articles and books on selected topics, students will have a starting point for online discussions about the issues associated with computer technology in the classroom. Students also study a variety of software packages and Internet websites and create web lessons. Some prior knowledge of computers and basic keyboarding skills is required. This course will be of interest to K-12 teachers who are interested in using computers in the sciences. Three credits.

581 The Role of the Principal
An examination of perspectives on educational leadership, delegation of functionally categorized responsibilities, administration of instructional programs, effective enhancement of staff, and the development of productive and satisfying learning environments for students. Three credits.

583 Education Planning and Policy
An examination of political theory as a basis for constructing policy and planning for the implementation of policy. Three credits.

590 Research Project
This course involves individual research, under the supervision of a faculty member, which develops both practical and theoretical understanding and competence in a particular area of education. Six credits.

593 Directed Study
In consultation with the department chair, students may undertake a directed study program in an approved area of interest that is not available through other course offerings. See section 3.5. Three credits.

595 Seminar
Students work under the supervision of a professor who will guide them in the selection of thesis topics and the preparation of thesis proposals. Students will have the opportunity to discuss their work with others as the research proposal is prepared. No credit.

599 Thesis
Twelve credits.

9.17.3 Ph.D. in Educational Studies
The Ph.D. in Educational Studies is offered in partnership by St. Francis Xavier University, Mount Saint Vincent University, and Acadia University. This research-oriented doctoral program is jointly administered by the Inter-University Doctoral Administrative Committee (IDAC). Applicants are admitted to one university and graduate from that home institution of record.

Doctoral students can focus their studies on one or more of six interrelated themes: curriculum studies, educational foundations and leadership, inclusive education, lifelong learning, literacies, and the psychological aspects of education. Applicants are encouraged to review the research interests of education faculty members at all three participating universities, available at their respective websites. An average of 14 students normally will be admitted each year: six at MSVU, four at StFX and four at Acadia.

Students enrol in EDUC 9001 and 9002 on site in July at one of the three universities. The site for these two courses will rotate amongst the three universities from year-to-year. Students complete EDUC 9010 and 9100 with their dissertation advisor and their committee at their home institution of record. The remaining courses are delivered using an e-learning platform. In some instances, doctoral students may arrange to enrol in an existing topic-related masters level course, augmented with doctoral level analysis and applications. Doctoral students have the right to take courses and seminars and use the academic facilities of any of the three participating universities in accordance with their approved plan of study.

9001 Foundations of Educational Inquiry
This course examines the purpose, process, nature and ideals of education. Students will engage with enduring educational philosophical and theoretical traditions and perspectives, the history of educational thought and the philosophy of education, in particular. A variety of foundational perspectives provides deeper understandings of the theoretical and methodological underpinnings of education. Co-requisite: EDUC 9002. Three credits.

9002 Methodological Perspectives on Educational Research
This course examines of the importance of methodological paradigms in educational research (building on the foundations of educational inquiry). Students investigate ontological assumptions; epistemological views; the role of logic, sound evidence and justified beliefs; axiology (values and biases); and rhetorical (research reporting structures) components of educational inquiry. Co-requisite: EDUC 9001. Three credits.

9003 Doctoral Seminar: Contemporary Educational Theory
This course explores how educational philosophy, research paradigms and theories are manifested in contemporary educational research debates and dialogues. Through an intensive examination of a range of theories that inform studies in education, students gain an advanced and comprehensive understanding of contemporary educational theory within the Canadian and international contexts. Prerequisites: EDUC 9001, 9002. Co-requisite: EDUC 9004. Three credits.

9004 Focused Educational Studies
This course will provide for focused exploration of research topics that reflect the research interests of the current roster of doctoral students. In a seminar setting, individual students will study the research and theoretical literature in the educational area(s) that inform their research interests. Prerequisites: EDUC 9001, 9002. Co-requisite: EDUC 9003. Three credits.

9005 Advanced Research Seminar: Focus on Methods
Students will gain detailed knowledge and technical expertise related to methods appropriate for their particular research question(s), aligned with their chosen philosophical and methodological orientations. Issues related to particular research design processes will be addressed. Prerequisites: EDUC 9001, 9002. Three credits.

9006 Special Topics Educational Studies
Three credits.

9007 Special Topics Educational Studies
This course provides students with an opportunity to explore selected topics in educational studies related to the literature associated with their research area. Prerequisites: EDUC 9001, 9002. Three credits.

9008 Independent Study
Three credits.

9009 Independent Study
The curriculum for this course will be determined by the supervisor of the course in consultation with the student and other faculty members, as necessary. Prerequisites: EDUC 9001, 9002. Three credits.

9010 Comprehensive Examination: Research/Scholarly Portfolio
Students will develop and orally defend an extensive scholarly portfolio demonstrating sufficient breadth, depth, creativity and engagement to undertake substantive research in their field. The portfolio will demonstrate students' knowledge and competence in each of five areas: general knowledge of educational theoretical traditions and trends, in-depth knowledge of their specific focal area, research and methodological knowledge and competence, professional competency in their focal area, and teaching competency in their professional area. Pass/Fail. The portfolio is created concurrently with EDUC 9001, 9002, 9003, 9004, 9005 and any EDUC 9006, 9007 and/or EDUC 9008. Nine credits.

9100 Dissertation
The dissertation must constitute a substantial and original contribution to the study of education. Students must prepare a research proposal for approval by an appropriate faculty dissertation committee, complete the proposed study, and defend the completed thesis in a final oral examination. Pass/Fail. Prerequisite: EDUC 9010. Eighteen credits.
9.18 ENGINEERING

F. Comeau, Ph.D., P.Eng.
E.C. Oguejiofor, Ph.D., P.Eng., FEC

Part Time
P. Doiron, P.Eng.
Dunniewold, H., P.Eng.

Program requirements are found in chapter 7. Year 1 is common to all disciplines. For year 2, students must follow the requirements for the disciplines to which they hold conditional admission at Dalhousie University third-year engineering, as outlined below:

Year 1
36 credits consisting of CHEM 121, 122, ENGR 121, 122, 128, 132, 136, 147; PHYS 121, 122; 6 credits of writing courses taken from one or a combination of ANTH, ART 141/142, ENGL, HIST, MUSI, PHIL, PSCI, RELS, or WMGS. Students wishing to take a writing course not listed here must obtain the approval of the engineering department chair.

Year 2
33 credits consisting of ENGR 123, 211, 221, 222, 224, 232, 237, 242; 9 credits of the discipline-specific courses listed below:

Chemical: ENGR 212, 227; CHEM 225
Civil: ENGR 212, 216, 235
Electrical: ENGR 238, 246; CSCI 162
Environmental: ENGR 212, 216, 235
Industrial: CSCI 162 and any two of ENGR 212, 216, 227, 231, 235, 238, 246; CHEM 225
Mechanical: ENGR 212, 231, 235
Mineral Resources: ENGR 212, 216, 235

For up to date information, please visit the department website: http://www2.mystfx.ca/engineering/

121 Calculus I for Engineers
This course examines the main idea of calculus of a single variable. It covers functions; limits; continuity; differentiation and integration of polynomial, exponential, logarithmic and trigonometric functions; product, quotient and chain rules; applications of differentiation to graphing; maximum-minimum problems and related rate problems; definite and indefinite integrals and the fundamental theorem of calculus. Credit will be granted for only one of ENGR 121 or MATH 106 or 126. Cross-listed as MATH 121. Three credits and one-hour lab and one-hour problem session.

122 Calculus II for Engineers
A continuation of ENGR 121, this course covers applications of integration including areas, volumes, moments, pressure and work; techniques of integration; numerical integration; length of curves; surfaces of revolution; parametric equations; polar co-ordinates; sequences and series and Taylor series. Credit will be granted for only one of ENGR 122 or MATH 107 or 127. Cross-listed as MATH 122. Prerequisite: ENGR 121. Three credits and one-hour lab and one-hour problem session.

123 Linear Algebra for Engineers
Covers geometric vectors in three dimensions; dot product; cross product; lines and planes; complex numbers; systems of linear equations; matrix algebra; matrix inverse; determinants; Cramer’s rule; introduction to vector spaces; linear independence and bases; rank; linear transformations; orthogonality and applications; Gram-Schmidt algorithm; eigenvalues and eigenvectors. Cross-listed as MATH 223. Three credits and two-hour lab.

128 Engineering Design and Graphics
Introduces the engineering profession through graphics and design. The engineering graphics language is presented through free hand sketches, instrument and computer-aided drawings. Students develop and enhance visualization skills as well as the ability to produce and interpret simple drawings. Students complete a design project that includes drawings and a report. Credit will be granted for only one of ENGR 128, ENGR 131, or ENGR 133. Three credits and three-hour lab.

132 Technical Communications
The main objective of this course is to provide students with technical communication skills, both written and oral. The history of engineering will be studied. Methods of producing engineering documents and presentations will be covered. Students will learn how to locate, use, and reference engineering information sources. Credit will be granted for only one of ENGR 132 or ENGR 244. Three credits and two-hour lab.

136 Statics
Covers statics of particles and rigid bodies. Designed to teach the principles and application of mechanics, and to develop an analytical approach to solving problems. Vector analysis is used extensively. Three credits and three-hour lab.

147 Engineering Computer Programming
An introduction to computer programming with a focus on engineering applications. The basic programming control structures, data structures, and modularization will be covered using the C or C++ language. Students will implement programs on a traditional IDE. In addition, the Arduino platform will be used to interface software with hardware. Three credits and three-hour lab. Credit will be granted for only one of ENGR 147, ENGR 144, ENGR 198 (2017-2018) or CSCI 161. Cross-listed as CSCI 161. Prerequisite: ENGR 132. Three credits and two-hour lab.

211 Thermo-Fluids I
This is the first of two courses in which the content of the traditional introductory thermodynamics and fluid mechanics courses is presented in a unified manner. Fluid properties; fluid statics; conservation of mass for both steady and unsteady flow systems; the first and second laws of thermodynamics and the application of these laws to closed systems and to steady and unsteady open systems; Bernoulli’s equation; vapour and gas cycles will be covered. Credit will be granted for only one of ENGR 211 or ENGR 233 or ENGR 234. Prerequisites: ENGR 121, 122, 136; CHEM 121/122(120). Three credits and three-hour lab.

212 Thermo-Fluids II
The second of two courses on thermo-fluids engineering will present availability; irreversibility; the control volume form of the continuity, momentum and energy equations; Euler’s equation of motion; fluid kinematics; dimensional analysis and similitude; viscous flow in pipes and ducts. Credit will be granted for only one of ENGR 212 or ENGR 233 or ENGR 234. Prerequisites: ENGR 123, 211. Three credits and three-hour lab.

216 Geology for Engineers
This course covers minerals, igneous rocks, weathering, sedimentary rocks, metamorphic rocks, geologic time, mass wasting, running water, groundwater, glaciations, shorelines, ocean floors, deformation and mountain building, Earth’s interior; earthquakes. Three credits and two-hour lab.

221 Differential Equations for Engineers
Covers first order linear and non-linear ordinary differential equations; ordinary differential equations of higher order with constant coefficients; applications to engineering problems; Laplace transforms; periodic functions; applications of Laplace transforms to linear systems; Fourier series. Credit will be granted for only one of ENGR 221 or MATH 237. Cross-listed as MATH 221. Prerequisites: ENGR 121, 122 or MATH 121, 122. Three credits and two-hour problem session.

222 Calculus III for Engineers
Extends the ideas introduced in ENGR 121 to the calculus of several variables, and covers space curves, arclength, curvature; partial derivatives; implicit functions; constrained and unconstrained extrema; multiple integrals; line, surface, and volume integrals; change of variables in multiple integrals; scalar and vectors fields; gradient, divergence, and curl; Stokes theorem. Credit will be granted for only one of ENGR 222 or MATH 267. Cross-listed as MATH 222. Prerequisites: ENGR 121, 122 or MATH 121, 122. Three credits and two-hour problem session.

224 Probability and Statistics for Engineers
This course covers probability laws and the interpretation of numerical data, probability distributions and probability densities, functions of random variables, joint distributions, characteristic functions, inferences concerning mean and variance, tests of hypotheses, linear regression, and time series analysis. Engineering applications are emphasized and statistical computer packages are used extensively. Cross-listed as STAT 224. Prerequisite: ENGR 122 or MATH 122. Three credits and two-hour problem session.

226 Fundamentals of Environmental Engineering
This course focuses on sources of environmental pollutants, the effects of pollutants on living and non-living systems, processes by which pollutants are generated or by which their effects can be minimized or remediated. Lectures are supplemented by guest speakers, case studies and field trips. Credit will be granted for only one of ENGR 226 or ENGR 228. Prerequisite: ENGR 211. Three credits.

227 Fundamentals of Chemical Engineering
Covers mass and energy balances for reacting and non-reacting chemical processes. Topics include the system of units; processes and process variables; mass balances for single-phase and multi-phase systems; Gibbs phase rule; Raoult’s law; Henry’s law; colligative properties; energy balances; combined mass and energy balances on reactive and non-reactive processes and on transient processes. Prerequisite: CHEM 121/122(120). Three credits and two-hour lab.

231 Dynamics
This second course in the study of engineering mechanics covers dynamics of particles and rigid bodies. Topics include kinematics; kinetics of particles and rigid
bodies in plane motion using Newton's second law; the principle of work and energy; and the principle of impulse and momentum. Vector analysis is used extensively and there will be computer applications. Prerequisites: ENGR 121, 122, 123; PHYS 120 or ENGR 136. Three credits and three-hour lab.

232 Engineering Design and Communications II
This project-based course offers students the opportunity to integrate and apply skills and knowledge learned in previous courses to a constrained engineering design project. Students work individually and as a part of a design team. Project design outcomes are presented orally and in formal written reports, as well as electronically on the internet. Elementary project management concepts are introduced. Ethical and legal issues that impact the practice of engineering are discussed. Credit will be granted for only one of ENGR 232 or ENGR 236 or ENGR 248. Prerequisites: ENGR 144 or CSCI 125; ENGR 211, 242; ENGR 237 or PHYS 221. Three credits and three-hour lab.

235 Strength of Materials
An introduction to basic principles of stress, strain, and stability. Topics include plane stress and strain; relationships between stress and strain; mechanical properties of materials; shear force; bending moment; axial force; torsion; stresses and deformations due to foregoing force effects; elastic and inelastic buckling. Prerequisite: ENGR 136. Three credits and three-hour lab.

237 Basic Electric Circuits Theory
Topics include introductory concepts; resistive networks; response to linear circuits with energy storage; exponential excitation functions; steady-state AC circuits; analysis; network analysis; systems. Cross-listed as PHYS 221. Prerequisite: ENGR 221 or MATH 221 concurrent; PHYS 121, 122. Three credits and three-hour lab.

242 Engineering Economics
This course provides an introduction to the economic aspects of decision-making in engineering. Topics include fundamental concepts; cash flow diagrams; interest factors; discounted cash flow techniques; rate of return; inflation; accounting; tax; project financing; sensitivity and risk analysis; replacement analysis; public sector analysis. Three credits and three-hour lab.

246 Circuit Analysis
Covers advanced circuit analysis techniques, starting with sinusoidal excitation. Topics include grounding and harmonics; symmetrical components and dealing with unbalanced networks; real and reactive power flow; balanced three-phase circuits for power distribution; phasors and complex impedance. Mutual inductance and magnetically coupled coils are used to introduce transformer behaviour and performance. Cross-listed as PHYS 246. Prerequisites: ENGR 144 or CSCI 125; ENGR 237 or PHYS 221. Three credits and three-hour lab.

9.19 ENGLISH
M. D’Arcy, Ph.D.
L. Estill, Ph.D.
J. Khoury, Ph.D.
P.A. Marquis, Ph.D.
M.B. McGillivray, Ph.D.
M.A. Moynagh, Ph.D.
M. Nilgea, Ph.D.
J. Potts, Ph.D.
C. Rushton, Ph.D.
D. Smith, Ph.D.
E. Wilputte, Ph.D.
K. Wright, Ph.D.

Part Time
K. Edwards, Ph.D.
A. Simpson, MA

English courses are organized into nine categories.

Medieval Literature
206* World Masterpieces I: The Classical World
207* World Masterpieces II: Medieval and Renaissance
290 The Canterbury Tales
388 Heroic Literature of the Middle Ages
389 The Ricardian Age: Chaucer’s Contemporaries

Renaissance Literature
238 Shakespeare’s Early Works
239 Shakespeare’s Later Works
304 The Early Tudor and Elizabethan Renaissance
305 The Later Elizabethan Renaissance
308 Milton and His Time
341 Shakespeare and Marlowe
491 Selected Topics: Shakespeare and the Bible

18th-Century Literature
253 Coffeehouse Culture of 18th-Century England
254 Topics in 18th-Century Literature
355 Restoration and 18th-Century Drama and Prose
356 18th-Century Novel and Poetry

19th-Century Literature
243 The Protomodern American Novel
270 The Romantic Gothic: 19th-Century Poetry and Short Fiction
271 Gothic Fiction: The 18th- and 19th-Century Gothic Novel
323 Victorian Medievalism
325 The American Novel, 1850-1940
492 Selected Topics: Grit, Mindset, Determination

20th- and 21st-Century Literature
201 Science Fiction and Fantasy
211 Introduction to Film and Media Studies
217 British Fiction, 1900-1950
218 Contemporary British Fiction
233 Children’s Literature: 1865 to the Present
241 Modern & Contemporary Poetry
257 The 21st-Century American Novel
258 Television Today
311 Photography and Narrative
319 Topics in Film Studies
329 Studies in Women Writers: Feminisms and Their Literatures
330* Studies in Women Writers: Genres, Cultures, and Contexts
337* Children’s Literature: Genres and Themes
353 Tolkien and the Inklings
379 American Literature

Canadian Literature
263 Canadian Literature I: 18th and 19th Centuries
264 Canadian Literature II: The 20th-Century and After
338 Canadian Drama
365 Canadian Fiction
366 Topics in Canadian Literature

Postcolonial Literature
240 Literature of the Middle East
245 Postcoloniol Literature
347 Literature of Africa and the African Diaspora

Creative Writing
231 Introduction to Creative Writing
322 Intermediate Creative Writing
422 Advanced Creative Writing

Literary Criticism and Cultural Theory
215 Principles & Practices of Literary Criticism
313 Literary Theory’s Histories
314 Contemporary Literary Theory
339 Cultural Theory through Popular Culture

*Courses could satisfy more than one category and/or historical period. See department for clarification.

Department Requirements
ENG 100, 111/112, or equivalent is required for entrance to all other ENGL courses. A student should have ENGL 100 or 111/112 plus at least three credits at the 200 level before taking a course at the 300 level. Some exceptions apply; see course descriptions. A student must have at least 18 credits of ENGL for admission to a 400-level course.

All students seeking admission to honours and advanced major programs must consult the department chair by March 31 of the second year to obtain approval for proposed course patterns, and again in March of the junior year for advice on thesis and senior seminar requirements.

Major Program
Students majoring in English complete the following courses: ENGL 100, 111/112
or equivalent; six credits Medieval or Renaissance; six credits 18th or 19th century; six credits 20th and 21st century or Canadian or Postcolonial; and 12 credits ENGL electives. Major students will normally complete at least nine credits of English courses before enrolling in a 300- or 400-level course. All prospective majors should attend an advising session normally held in March.

**Advanced Major Program**

Advanced majors in English complete the following courses: ENGL 100, 111/112 or equivalent; 24 credits of English electives from four of the five following historical periods, including: Medieval; Renaissance; Restoration and 18th century; 19th century; and 20th- and 21st-century literature; and six credits of senior seminars, one 3-credit senior seminar in the fall term, and another 3-credit senior seminar in the winter term. Students must also write an advanced major thesis in their final year in one of the senior seminars. See section 4.1 for degree regulations.

**Honours Program**

Students complete ENGL 100, 111/112, and 24 credits of English electives from four of the five following historical periods of literature: Medieval; Renaissance; Restoration and 18th century; 19th century; 20th- and 21st-century literature. Students also take 18 credits of English electives from three of the following four categories: Postcolonial literature; literary criticism and cultural theory; Canadian literature; and creative writing. An honours thesis is also required (6 credits), as well as 6 credits of senior seminars. See section 4.1 for degree regulations.

**Honours with a Subsidiary Subject**

Honours (ENGL) with a subsidiary subject requires 60 credits in the same pattern as the English honours program. A subsidiary subject in English requires 24 credits in English, with at least 6 credits at the 300 or 400 level.

**Senior Seminar**

Each year certain advanced courses will be designated senior seminars. All honours and advanced major students must be enrolled in two of these during their senior year, one in the first term and the other in the second term. Normally students will have third-year standing and have taken a minimum of 15 credits in English. Priority will be given to honours and advanced major students in English. Students may enrol in additional English seminars as part of their normal degree pattern, but do so as a 300-level course.

**Humanities Colloquium**

The humanities colloquium is an optional and interdisciplinary way of studying three first-year courses, usually ENGL 100, HIST 101, 102, and PHIL 100. See section 4.4 for further information.

**100 Introduction to Literature and Critical Writing**

Literature, Myth, and Culture. This course introduces students to the critical tools and methods of literary study, including close reading and argumentative writing. Students will learn about the history of genres (e.g. poetry, drama, and the novel) and forms of literature (e.g. tragedy, realism). Texts may include the earliest writing in English to more recent works in various media. Credit will be granted for only one of ENGL 100, ENGL 110 or ENGL 111/112. Six credits.

Note: ENGL 100, 111/112, or equivalent is required for entrance to all other ENGL courses.

**111 Literature and Academic Writing I**

This course will give students key skills such as: how to write literary-critical essays; how to build a question or problem from a close-reading of a literary work; how to frame an argument in a way that gives it purpose; how to develop that argument by presenting and analyzing evidence; how to engage in scholarly debate; how to do literary-critical research. Credit will be granted for only one of ENGL 111, 110 or 110. Three credits.

ENGL 111.12 focuses on Dead/Undead

ENGL 111.13 focuses on Race and Racism

ENGL 111.20 focuses on Why does Art Matter?

**112 Literature and Academic Writing II**

This course follows ENGL 111. It introduces students to the study of literature by familiarizing them with literary-critical concepts and terminology, by fostering an understanding of genre and form, by teaching the fundamental skill of close-reading, and by introducing them to literary works from a range of historical periods. Prerequisite: ENGL 111. Credit will be granted for only one of ENGL 112, 100 or 110. Three credits.

ENGL 112.10 focuses on Modern Love

ENGL 112.22 focuses on Becoming Yourself: Stories of Early Adulthood

**201 Science Fiction and Fantasy**

This course will examine the history of speculative literature, including the relationship between science and narrative, the rise of ethnic science fiction and fantasy, and ways in which the future and the past might be imagined. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits.

**206 World Masterpieces I: The Classical World**

Through a reading of Homer’s classical and influential poems (the Iliad and Odyssey), the course will explore how the ancient world thought texts worked. Readings will include Plato, Aristotle, Longinus, Horace and others. The course will also look at the New Testament’s adaptation of older texts, including the Old Testament, from a literary vantage point. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits. Not offered 2019-2020.

**207 World Masterpieces II: Medieval and Renaissance**

“Imagination, Dream and Vision.” An introduction to masterpieces in Western literature, in translation, focused on medieval and Renaissance/early modern Europe. Texts might include *The Dream of the Rood*, *The Wife of Bath's Tale*, excerpts from *The Faerie Queene*, *The Rime of the Ancient Mariner* and *The Eve of Saint Agnes*. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits.

**211 Introduction to Film and Media Studies**

This course will consider concepts and discussions that have developed in the history of film, television, and media studies. Students will be introduced to the vocabulary of film and media studies, techniques of analysis, and major theoretical discussions in these fields. Screenings will introduce students to various kinds of films, dating from the early 20th century to the present. Credit will be granted for one of ENGL 211, 209 or 297 “Analyzing Film.” Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits. Not offered 2019-2020.

**215 Principles and Practices of Literary Criticism**

This course builds on the skills students acquire in ENGL 100. Its aim is twofold. On the one hand, it will concern itself with philosophical questions regarding literacy, form and genre, and schools of critical approach (e.g. rhetorical, historical, sex and gender, sociological, political, psychological, neo-formal). On the other, it will develop practical skills by: expanding critical vocabulary; developing abilities to write argumentatively; and increasing proficiency with sources and databases. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits.

**217 British Fiction, 1900-1950**

A study of British fiction in the first half of the 20th century. Literary works will be considered in relationship to central cultural and intellectual developments of this period, as well as crucial historical points of reference (the world wars, colonialism and decolonization). Authors to be studied may include Joseph Conrad, E.M. Forster, James Joyce, Virginia Woolf, and Elizabeth Bowen. Credit will be granted for only one of ENGL 217 or ENGL 350. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits.

**218 Contemporary British Fiction**

This course will examine British fiction published since 1950. We will be concerned in particular with the following issues: changing conceptions of British national identity, and the relationship between these changes and the development of British fiction; ongoing discussions in this period on the capabilities and responsibilities of fictional narrative; the notions of postmodernism and late modernism and the pertinence to these periodizing terms to post-war British fiction. Credit will be granted for only one of ENGL 218 or ENGL 350. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits.

**233 Children's Literature: 1865 to the Present**

Using the landmark publication of Lewis Carroll's *Alice's Adventures in Wonderland* as a starting point, this course provides a critical survey of children's literature in Britain, America, and Canada. Authors to be studied may include: Carroll, L.M. Montgomery, Maurice Sendak, Roald Dahl, R.L. Stevenson, E.B. White, and various picture books. Credit will be granted for only one of ENGL 233 or ENGL 234. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits. Not offered 2019-2020.

**CREATIVE WRITING COURSES**

Students wishing to enrol in ENGL 322 or 422 are required to submit a portfolio to the English Department. The portfolio must be submitted electronically to english@sfx.ca as an attachment by June 1. The portfolio should consist of 10-15 pages of prose fiction, poetry, drama, or any combination thereof. If in any calendar year a course is restricted to a particular genre, the portfolio should consist solely of work in that genre. Students must indicate the creative writing course for which they wish to be considered and provide a complete list of English courses previously taken.

**231 Introduction to Creative Writing**

This course teaches students how to write creatively in two genres -- poetry and fiction -- in a workshop setting. Students will explore those elements of composition (imagery, dialogue, point of view, characterization, etc.) that make for interesting and challenging writing. Six credits.
238 Shakespeare's Early Works
An introduction to Shakespeare's early works, covering his writing from 1585 to 1600. Works may include histories, comedies, and poetry. Credit will only be granted for one of ENGL 238 and ENGL 237. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits.

239 Shakespeare's Later Works
An introduction to Shakespeare's later works, from roughly 1600 to his death in 1616. Works studied may include tragedies, romances, comedies and poetry. Credit will only be granted for one of ENGL 238 and ENGL 237. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits. Not offered 2019-2020.

240 Literature of the Middle East
This course will introduce students to the rich literary heritage of various countries in the Middle East. In addition to the geographic range, the course will also introduce students to various kinds of literature including traditional poetry and folk tales, but the main focus will be the novel and the short story of the twentieth century. Writers to be studied may include Najib Mahfuz, Elias Khoury, Hanan al-Shaykh, Ghassan Kanafani, Tayeb Salih, Muhammad Shukri, and others. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits.

241 Modern and Contemporary Poetry
A study of some of the major poets of the 20th and 21st centuries, including Elizabeth Bishop, T.S. Eliot, Wallace Stevens, Marianne Moore, W.B. Yeats, Gwendolyn Brooks, Philip Larkin, Derek Walcott, Sylvia Plath, Adrienne Rich, Henri Cole, Eavan Boland. Credit will be granted for only one of ENGL 241, 320 or 298 ST: Modern & Contemporary Poetry. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits. Not offered 2019-2020.

243 The Protomodern American Novel
"Grit, Opportunity, (In) equality." American stories and novels from the 19th and 20th century raise questions about whether equality is an ideal in name only. Are all opportunities equal? Are playing fields level? Does effort matter? How do race, gender and class affect one’s chances? How do stories help us understand these problems? Credit will be granted for only one of ENGL 243 and ENGL 344. Three credits. Not offered 2019-2020.

245 Postcolonial Literature
This course will introduce you to the culture of empire and to a growing body of writing that has come to be called “postcolonial.” Broadly defined as the literature of peoples who have experienced colonialism, this body of writing raises important questions about place, identity and belonging, and about the role of literature in representing nation, empire, and globalization. We will read fiction, poetry, and essays by writers from Europe, Africa, South Asia, and the Caribbean. Credit will be granted for only one of ENGL 245 or ENGL 247. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits. Not offered 2019-2020.

253 Coffeehouse Culture of 18th Century England
A course exploring a variety of works through the lens of the 18th-century coffeehouse. Focusing primarily on the periodical literature of the time—The Tatler, The Spectator, The Plain Dealer and The Female Spectator—and novels and poetry, the course will consider themes like conversation, urban space, taste and culture, consumerism, gender fashioning, and the private subject made public. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits. Not offered 2019-2020.

254 Topics in 18th Century Literature
Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits. Not offered 2019-2020.

256 The British Novel, 1850-1900
In considering British fiction produced from 1850-1900, we’ll encounter vampire stories, some of the earliest science fiction, novels about time travel and Martian invasions, influential detective fiction (Sherlock Holmes stories), love stories, and a strikingly weird cast of fictional monsters (Mr. Hyde, Dracula). Works to be studied may include Stoker's Dracula, Wells's The War of the Worlds, Stevenson's Strange Case of Dr. Jekyll and Mr. Hyde, and Conan Doyle's The Sign of the Four. Prerequisites: ENGL 100 or 111/112. Three credits.

257 The 21st Century American Novel
This course will introduce students to recent formal and generic developments in the American novel and situate these trends within the history of the novel as a literary form. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits. Not offered 2019-2020.

258 Television Today
This course introduces students to current debates about television and its role in contemporary culture. We will emphasize the manner in which programs develop narratives (episodically, serially, in story arcs) and the manner in which they are received (weekly, binge watching). Subscription fees for online content providers may be required. Credit will be granted for only one of ENGL 258 and 297 offered in 2016-2017. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits. Not offered 2019-2020.

263 Canadian Literature I: 18th and 19th Centuries
This course will survey Canadian poetry and prose in the historical contexts of exploration, settlement, and Confederation. Students will examine early Canadian authors’ engagements with the Romantics and Victorians, and will consider the emergence of a national literature. Selected authors may include Frances Brooke, Samuel Hearne, John Richardson, Thomas Chandler Haliburton, Susanna Moodie, James de Mille, Isabella Valancy Crawford, and Sir Charles G. D. Roberts. Credit will be granted for only one of ENGL 263 or ENGL 265. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits.

264 Canadian Literature II: The 20th Century and After
This course examines the major genres of Canadian writing during the 20th and 21st centuries, including fiction, poetry, and non-fiction. The course will emphasize key aesthetic developments within the contexts of modernism, feminism, postcolonialism, regionalism, postmodernism, environmentalism, culture and race. Credit will be granted for only one of ENGL 264 or ENGL 265. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits.

270 The Romantic Gothic: Poetry and Short Fiction
A study of Gothic literature in its historical and philosophical context, this course will explore 19th-century short fiction and poetry as well as a play and influential 18th-century literary sources. Authors may include: Walpole, Burke, Kant, Wordsworth, Smith, Robinson, Hogg, Scott, Coleridge, Keats, Lord Byron, and Baillie. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits.

271 Gothic Fiction: The 18th and 19th Century
Gothic Novel
An examination of the Gothic novel and the cultural forces that produced it. The course will explore supernatural tales from the classical and medieval periods which acted as forerunners to the genre. Authors may include: Horace Walpole, Ann Radcliffe, Matthew “Monk” Lewis, and Jane Austen; students may also read Frankenstein and Dracula. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits.

290 The Canterbury Tales
This course will introduce Geoffrey Chaucer’s Canterbury Tales, but it does more than that. The generic and formal diversity of Chaucer’s collection allows for discussion of medieval literary form and content, while also introducing significant aspects of medieval culture (the problem of “courtly love,” medical theory and political life). Further, the course allows discussion of manuscript tradition and theories of influence. Credit will be granted for only one of ENGL 290 or ENGL 390. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits.

295 Selected Topics
Prerequisite: ENGL 100 or 111/112, or 110, or equivalent. Three credits.

304 The Early Tudor and Elizabethan Renaissance
A study of texts produced during the Tudor dynasty. Authors may include Christopher Marlowe, William Shakespeare, Thomas Kyd, Edmund Spenser, and others. Prerequisite: ENGL 100, 111/112 or equivalent. Three credits. Not offered 2019-2020.

305 The Later Elizabethan Renaissance
William Shakespeare’s sonnet sequence, along with Edmund Spenser’s epic allegory, The Faerie Queene, will be read in the context of the 1590s, the last full decade of the reign of Elizabeth I. In close readings of these two masterpieces, we will examine the relations between literature and culture and the way in which
politics and gender provide a context for aesthetic production. Prerequisite: ENGL 100, 111/112 or equivalent. Three credits.

308 Milton and His Time
This course will provide an intensive study of Milton’s life and major poems, especially Paradise Lost, and some of his polemical prose. The course will also focus on the historical and political contexts of this revolutionary age, and Milton’s contributions to the Republicanism of the era. Credit will be granted for only one of ENGL 308 or ENGL 312. Prerequisite: 9 credits ENGL. Three credits. Not offered 2019-2020.

313 Literary Theory's Histories
This course introduces students to the history of literary theory. Depending on the instructor, the course may cover either a specific period in literary studies (e.g. Medieval, Early Modern, Romantic) or a broader historical accounting of contemporary theory’s antecedents. Credit will be granted for only one of ENGL 313 or ENGL 445. Prerequisite: 9 credits ENGL. ENGL 215 is recommended. Three credits. Not offered 2019-2020.

314 Contemporary Literary Theory
This course introduces students to current issues in literary criticism including (but not limited to): formalism, gender and sexuality, materialism, psychology and historicism. Our aim will be to consider the usefulness of different approaches in opening up our readings of texts. We will examine a sample of different types of works – a novel, a play, a film, lyric poems – in testing different theoretical approaches. Credit will be granted for only one of ENGL 314 or ENGL 445. Prerequisite: 9 credits ENGL. ENGL 215 is recommended. Three credits. Not offered 2019-2020.

319 Topics in Film Studies
Postwar European Cinema: Movements and Directors. This course will address the development of cinema from a historical and formal perspective. Topics to be covered include movements and periods in the history of the cinema, the impact on cinema of technological developments, different modes of narrative cinema, and major categories of formal analysis, such as mise-en-scene, editing, and cinematography. One focus of the course will be on the techniques and conventions of writing about cinema. Prerequisite: 9 credits ENGL. ENGL 215 is recommended. Three credits.

323 Victorian Medievalism
This course will examine Victorian treatments of the medieval. Texts studied will include non-fiction, fiction, and poetry. We will also consider the Gothic Revival in architecture and the Pre-Raphaelite movement in painting. Authors may include Thomas Carlyle, Alfred Lord Tennyson, E. B. and Robert Browning, John Ruskin, George Eliot, Edward FitzGerald, William Morris, and Christina and D. G. Rossetti. Prerequisite: 9 credits ENGL. Three credits. Not offered 2019-2020.

325 The American Novel, 1850-1940
What kinds of social creatures are people? What causes our social lives to fall into patterns, shapes, and configurations? How do these forms define our social worlds? In this class we will look at American novels written at the end of the 19th century and the start of the 20th century as resources for understanding the complexity of modern social life. Three credits. Not offered 2019-2020.

328 Studies in Women Writers: Feminisms and Their Literatures
An introduction to feminist theories within historical, cultural, and philosophical contexts, this course explores the relationship between feminist theories and literary texts that exemplify or extend them. Cross-listed as WMGS 329. Prerequisite: 9 credits ENGL. Three credits.

330 Studies in Women Writers: Genres, Cultures, and Contexts
This course explores modern and contemporary poetry written by women in English. Cross-listed as WMGS 330. Prerequisite: 9 credits ENGL. Three credits. Not offered 2019-2020.

334 The Western
This course will survey the western, from its contemporary origins in newspapers and dime novels through to the revisionist texts of the 60s-80s, and then to current generic mash-ups (the horror western, the curvy western). Texts could include novels (Wister’s The Virginian), radio and TV (The Lone Ranger), film (The Searchers, Pale Rider), and graphic novels (Preacher). Prerequisite: 9 credits ENGL. Three credits.

337 Children's Literature: Genres and Themes
Prerequisite: 9 credits ENGL. Three credits.

338 Canadian Drama
This course will examine how Canadian drama has been (re)defining our national identity for the past four hundred years. Introducing students to theatrical forms such as vaudeville, minstrelsy, clowning, and verbatim theatre, this course will simultaneously consider issues of nationality, race, and gender. Playwrights include Tomson Highway, Margaret Atwood, Djanet Sears, and Guillermo Verdexcha. Credit will be granted for only one of ENGL 338 or ENGL 366. Prerequisite: 9 credits ENGL. Three credits. Not offered 2019-2020.

339 Cultural Theory and Popular Culture
This course introduces students to the classical texts of and contemporary developments in cultural theory. The course will practically apply these theories through the study of popular culture. Students will learn the basics of cultural analysis and familiarize themselves with what theorists have come to understand as the “critique of everyday life.” Credit will be granted for only one of ENGL 339 and ENGL 318. Prerequisite: 9 credits ENGL. Three credits.

341 Shakespeare and Marlowe
A study of Shakespeare’s work in comparison with his early contemporary dramatist and poet, Christopher Marlowe. Prerequisite: 9 credits English. Three credits.

347 Literature of Africa and the African Diaspora
A study of the literature of sub-Saharan Africa and/or the African Diaspora, including African-Canadian, African-American, Afro-Caribbean, and Black British literatures. Topics will vary from year to year. Prerequisite: 9 credits ENGL. Three credits. Not offered 2019-2020.

353 Tolkien and the Inklings
“Versus.” This course will put “traditional” fantasy authors such as Tolkien and Lewis up against those authors who question or write against them, such as Philip Pullman, Madeline L’Engle, and George R. R. Martin. Prerequisites: 9 credits English. Three credits.

355 Restoration and 18th-Century Drama and Prose
The libertine is the Restoration’s bad boy and its cultural icon. This course explores the character and philosophy of the libertine as depicted in several Restoration plays, and modeled on the real-life Earl of Rochester. Womanizer, drunkard, poet, wit, and master of masquerade, the libertine embodies the attractive and repulsive aspects of masculinity. Plays include Wycherley’s The Country Wife, Shadwell’s Libertine, Etheridge’s Man of Mode, Behn’s The Rover, and the movie, The Libertine. Prerequisite: 9 credits ENGL. Three credits. Not offered 2019-2020.

356 18th-Century Novel and Poetry
A study of the rise of the novel from Aphra Behn to Laurence Sterne, the course examines the imagined lives of mistresses, misfits, magicians, and crossdressing as authors explore the secret springs of human thought and motivation as they experiment with form and style. Works include Behn’s The Fair Jilt, Defoe’s Roxana, Haywood’s Eovaai, Fielding’s The Female Husband, and Sterne’s Tristram Shandy. Prerequisite: 9 credits ENGL. Three credits. Not offered 2019-2020.

358 Canadian Fiction
Students will read novels and short stories, in English, to develop a sense of the thematic patterns, style, and changing narrative strategies in Canadian fiction, especially in works since 1930. Credit will only be granted for only one of ENGL 365 and 367. Prerequisite: 9 credits ENGL. Three credits.

360 Topics in Canadian Literature
Prerequisite: 9 credits ENGL. Three credits. Not offered 2019-2020.

388 Heroic Literature of the Middle Ages
See ENGL 491 for course information. Prerequisite: 9 credits ENGL. Three credits.

391 Selected Topics
Prerequisite: 9 credits ENGL. Three credits. Not offered 2019-2020.

397 Selected Topics in Literature I
See ENGL 492 for course information. Prerequisite: 9 credits ENGL. Three credits.

398 Selected Topics in Literature II
Prerequisite: 9 credits ENGL. Three credits. Not offered 2019-2020.

400 Honours Thesis
Honours students write a thesis under the supervision of a faculty thesis director. Students must meet the thesis director in March of the junior year to prepare a topic. Honours students must register for the thesis as a six-credit course in their senior year. The thesis must be submitted no later than March 31 of the senior year. See chapter 4. Six credits.
**SENIOR SEMINARS**

**491 Selected Topics I**
The topic for 2019-2020 is Shakespeare and the Bible. This course will study the relationship between two of the most influential works in the history of writing: the Bible and Shakespeare’s First Folio (selected plays). The course will assume that students may be familiar with either Shakespeare or the Bible, but not necessarily both. The course will explore biblical patterns and allusions in order to study their impact on Shakespeare’s plays. Five to six plays of different genres will be studied. Prerequisites: third-year standing and 15 credits English. Three credits.

**492 Selected Topics II**
The topic for 2019-2020 is Grit, Mindset, Determination. Is grit better understood as a character trait one possesses or a condition from which one tries to emerge? Can one will oneself to outcomes? Contemporary educational and psychological theorists argue that developing grit is essential to achieving one’s potential. This seminar examines a set of American novels that explore the complications involved in making grit into a personal attribute. Prerequisites: third-year standing and 15 credits English. Three credits.

**497 Advanced Major Thesis**
Advanced major students write a thesis as part of the senior seminar. See chapter 4. No credit.

**499 Directed Study**
In consultation with the department and with approval of the chair, students may undertake a directed study program in an approved area of interest, which is not available through other course offerings. See section 3.5. Three or six credits.

- FRENCH see 9.26 Modern Languages
- GERMAN see 9.26 Modern Languages

**9.20 HEALTH**

The BASc in Health is designed to allow students to approach health and health-related issues from an interdisciplinary perspective. The program aims to provide students with a contemporary education in health by drawing on knowledge from a number of disciplines. Since the field of health is most fully understood with scientific, social, and humanistic contributions to its definition, the program is developed within the BASc structure - a four-year combined degree in both Arts and Science. The program will be suitable for students who come to University with a desire to pursue a career in a health-related field or who want to pursue a graduate degree in health studies or health sciences. This is not a professional program that prepares students to become practitioners, but rather provides students who have an interest in health with the opportunity to explore health from multiple disciplinary perspectives. This program will prepare students for the topics covered in the MCAT exams.

Students are required to meet with the program coordinator or an academic advisor every year to assess their academic progress.

HLTH 101, 102, 201, 202, 203, 301, 302, 401, and 402 are restricted to students enrolled in the BASc in Health program.

**Bachelor of Arts and Science in Health**

a) 24 credits of core courses: HLTH 101, 102, 201, 202, 301, 302, 401, 402.
b) BIOL 111, 112, CHEM 101, 102, PSYC 101, 102, SOCI 101, 102. The 12 credits of BIOL and CHEM are included in the biomedical concentration; the 12 credits of PSYC and SOCI are included in the social determinants and health equity concentration.
c) 48 credits in primary concentration: HLTH 203; STAT 101; 12 credits from requirement (b); 30 credits from designated courses.
d) 24 credits in secondary concentration: 12 credits from requirement (b); 12 credits from designated courses.
e) 12 credits from health humanities and health ethics designated courses, to include a minimum of 3 credits from health ethics options.
f) 12 credits of open electives.
g) 100-level restriction: in the primary concentration, a maximum of 18 credits at the 100-level (not including STAT 101); in the secondary concentration, a maximum of 12 credits at the 100-level, which are fulfilled by courses in requirement (b).
h) 300- and/or 400-level requirement: a combined minimum of 12 credits of 300- and/or 400-level courses in the primary and secondary concentrations.
i) In addition to the 12 credits of health humanities, a minimum of 24 credits of arts courses. The arts courses in requirement (b) fulfill 12 of these required credits.
j) A minimum of 24 credits of science courses. The science courses in requirement (b) fulfill 12 of these required credits. 12 credits must be courses with laboratory components at the 200-level or above. These science courses can be used anywhere in the degree pattern. (Psychology falls within the Faculty of Arts, therefore, lab courses in psychology cannot fulfill this requirement.)

**Bachelor of Arts and Science with Honours in Health**
The requirements are the same as those for the program above, with the following exceptions:
a) HLTH 490 is required in the primary concentration, for a total of 54 credits.
b) There are 6 credits of open electives.
c) The honours program requires a combined minimum of 18 credits of 300- and/or 400-level courses (including HLTH 490) in the primary and secondary concentrations.

**Biomedical as Primary Concentration**

- Year 1: BIOL 111, 112; CHEM 101/102; HLTH 101, 102; PSYC 101, 102; SOCI 101, 102;
- Year 2: HLTH 201, 202, 203; STAT 101; 3 credits health humanities; 9 credits BIME designated courses; 3 credits SDHE designated courses; 3 credits electives
- Year 3: HLTH 301, 302; 6 credits health humanities; 12 BIME designated courses; 3 credits SDHE designated courses; 3 credits electives
- Year 4: HLTH 401, 402, 490; 3 credits health humanities; 9 credits BIME designated courses; 6 credits SDHE designated courses; 6 credits electives

**Honours with Biomedical Concentration**

- Years 1 & 2: same as program above
- Year 3: HLTH 301, 302; 6 credits health humanities; 15 BIME designated courses; 3 credits SDHE designated courses
- Year 4: HLTH 401, 402, 490; 3 credits health humanities; 6 credits BIME designated courses; 6 credits SDHE designated courses; 3 credits electives

**Social Determinants and Health Equity as Primary Concentration**

- Year 1: BIOL 111, 112; CHEM 101/102; HLTH 101, 102; PSYC 101, 102; SOCI 101, 102;
- Year 2: HLTH 201, 202, 203; STAT 101; 3 credits health humanities; 3 credits BIME designated courses; 9 credits SDHE designated courses; 3 credits electives
- Year 3: HLTH 301, 302; 6 credits health humanities; 3 BIME designated courses; 12 credits SDHE designated courses; 3 credits electives
- Year 4: HLTH 401, 402, 490; 3 credits health humanities; 6 credits BIME designated courses; 9 credits SDHE designated courses; 6 credits electives

**Honours with Social Determinants and Health Equity Concentration**

- Years 1 & 2: same as program above
- Year 3: HLTH 301, 302; 6 credits health humanities; 3 BIME designated courses; 15 credits SDHE designated courses;
- Year 4: HLTH 401, 402, 490; 3 credits health humanities; 6 credits BIME designated courses; 6 credits social determinants and health equity designated courses; 3 credits electives

**Co-operative Education in Health**
This optional academic program allows students to gain the opportunity to gain 12 months of professional, paid work experience in a range of opportunities in industry, government and not-for-profit across Canada. Students can gain valuable technical and professional experience in field and lab work, research, policy and education to reinforce classroom-based instruction. COOP 405 can be used as a primary or secondary concentration designated elective, or as an open elective. See section 9.13 for further information.

**101 Fundamentals of Health I**
This course provides an introduction to perspectives of health from a range of arts and science disciplines. Emphasis is on how health, wellness, illness, and disability have been conceptualized and constructed. Students will compare and contrast social and medical models of health across different historical periods, societies and cultures. Tutorials will develop applied skills for university success in health studies. Three credits and tutorial.
202 Fundamentals of Health II
This course builds on HLTH 101, challenging students to consider systematic variations in the distribution of health, health equity, and social justice among individuals, groups, populations, and societies. Various biological determinants that underpin health, illness, disease, pain, and defect are examined. Various explanations of social determinants that affect health, well-being, illness, and disability are a focus. The relevance of determinants of health in the global context is introduced. Prerequisite: HLTH 101. Three credits and tutorial.

201 Health Across the Lifespan I
This course provides students with an integrated approach to understanding the health of children in developing and developed countries and will foster an understanding of the multiple determinants of healthy development. Students will identify alternative approaches to health beyond the disease-based approaches and will learn about the role of government in health care. By applying selected developmental theories to healthy physical, cognitive and social development, students will come to understand the contribution of family and community to, and the impact of socio-economic, political, biological, and environmental factors on, child health and development up until adolescence. Prerequisites: HLTH 101, 102. Three credits.

202 Health Across the Lifespan II
This course provides students with an integrated approach to understanding age-related changes of health during adolescence and adulthood in a cross-cultural context including health of indigenous populations. Special emphasis will be placed on using critical thinking to evaluate scientific research related to developmental origins of health beyond the childhood years. Themes covered include determinants of adolescent, adult, and geriatric health, the role of cultural considerations in healthy aging and dealing with death as part of the lifecycle. Prerequisite: HLTH 201. Three credits.

203 Introduction to Health Research Methods
An introduction to quantitative and qualitative research methods used to study health-related topics. A range of study designs will be discussed, with consideration to characteristics such as levels of measurement, sampling approaches, and data collection/generation techniques. The importance of research within the field of health, as well as strengths and weaknesses of different techniques, will be addressed. Discipline-specific methodology will be introduced, such as epidemiology, evidence-based practice, program evaluation, and public health research. Credit will be granted for only one of HLTH 203 and another research method course. Prerequisite: STAT 101 and second year BASc in Health status. Three credits and tutorial.

301 Global Health, Equity, and Innovation
This course examines global health within the context of an increasingly uneven, globalized world. The course departs from a biomedical orientation on health to introduce competing health and health system discourses, the political-economy of global health, factors that perpetuate and underpin global health inequities, as well as insights into the global health governance and policy landscape. Given the imperative for ‘health for all’, strategies and options for creating and spreading health through social innovation and policy will be explored. Prerequisites: HLTH 201, 202. Three credits.

302 Health in All Policies: An Intersectoral Approach to Health and Health Equity
This course examines approaches to health that extend beyond the delivery of health services. Students will examine the consequences of programs and policies that lie outside health sector on health systems, determinants of health, health and health equity. A focus is on an intersectoral and systems approach to health and equity that involves government and non-government stakeholders from various sectors. Emphasis is on examining health in all policies and the role stakeholders play in overcoming barriers that hinder intersectoral approaches to complex health and equity issues from a systems perspective. Prerequisite: HLTH 301. Three credits.

398 Selected Topics
The topic for 2019-2020 is Health Systems and Health Policy. This course will examine policy decisions of health systems in comparative perspective and the role of evidence in that process. The course will focus on the Canadian (specifically NS) health system and compare the origins and evolution of this system, and current debates about its future, with a comparator country's health system. A comparator health system will be used for discussion and assignments. The course objective is to review how healthcare is different from other goods and services, how governments have responded to these differences, how governments make decisions about healthcare in different health systems, and how governments are dealing with current healthcare challenges in different health systems. Prerequisite: HLTH 302. Three credits.

401 Health Leadership
This course represents the capstone for students completing the BASc in Health.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PHYS 101</td>
<td>Physics for the Life and Health Sciences I</td>
<td>3, lab</td>
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<tr>
<td>PHYS 102</td>
<td>Physics for the Life and Health Sciences II</td>
<td>3, lab</td>
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<tr>
<td>PSYC 220</td>
<td>Cognitive Psychology</td>
<td>6, lab*</td>
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<tr>
<td>PSYC 225</td>
<td>Sensation and Perception</td>
<td>6, lab*</td>
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<tr>
<td>PSYC 230</td>
<td>Brain and Behaviour</td>
<td>6, lab*</td>
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<td>PSYC 327</td>
<td>The Psychology of Pain</td>
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<tr>
<td>PSYC 328</td>
<td>Neural Mechanisms of Pain Analgesia</td>
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<tr>
<td>PSYC 362</td>
<td>Applications of Psychology to the Health Sciences</td>
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<td>PSYC 367</td>
<td>Basics of Psychopharmacology</td>
<td>3</td>
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<td>Pharmacology of Drugs of Abuse</td>
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<td>PSYC 373</td>
<td>Human Neuropsychology</td>
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*Psychology falls within the Faculty of Arts, therefore, labs courses in psychology cannot fulfill this requirement.

### Social Determinants and Health Equity Designated Courses

Departmental prerequisites will apply.

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<tr>
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<tbody>
<tr>
<td>ANTH 111</td>
<td>Introduction to Physical Anthropology/Archaeology</td>
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<tr>
<td>ANTH 112</td>
<td>Introduction to Socio-Cultural Anthropology</td>
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</tr>
<tr>
<td>ANTH 218</td>
<td>Anthropology of Health and Illness</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 320</td>
<td>People and Development</td>
<td>3</td>
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<td>ANTH 323</td>
<td>Feminist Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 415</td>
<td>Anthropology of HIV/AIDS</td>
<td>3</td>
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<tr>
<td>COOP 405</td>
<td>Work Term and Integrated Learning</td>
<td>3</td>
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<tr>
<td>DEV 211</td>
<td>Local and Community Development Economics</td>
<td>3</td>
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<td>DEV 321</td>
<td>People and Development</td>
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<tr>
<td>ECON 101</td>
<td>Introductory Microeconomics</td>
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<td>ECON 102</td>
<td>Introductory Macroeconomics</td>
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<td>ECON 201</td>
<td>Intermediate Microeconomic Theory I</td>
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<td>ECON 211</td>
<td>Local and Community Development Economics</td>
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<td>ECON 364</td>
<td>Health Economics</td>
<td>3</td>
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<tr>
<td>ESCI 272</td>
<td>Understanding Climate Change</td>
<td>3, lab</td>
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<tr>
<td>ESCI 273</td>
<td>Health and the Environment</td>
<td>3</td>
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<tr>
<td>ESCI 274</td>
<td>Health Impacts of Global Climate Change</td>
<td>3</td>
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<tr>
<td>HIST 101</td>
<td>Western Civilization: Earliest Civilizations to the War of Religion</td>
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<td>HIST 102</td>
<td>Western Civilization: Columbus to Decolonization</td>
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<td>HIST 111</td>
<td>Introduction to Global History 1300-1795</td>
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<td>HIST 112</td>
<td>Introduction to Global History from 1789</td>
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<td>HIST 113</td>
<td>Life and Times: Pre-Confederation Canada</td>
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<td>HIST 115</td>
<td>A History of Canada: Post Confederation</td>
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<tr>
<td>HIST 317</td>
<td>Canadian Women’s and Gender History: From Colony to Nation</td>
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<td>HIST 318</td>
<td>Canadian Women’s Gender History: Modernity</td>
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<tr>
<td>HIST 332</td>
<td>The Medieval Body</td>
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<td>HIST 360</td>
<td>Gender and Sexuality in Modern European Empires</td>
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<tr>
<td>HIST 398</td>
<td>Themes in the History of Sexuality</td>
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<td>HKIN 226</td>
<td>Focus on Personal Health</td>
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<td>HKIN 253</td>
<td>Sport Philosophy</td>
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<td>HKIN 264</td>
<td>The Sociology of Sport</td>
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<td>HKIN 322</td>
<td>Gender in Sport and Physical Activity</td>
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<td>HKIN 354</td>
<td>Sport Morality</td>
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<td>HNU 425</td>
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<td>HNU 433</td>
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### Nursing

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<tr>
<td>NURS 364</td>
<td>Social Justice and Health</td>
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<td>NURS 365</td>
<td>Gender and Health</td>
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<tr>
<td>NURS 408</td>
<td>Advanced Population and Public Health</td>
<td>3</td>
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<td>NURS 433</td>
<td>Introduction to Policy for Health-Interdisciplinary Strategies</td>
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<td>NURS 486</td>
<td>International Health and Development</td>
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### Philosophy

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<td>Introduction to Philosophy</td>
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<tr>
<td>PHIL 231</td>
<td>Human Nature I: Consciousness &amp; Epistemology</td>
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<td>PHIL 232</td>
<td>Human Nature II: The Emotions</td>
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<td>PHIL 332</td>
<td>Contemporary Moral and Social Issues</td>
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<td>PHIL 335</td>
<td>Ethics in Health and Medicine</td>
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### Political Science

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<td>PSCI 101</td>
<td>Introduction to Power and Politics</td>
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<tr>
<td>PSCI 102</td>
<td>Introduction to Comparative &amp; Global Politics</td>
<td>3</td>
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<tr>
<td>PSCI 221</td>
<td>Canadian Politics I: Structures &amp; Institutions</td>
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### Religion Studies

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<tr>
<td>RELS 111</td>
<td>World Religions I: Compassionate Global Citizenship</td>
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<tr>
<td>RELS 112</td>
<td>World Religions II: Compassionate Global Citizenship</td>
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<td>RELS 117</td>
<td>Ethical Principles for Health Care Providers</td>
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<td>RELS 120</td>
<td>Religion, Spirituality, and Health</td>
<td>6</td>
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<td>RELS 297</td>
<td>Selected Topics: The Body: An Owner’s Manual</td>
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<td>RELS 328</td>
<td>Mind, Self, and Society</td>
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<td>RELS 401</td>
<td>Religious Approaches to Sexuality</td>
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<td>RELS 402</td>
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### Sociology

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<tr>
<td>SOCI 217</td>
<td>Race and Identities</td>
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<tr>
<td>SOCI 221</td>
<td>Marriage and Family Life</td>
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<tr>
<td>SOCI 242</td>
<td>Technology and Society</td>
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<td>SOCI 243</td>
<td>Consumer Society</td>
<td>3</td>
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<td>SOCI 247</td>
<td>Environmental Social Science I: Problems and Paradigms</td>
<td>3</td>
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<td>SOCI 248</td>
<td>Environmental Social Science II: Power and Change</td>
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<td>SOCI 251</td>
<td>Theories of Deviance and Social Control</td>
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<td>SOCI 252</td>
<td>Topics in Deviance and Social Control</td>
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<td>Experiencing Social Class</td>
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<td>SOCI 315</td>
<td>Conceptions of Disability</td>
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<td>SOCI 314</td>
<td>Disability and Culture</td>
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<td>SOCI 335</td>
<td>Sociology of Canada’s Indigenous Peoples</td>
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<td>SOCI 364</td>
<td>Food and Society</td>
<td>3</td>
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<tr>
<td>SOCI 417</td>
<td>Social Difference: Race, Ethnicity, Gender, Class, Sex, and Disability</td>
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### Women's and Gender Studies

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<tr>
<td>WMGS 100</td>
<td>Introduction to Women’s and Gender Studies</td>
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<td>WMGS 205</td>
<td>Gender, Sexuality and the Body</td>
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<tr>
<td>WMGS 217</td>
<td>Race, Class, Gender and Sex</td>
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<tr>
<td>WMGS 221</td>
<td>Sociology of Marriage and Family Life</td>
<td>3</td>
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<tr>
<td>WMGS 317</td>
<td>Canadian Women’s and Gender History: From Colony to Nation</td>
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<tr>
<td>WMGS 318</td>
<td>Canadian Women’s History: Modernity</td>
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<tr>
<td>WMGS 327</td>
<td>Feminist Anthropology</td>
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<tr>
<td>WMGS 332</td>
<td>Gender in Sport and Physical Activity</td>
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<td>WMGS 333</td>
<td>The Medieval Body</td>
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<tr>
<td>WMGS 343</td>
<td>Psychology of Gender</td>
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<td>WMGS 344</td>
<td>Developmental Social Psychology of Gender</td>
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<td>WMGS 364</td>
<td>Social Justice and Health</td>
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<td>WMGS 365</td>
<td>Gender and Health</td>
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<tr>
<td>WMGS 370</td>
<td>Gender and Sexuality in Modern European Empires</td>
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9.21 HISTORY

N. Forestell, Ph.D.
C. Frazer, Ph.D.
S. Kalman, Ph.D.
G. Lalande, Ph.D.
P. McInnis, Ph.D.
R. Sempie, Ph.D.
L. Stanley-Blackwell, Ph.D.
D. Trembinski, Ph.D.
R. Zecker, Ph.D.
Senior Research Professor and Professor Emeritus
P. Phillips, Ph.D.

The Discipline of History
Curiosity inspires every generation to study the lives and societies of people who lived before them. The discipline of history has been developed to help us do this in a systematic, rigorous and critical way. The history program offers a wide-range of fascinating courses, from global history and the history of western civilization to more focused courses about nations, social groups and special topics. As well, its program equips students to develop the critical tools necessary to investigate the past effectively and to express their findings with clarity, vigour and intelligence. Students can take history courses as electives or pairs, or to complete a minor, major, joint major, advanced major, joint advanced major, honours or honours with subsidiary program.

Department Requirements
Students must follow the degree regulations found in chapter 4 and must consult with the department chair to plan their specific program and have it approved. The fundamental requirements of each program are outlined below. Departures from these regulations require the permission of the department chair and/or the Dean of Arts. Students following the major degree programs strive to balance specialization with breadth in their selection of courses. They must have some degree of specialization in one of the three designated areas of concentration: (1) Canadian, (2) European, or, (3) American/Latin American/Asian history.

Transfer credit limitations: Of the 36 credits required for a history major or advanced major, normally at least 24 must be obtained from StFX; of the 60 credits required for a history honours, normally at least 42 must be obtained from StFX; of the 48 credits required for a history honours with subsidiary, normally at least 36 must be obtained from StFX. The seminar and thesis requirements must be completed through StFX.

Note: Six credits from HIST 101, 102, 111, 112, 113, or 115 are required as a foundation for all first- and second-year students taking further history courses but this requirement is normally waived for third- and fourth-year students seeking a first course in history.

Minor or Subsidiary in History
a) 6 credits from HIST 101, 102, 111, 112, 113, 115
b) 18 additional credits above the 100 level

c) Total: 24 history credits with at least 6 credits at the 300/400 level

Major Program
Same history requirements as major above.

Advanced Major Program
a) 6 credits from HIST 101, 102, 111, 112, 113, 115
b) 6 credits in Canadian history above the 100 level
c) Total of 18 credits in a chosen concentration
d) Total of 12 credits from areas outside the chosen concentration
e) Total: 36 history credits with at least 15 credits at the 300/400 level

Joint Major Program
Same history requirements as advanced major above. Students are also required to complete a senior advanced major essay in a 400-level class. However, students are not required to do a senior advanced major essay if they choose history as their major subject B.

Honours Program
a) 6 credits from HIST 101, 102, 111, 112, 113, 115
b) 6 credits in Canadian history above the 100 level
c) HIST 445 (counts outside the chosen concentration)
d) A senior seminar (counts in the chosen concentration; requires senior advanced major essay)
e) Total of 18 credits in a chosen concentration
f) Total of 12 credits from areas outside the chosen concentration
g) Total: 36 history credits with at least 15 credits at the 300/400 level

Honours with a Subsidiary Subject
a) 6 credits from HIST 101, 102, 111, 112, 113, 115
b) 6 credits in Canadian history above the 100 level
c) HIST 445 (counts outside the chosen concentration)
d) A seminar (counts in the chosen concentration)
e) Total of 33 credits in a chosen concentration (includes HIST 490)
f) Total of 21 credits from areas outside the chosen concentration
g) HIST 490 (Thesis, 6 credits) with a faculty member
h) Total: 60 history credits with at least 24 credits at the 300/400 level

Recognized Courses
Subject to the restrictions stated below, students may count the following courses for credit in the Department of History: Celtic Studies - CELT 131/132 and 331/332; Art - ART 251, 252, 371, 372, 373, and 435. Students completing a minor, major, advanced major, joint advanced major or honours in history are permitted to count no more than twelve credits of the aforementioned courses as history courses; similarly, no more than six credits of these courses may be taken from any one
Humanities Colloquium
The humanities colloquium is an optional and interdisciplinary way of studying three first-year courses, usually ENGL 100, HIST 101, 102, and PHIL 100. See section 4.4 for further information.

101 Western Civilization: Earliest Civilizations to the Wars of Religion
This course explores the early history of Western Civilization. Topics include: Classical Greece and the Roman Republic and Empire; Christianity; the Byzantine Empire; Islam; the Carolingian Empire; Feudalism and Manorialism; the Economic Revival; Medieval Society and Culture; the Growth of National Monarchies; the Age of Exploration and Discovery; the Renaissance and the Reformation. Credit will be granted for only one of HIST 101 or HIST 100. Three credits.

102 Western Civilization: Columbus to Decolonization
This course explores the history of Western Civilization from the European conquest of the Americas to the end of the Cold War. Topics include: Europe’s overseas expansion; the age of absolutism; the scientific revolution; the Enlightenment; the American War of Independence; the French Revolution and Napoleon Bonaparte; the Industrial Revolution; Nationalism, liberalism, feminism, and imperialism; the two World Wars; decolonization; and the Cold War. Credit will be granted for only one of HIST 102 or HIST 100. Three credits.

116 No, It Wasn’t Ancient Aliens: World History to 1300
It may come as a surprise to the History Channel, but ancient pyramids, ziggurats, temples and monuments the world over were not built by aliens. Rather, they stand as evidence of the complex societies that existed throughout the world in the premodern period. From Zimbabwe to Peru, the Canadian Arctic to India, China to the Netherlands, exciting new discoveries and analyses will be explored to demonstrate the ingenuity, mobility and interconnectedness of premodern cultures. Three credits.

121 Global Race & Ethnicity I, 1300-1776
W.E.B. Du Bois stated, “The problem of the color line is the problem of the twentieth century,” but even earlier, the creation and operation of racial differences in colonial and capitalist contexts defined many key world events. This course examines the major events of world history from 1300 to the late eighteenth century’s “Age of Revolutions.” Global developments shall be examined via the social construction of racial, and ethnic differences between peoples. Credit will be granted for only one of HIST 121 and HIST 110, HIST 111. Three credits.

122 Race/Ethnicity in Global History, 1776-present
W.E.B. Du Bois stated, “The problem of the color line is the problem of the twentieth century,” but even earlier, the creation and operation of racial differences in colonial and capitalist contexts defined many key world events. This course examines the major events of world history from the late eighteenth century’s “Age of Revolutions” to the twenty-first century. Global developments shall be examined via the social construction of racial, and ethnic differences between peoples. Credit will be granted for only one of HIST 122 and HIST 110, HIST 112, HIST 131. Three credits.

132 Global History: Illicit Cargos and the Making of the Modern World (1789-present)
The ideas that sparked early-modern Atlantic revolutions resulted from earlier exploration and the exchange of people, goods, and ideas. The world has remained interconnected ever since. This course examines how this is the case by investigating human society and the historical processes that have shaped institutions and ideas since the 18th century. It will do so through a focus on the goods being exchanged – from sugar and spice to ivory and opium, and what that meant in society. Credit will be granted for only one of HIST 132 or HIST 110, HIST 112, HIST 122, HIST 142. Three credits.

141 Empire & Plague, 1300-1800
This course examines the process of conquest and the rise of empires across Asia, Africa, Europe and the Americas, spanning the centuries between 1300 and 1800. The course also addresses the impact of epidemics and pandemics, including the Black Death in Afro-Eurasia, and the genocide of indigenous populations in the Americas. Credit will be granted for only one of HIST 141 and HIST 110, HIST 111, HIST 121. Three credits.

142 Revolution: Global from 1750
This course takes a global focus on revolutionary struggles, national liberation and resistance to various forms of social oppression (like racism, sexism and misogyny, homophobia/transphobia) in the 19th and 20th centuries. This includes liberal and radical revolutions like the American and Russian Revolutions, as well as social and emancipatory movements like feminism, anti-racism, anti-imperialism, national liberation, and struggles for gay rights. Credit will be granted for only one of HIST 142 and HIST 110, HIST 112. Three credits.

213 Life and Times: Pre-Confederation Canada
This introductory survey lecture course is designed to examine the life and times of the Pre-Confederation Canada from a political, social, cultural and economic perspective. In this journey back in time in Canadian history, student will learn about the diversity of historical figures, experiences, events and ideas. Credit will be granted for only one of HIST 213 or HIST 113 or HIST 200. Three credits.

215 A History of Canada: Post Confederation
This course provides an introduction to the major themes in Canadian history from Confederation to the contemporary era. It will explore the crucial political, economic, and social themes in Post-Confederation history. Regional, racial, ethnic, and gender variations will be addressed in this survey. Students will learn to identify, analyze, and discuss key issues in Canadian history. Credit will be granted for only one of HIST 215 or HIST 115, HIST 200. Three credits.

216 Modern France, 1789 to the Present
Explores French history from the end of the old regime to the present. Topics include the 1789 revolution and its aftermath, Napoleon, the July Monarchy, the Second Empire, class and gender in 19th-century France, the Third Republic, the Dreyfus Affair, the “Hollow Years” of the interwar era, the defeat of 1940 and the authoritarian Vichy Regime, decolonization and the rise of De Gaulle, and the role of feminism/memory/multiculturalism in post-war France with concentration on social, intellectual, cultural trends, and politics. Prerequisite: Six credits from HIST 100, 101, 102, 110, 111, 112, 113, or 115 or permission of the instructor. Three credits.

221 Medieval Russia
Topics include the origins of the Slavs; their adoption of Christianity; the establishment and development of the Kievan state; the coming of the Mongols and the Mongol “yoke”; the slow emergence of Muscovy; Ivan the Terrible and the Time of Troubles. Three credits.

222 Imperial Russia
Topics include 17th-century Muscovy: the Romanovs, serfdom, schism, and territorial expansion; the 18th century: Peter the Great, Catherine II, and Westernization; and the 19th century: autocracy, culture, the abolition of serfdom, industrialization, the revolutionary movement, foreign policy, World War I and the collapse of tsarism; the revolution of 1917. Three credits.

223 Black and White and Colourful all over: Africa in the World from 1800
This course will examine societies in modern Africa. African histories of this period will be weighed alongside a more Afrocentric perspective, examining a selection of social systems: economic organization, political institutions, religious beliefs and life patterns, and the impact of the outside world on them. Topics to be addressed include: gender, culture, belief and identity, European imperialisms, contested nationalisms, independence movements, and the nature and experience of the African diaspora. Credit will be granted for only one of HIST 223 and HIST 297 offered in 2016-2017. Three credits.

227 Canadian Business History
This course begins with the 1880s to investigate how Canada became one of the world’s wealthiest nations. It explores the emergence of its financial markets, its entrepreneurial tradition, innovations in finance, management, and technology, the origins and growth of its regional, national and multinational corporations, its international trade relations and globalization. The course also examines the evolving relationship between commerce and society, and reviews economic shocks and disruptions generated by wars, depression, stock market bubbles and credit crashes. It concludes with an overall assessment of Canada’s business development by considering the central arguments of the proponents and critics of capitalism in its Canadian form. Offered online only. Three credits.

228 History of Maritime Provinces: Pre-Confederation
This survey course examines the political, social, cultural and economic development of the Maritime Provinces from the 16th century to the 1860s. It will explore such topics as relations between Europeans and First Nations; the clash of empires; the Acadian Expulsion; the impact of immigrant cultures; the Age of Salt, and federation with Canada. Credit will be granted for only one of HIST 228 and HIST 209. Three credits.

229 History of Maritime Provinces: Post-Confederation
This survey lecture course is designed to examine the political, social, cultural and economic development of the Maritime Provinces from the 1860s to the 1960s. It will examine such topics as the federation with Canada; industrialization and deindustrialization; labour unrest; social reform; the world wars; the impact of
modernity and state intervention; out-migration; and the historical experiences of African-Martimmers, Mi'kmaq, Acadians, and Maritime women. Credit will be granted for only one of HIST 229 and HIST 209. Three credits.

231 Martyrs, Monks & Marauders: Piety & Violence in Early Medieval Europe (300-1050 CE)
The history of the Early Middle Ages has been much debated in recent years. Did Rome fall as Germanic warlords poured over its borders or were the Germanic migrations peaceful? Did Vikings only seek to pillage and destroy or to trade goods and share knowledge? What were the social, political and military roles of early Christian martyrs and monks? This course will answer such questions, while providing an overview of the history of Europe between 300 and 1050 CE. Credit will be granted for only one of HIST 231 or HIST 230. Three credits.

232 Surviving Chivalry & the Four Horsemen: Europe's High & Late Middle Ages (1050-1521 CE)
In 1050, Europe embarked on a long period of economic, intellectual and cultural growth. This was the time of the Crusades, chivalry and scholasticism. Beginning in 1300, however, Europe faced new crises characterized by some as the horsemen of the Apocalypse: famine, plague, war and death. Yet out of this disastrous period of history, new intellectual and artistic growth occurred, leading to the Renaissance. This course traces the history of medieval Europe through the highs and lows discussed above. Credit will be granted for only one of HIST 232 or HIST 230. Three credits.

233 French Imperialism
This course examines the history of French Imperialism during the 19th and 20th centuries in the Maghreb, Africa, Asia, and the Pacific. It explores various themes associated with colonial politics, society, economy, and culture, including the historiography of French imperialism, the construction and maintenance of the colonial governing system, the gendered nature of colonial discourse and practice, the social impact of religious customs in various locations within the empire, racial hierarchies and concomitant administrative repression, colonial representations in metropolitan French culture, and nationalist movements and revolts before and during the era of decolonization. Prerequisite: Six credits from HIST 100, 101, 102, 110, 111, 112, 113, or 115 or permission of the instructor. Three credits.

235 Introduction to South Asian History
The Indian sub-continent has been a crossroads of people and cultures throughout human history and its diasporas provide working communities, successful business models, rich history and beautiful culture from yoga to Freddy Mercury. South Asia is of central geopolitical, economic and cultural importance in the modern period. This course begins with the arrival of the Mughals in the 16th century and ends with decolonization and partition in 1947. Three credits.

236 Vikings! The Course
Vikings did more than plunder and pillage - they explored, farmed, and traded along vast travel networks that stretched from the east coast of Canada to the sophisticated cities of Constantinople and Baghdad in the East. Vikings! The Course will survey the spread of Norse influence and culture from their initial steps out of Scandinavia in the 8th century - attacking monasteries and cities to the founding of Norse kingdoms in Normandy, Sicily and Novgorod. Three credits.

242 The United States Before 1865
Survey of the US from colonial times to the Civil War, with emphasis on aboriginal beginnings and civilizations; colonization; the rise of slavery and racism in British North America; the place of the colonies in the British Empire; the War of Independence; territorial expansion; the beginning of industrialization and its effects on the Jeffersonian notions of republicanism; the "problem" of slavery and growing sectionalism; and the road to Civil War and disunion. Three credits.

244 The United States After 1865
Topics emphasized are the Civil War as a black freedom movement; the federal government's brief and grudging commitment to black citizenship during Reconstruction; the abdication of Reconstruction and the imposition of segregation in the late 19th century; industrialization and age of fabulous robber barons and desperate immigrants; the Depression and the coming of the New Deal; the civil rights movement and Vietnam and its sequels. Three credits.

247 Crusades and Their Cultures
This class explores history of the medieval religious wars that are now known as the crusades. Although often treated collectively, these wars differed greatly in character, from penitential crusades to the holy land to disciplinary crusades against the Cathars and Hussites, to the economic war of aggression that was the Fourth Crusade. Organized as a brief chronological survey of the crusades from 1096 to 1430. This course will also examine various themes in recent crusade historiography. Three credits.
Emphasis will be on the First and Second World Wars, peacekeeping, and the Cold War. Through this lens, the class will study not only Canada’s role in global conflict, but how those conflicts changed and influenced the Canadian state and Canadian society to help create the nation that exists today. Three credits.

298 Selected Topics
The topic for 2019-2020 is The Practice of Oral History. This course will introduce students to the practice of oral history, exploring how recorded interviews can enrich our understanding of the past. In addition to studying the academic development of oral history research, students will develop practical skills related to project planning, interviewing, and preserving oral history interviews. Three credits.

299 Selected Topics
The topic for 2019-2020 is At The Ends of the Earth. In many ways, the Arctic and Antarctic are opposites. Yet the histories of the two polar regions have often converged, shaped by the same geopolitical and economic forces, and by similar human motivations. This course will dive into this rich polar history from time immemorial to the present, covering Arctic Indigenous groups, European exploration and resource exploitation, colonization and state-building, and the how the polar regions have been used for war, peace, science, and technology. Three credits.

300 A Cultural and Intellectual History of Canada
From long houses to skyscrapers, from oral legends to action comics, from petroglyphs to abstract paintings, Canada’s artists, writers and painters have shaped and reflected Canada’s cultural and intellectual development. This survey course, covering the period from pre-Contact to 1967, demonstrates how literature, art and architecture offer multi-dimensional and fresh perspectives on Canadian history. Cross-listed as ART 300. Six credits.

303 Capitalism and Social Justice in Early Canada
This course traces the emergence of capitalism in early Canadian society. It examines the rise of this dynamic economic model for governments, entrepreneurs, and working people. The political and cultural aspects of the period between 1800-1919 will be analyzed from multiple perspectives including: gender, race, immigration, technological innovation, and workplace skills. Credit will be granted for only one of HIST 303 or HIST 309. Three credits.

304 Capitalism and Social Justice in Modern Canada
A continuation of HIST 303, this course broadens the analysis of modern capitalism and responses by working people to ongoing consequences of rapid economic and political change. Focusing on the challenges of world wars, depression, and globalization, between 1920-21st Century, elements of state development, business innovation, and workers’ responses will be discussed in detail. The course will conclude with an assessment of how Canada fits into a contemporary world of trade and labour. Credit will be granted for only one of HIST 304 or HIST 309. Three credits.

314 Canada and the Cold War Era
Examines Canada’s response to the atomic/nuclear age and divisions between the two superpowers from 1945-1991. Students will learn how the Cold War affected Canada and the West through a study of selected themes: political and cultural dimensions of the Red Scare; Canadian diplomacy during the Cold War; Canada’s role in the Vietnam War, and participation in NATO and NORAD; the influence of the Cold War on gender, business, labour, and popular culture. Three credits.

317 Canadian Women’s and Gender History: From Colony to Nation
This course introduces students to major themes in the field of Canadian women’s and gender history. Covering the period from the late 16th century to the late 19th century, the course examines the historical development of women’s roles, experiences, identities and gender relations. Particular attention is given in this course to the impact of colonialism, and the intersection of gender, race, economic/class status, and Indigenous/non-Indigenous status in shaping women’s work, family roles, sexuality, political engagement and activism. Credit will be granted for only one of HIST 317 or HIST 308. Cross-listed as WMGS 317. Three credits.

318 Canadian Women’s & Gender History: Modernity
This course introduces students to major themes in the field of Canadian women’s and gender history. Covering the period from the late 19th century to the late 20th century, the course examines the historical development of women’s roles, experiences, identities and gender relations. Particular attention is given to the intersection of gender, race, economic/class status, and Indigenous/non-Indigenous status in shaping women’s work, family roles, sexuality, political engagement and activism. Credit will be granted for only one of HIST 318 or HIST 308. Cross-listed as WMGS 318. Three credits.

319 Myth and Memory in Canadian History
What is told? How is it told? Why is it told? And, who is telling the story? By examining a variety of events, hero figures, communities, regions and time periods, students will look critically at how Canadians have used myth and memory to create their pasts and to construct group identities and national narratives. Three credits.

320 The USSR, 1917-1991
Examines the fall of the tsarist regime; the ideological roots of the Bolshevik Revolution; the economic, social, cultural, and political developments of the Soviet Union, from Lenin to Gorbachev; the failure of Soviet communism. Six credits.

322 Canadian Immigration, Race & Ethnicity to 1896
This course traces the history of Canadian immigration, settlement, ethnicity, race relations, and multiculturalism to 1896. It demonstrates the central contribution of immigrants to the formation of Canada while also introducing important debates about immigration policy, refugees, minority rights, equality of opportunity, racism, ethnic identity, the commemoration of ethnic pasts, the creation of transnational communities, concepts of citizenship, and the policy of multiculturalism. Credit will be granted for only one of HIST 322 or HIST 310. Three credits.

323 Canadian Immigration, Race, and Ethnicity from 1896
This course traces the history of Canadian immigration, settlement, ethnicity, race relations, and multiculturalism from 1896 to the present. It demonstrates the central contribution of immigrants to the formation of Canada while also introducing important debates about immigration policy, refugees, minority rights, equality of opportunity, racism, ethnic identity, the commemoration of ethnic pasts, the creation of transnational communities, concepts of citizenship, and the policy of multiculturalism. Credit will be granted for only one of HIST 323 or HIST 310. Offered online only. Three credits.

324 Plagues and Peoples
Through in-depth case studies this course explores the impacts various epidemics had on historical cultures. Short-term medical responses will be examined along with longer-term economic, social, religious and cultural effects. Course content highlights how new scientific research has furthered understandings of historical diseases and how studying historical diseases can help prepare us for the next pandemic. Case studies may include cancer, plague, syphilis, smallpox, leprosy, cholera, influenza, HIV/AIDS and Ebola. Three credits.

325 Eastern Europe, 1848-1995
This course covers the Ottoman, Austro-Hungarian, Russian, and German empires of the long 19th century; World War I, the interwar emergence of new states; World War II, the people’s democracies and the coming to power of the communists; the imposition of a Stalinist model of economic, cultural, political, and social development; the resistance to sovietization in Yugoslavia, Hungary, Czechoslovakia, and Poland; the revolutions of 1989; and the dismantlement of Yugoslavia and Czechoslovakia. Six credits.

326 History of Cuba from Independence to the Revolution
This course examines Cuban history from the early 19th century to the present. This includes the late stage of Spanish colonialism and the slave economy based on sugar, coffee and tobacco; the struggle for abolition and national independence; the Spanish-American War of 1898 and U.S. domination in the 20th century; the 1933 revolution and armed struggle against the Batista dictatorship; Fidel Castro, Che Guevara and the socialist experiment; the Cold War and Cuba’s role in Latin America; and Cuban society in a post-Soviet world. The course will also address Afro-Cuban culture, gender and sexuality, and human rights. Prerequisite: HIST 255 or 256 recommended. Three credits.

327 Pirates of the Caribbean: A Mostly True History, from Columbus to Blackbeard
This history of pirates starts with Columbus and ends with Blackbeard. It addresses images of piracy in history and culture, and the nature of piracy. European powers used piracy to challenge Spain in Europe and the Americas. Topics include the political economy of piracy, pirate republics, and the dynamics of class, race, gender, and sex. Instruction includes lectures, discussions, popular culture, and essays. There are no prerequisites, but familiarity with Latin American history is encouraged. Three credits.

332 The Medieval Body
This class explores late medieval conceptions of the physical body, which were always essential to identity in the Middle Ages. Medieval discussions of the practice of reading, clothing and fashion and even spiritual union with God, often involved debates and metaphors based upon the physical body. Through an exploration of primary and secondary texts along with seminar discussions, the class will explore the interconnectedness of late medieval ideas of corporeality, identity, spirituality and sexuality. Cross-listed as WMGS 333. Three credits.
333  The Individual in Medieval Society
Common scholarly discourse posits that individualism developed in the wake of the “civilizing process” of the early modern period and the 18th-century Enlightenment. Yet many medieval scholars decry this chronology, citing examples of medieval people who seem to satisfy the requirements for modern individualism and exploring medieval theories of identity that permit the development of something like modern individualism. This course will explore and take part in this intense debate both by reading the scholarly literature on the subject and by reading primary sources that describe the experiences of medieval people. Credit will be granted for only one of HIST 333 or HIST 330. Three credits.

334  Society and Ritual in the High Middle Ages
Like people living in the modern West, medieval individuals marked significant rites of passage such as birth, marriage and death with rituals. In the medieval West, these rituals usually revolved around the Catholic Church. This class will explore the major rites of passage through which medieval peasants, townspeople and nobles alike marked their lives, exploring not only the meaning and purpose of the rituals, but the rich social lives of those individuals participating in them. Credit will be granted for only one of HIST 334 or HIST 330. Three credits.

337  History of Modern Mexico
This course examines the history of modern Mexico from independence to the present. This includes the independence war of 1810-1821; civil war, rebellion, and banditry in the 19th century; indigenous peoples’ struggles to preserve their culture in the 19th and 20th centuries; foreign intervention and Mexican relations with North America and Europe. Special attention is paid to the Mexican Revolution of 1910. The course follows developments in the post-revolutionary era to explore popular culture, gender and sexuality, modernization, democracy and social justice. Prerequisite: HIST 255 or 256 recommended. Three credits.

341  A History of Canadian-American Relations
A study of Canadian-American relations from the American Revolution to the modern era. Topics include the founding of separate American and provincial societies; the tensions of continental and nationalist identities; the evolution of a North American economy and culture; policy making and bilateral relations in NATO and the UN; post-9/11 security arrangements; complementary and conflicting national interests in political, military, economic, social, and cultural issues. Three credits.

343  The Place of Race in the United States
Explores the enduring importance of race in America. Survey of African American history includes slavery; white-black relations; abolition; the Civil War and Reconstruction; Jim Crow segregation; the Harlem Renaissance and the great migration; black nationalism; the long civil-rights movement; and conservative backlash to affirmative action. Three credits.

346  American Social Movements, 1865-1945
Examines the triumphs and failures of social movements from the post-Civil War era to the New Deal. Explores the nature of protest and its effectiveness in the era. Topics include radical Reconstruction; populism; women’ suffrage; radical pacifism; industrial unionism; and the unemployed people’s councils of the Great Depression. Three credits.

347  American Social Movements, 1945-Present
Examines the triumphs and failures of social movements from New Deal era to the present. Students will study the tactics and achievements, as well as failures, of grassroots social movements. The nature of civil disobedience in the second half of the 20th century will be studied through topical case studies. Movements covered include industrial unionism; anti-nuclear activism; McCarthyism; black civil rights; gay rights; and the conservative backlash to affirmative action of groups such as Moral Majority. Three credits.

351  United States Immigration and Ethnicity
Examines the history of immigration to the U.S. and the role of ethnicity in American social, cultural and political life. Topics include immigrant images of status and success; migration and return migration; American acculturation; bi-nationalism, and the persistence of ethnic identities; anti-immigrant xenophobia; and the construction of immigrants “white” identities. Three credits.

353  Explorers and Exploration before Columbus
Though tradition credits Christopher Columbus with beginning an age of exploration, Columbus himself knew that he drew from a long tradition of explorers who came before him including peoples as diverse as Islamic scholars, Venetian merchants, Basque fishermen and Viking sailors. He knew about the multicultural cities of Jerusalem and Karakorum where individuals from all over Eurasia traded knowledge and goods. This course will examine the science, technology, literature and history of exploration that so inspired Columbus and the extent to which the different cultures of the premodern world were interconnected by trade, pilgrimage and exploration. Three credits.

355  The Sixties: A Social History
Examines the tumultuous 1960s and situates the Canadian experience within the international context - primarily the USA and Western Europe. Connections will be made between civil rights movements, anti-colonialism, environmentalism, “second-wave” feminism, Québécois nationalism, the New Left, student activism, and the importance of the counter-culture. The course will retain a historical perspective but draw upon interdisciplinary scholarship. The decade’s lasting significance and its current invocation as a cultural and political artefact will be debated. Three credits.

360  Gender & Sexuality in Modern European Empires
This course examines major issues in the history of gender and sexuality in the new imperialism. Themes to be covered include imperial families, race, gender and professionalism, gender, sexuality and citizenship, and women in imperialism and global movements. Cross-listed as WMGS 370. Three credits.

362  European Fascism
This course will explore the history of fascism from its late 19th-century origins to the present day. Topics include the political and doctrinal origins of fascism and its crystallization during the Great War; the fascistization of politics, economy and society in Mussolini’s Italy and Hitler’s Germany; anti-Semitism; the appeal of fascism in interwar Europe; and its subsequent apogee during World War II and the Holocaust. Prerequisites: 6 credits of HIST 100, 101, 102, 110, 111, 112, 113, 115 or permission of the instructor. Three credits.

363  Reformation Europe
Topics include the Catholic Church on the eve of the Reformation, Renaissance humanism, Martin Luther and Lutheranism, John Calvin and Calvinism, Henry VIII and Anglicanism, radical reformers, women and witchcraft, the Jesuits and the Council of Trent, the wars of religion within the Holy Roman Empire and France, Philip II and his Grand Project, the rivalry between Spain and England, the Thirty Years’ War (1618-48), and the historiography of the Reformation. Three credits.

364  The Holocaust
Explores the history and legacy of the destruction of the Jews in Europe during World War II. Topics include historical anti-Semitism; the rise of the Nazis; euthanasia; the ghettos; the death camps; the actions of collaborationist regimes; Jewish and non-Jewish resistance; the role of ordinary Germans; the establishment of Israel; and post-war trials and controversies. Three credits.

372  Imperial China
Topics include: Confucianism; the dynastic cycles; the fall of the Ming dynasty; the Manchus; the intrusion of the West: the missionaries, the Canton System, the opium wars and the unequal treaties; the Taiping Rebellion; the failed attempts at modernization; the Boxer uprising; the revolution of 1911. Credit will be granted for only one of HIST 372 or HIST 370. Three credits.

374  The People’s Republic of China
Examines the triumphs and failures of the People’s Republic of China. Topics include: Confucianism; the dynastic cycles; the fall of the Ming dynasty; the Manchus; the intrusion of the West: the missionaries, the Canton System, the opium wars and the unequal treaties; the Taiping Rebellion; the failed attempts at modernization; the Boxer uprising; the revolution of 1911. Credit will be granted for only one of HIST 374 or HIST 370. Three credits.

375  The Sixties: A Social History
Examines the tumultuous 1960s and situates the Canadian experience within the international context - primarily the USA and Western Europe. Connections will be made between civil rights movements, anti-colonialism, environmentalism, “second-wave” feminism, Québécois nationalism, the New Left, student activism, and the importance of the counter-culture. The course will retain a historical perspective but draw upon interdisciplinary scholarship. The decade’s lasting significance and its current invocation as a cultural and political artefact will be debated. Three credits.

383  Victorian Britain: Quakers, Queens, and Queers
The long 19th century was understood by Britons as ‘theirs’. An industrial powerhouse, grown on science and credit, Britain gained access to raw materials worldwide. Politically dynamic, British democracy went global, and a stable monarchy allowed for seemingly unparalleled Progress. Not everyone experienced this change in the same manner, however. It will explore how broad historical trends - changing ideals of citizenship and democracy, industrial growth, urbanism and the challenge of racial diversity - were experienced in this era. Three credits.

384  20th-Century Britain: State and Identity
Britain began the 20th century as a leading world power. By the end of the century this was much less the case, but the country had become one of the foremost welfare states. During this transformation, Britain faced important challenges in the two world wars, the ending of empire, and the Irish Question. This course deals with these and other challenges and the responses to them. Three credits.

386  Tudor England
Beginning with the foundation of Tudor rule in 1485, the course will explore the Reformation under Henry VIII and the statecraft of Elizabeth I. Students will explore the social, economic, political, religious, and diplomatic developments during this period. Three credits.

390  World War I
This course is an in-depth study of the major aspects-social, cultural, economic, political, and military-of the Great War. Six credits.
398 Themes in the History of Sexuality
A comparative study of the history of sexuality during the modern period from the eighteenth through the twentieth centuries. Following a broadly chronological and thematic approach to a diverse history of sexualities, the course will explore in particular the changing meanings of and interconnections between sexuality, race, class and gender. Topics will include: indigenous sexual cultures; sexuality and colonialism; inter-racial sexual relationships; the ‘invention of heterosexuality’; moral panics, prostitution, the regulation of sexual desire; and sexual subcultures. Cross-listed as WMGS 398. Three credits.

399 Selected Topics
Three credits.

401 Topics in Canadian History
This course examines important themes and interpretations in Canadian history. The specific focus of the seminar will reflect the interests of the professor and the students. Three credits.

445 Historiography
This is a seminar in theories and methods in the discipline of history, with corresponding readings in the related historiography. Combining a survey of historiography across time with writing and research projects, the seminar will introduce students to key concepts, methods, and interpretations of history. The subject matter will emphasize 20th-century historiography, including the impact that diverse approaches have had on the discipline today. This course is mandatory for all advanced major and honours students. Majors may take this course with the permission of the instructor. Three credits.

Seminar Notes:
a) Seminars are open to advanced major and honours students. Majors may take a seminar with the permission of the instructor. Advanced majors complete a senior research paper in the context of a seminar.
b) Seminars will be offered on a rotating basis depending on faculty resources and student demand, normally two per year; the department will make every effort to ensure that honours students will have the opportunity to study their chosen field of history at an advanced level.

455 Topics in Medieval European History
This course examines important themes and interpretations in Medieval European history. The specific focus of the seminar will reflect the interests of the professor and the students. Three credits.

457 Topics in American History
This course examines important themes and interpretations in American history. The specific focus of the seminar will reflect the interests of the professor and the students. Three credits.

461 Topics in Modern European History
Explores major developments in 19th- and 20th-century European history. The specific focus of the seminar will reflect the interests of the professor and the students. Three credits.

462 Topics in Latin American History
This course examines important themes and interpretations in Latin American history. The specific focus of the seminar will reflect the interests of the professor and the students. Three credits.

490 Thesis
Each student works under the supervision of a chosen professor who guides the selection of a thesis topic, use of resources, methodological component, quality of analysis and execution, and literary calibre of the final version. Required for all honours students. Six credits.

499 Directed Study
Under the direction of a faculty member, students may pursue an individual program of study in an area of history not available in the course offerings. For eligibility, see section 3.5. Three or six credits.

9.22 HUMAN KINETICS
A. Casey, Ph.D.
D. Kane, Ph.D.
A. Kolen, Ph.D.
M. Lam, Ph.D.
S. Mackenzie, Ph.D.
O. Nzindukiyimana, Ph.D.
M. Palmer, Ph.D.
R. Rasmussen, Ph.D.
D. Vossen, Ph.D.
C. Weaver, Ph.D.

The Department of Human Kinetics offers a four-year arts or science degree program in the study of human movement from a humanities, social sciences or scientific perspective. Both the BA and the B.Sc. in Human Kinetics offer the student further specialization with the option to major in either kinesiology or the pre-education, both of which are nationally accredited programs.

Selection of the major comes at the end of the second year of study and is dependent upon the student’s interests and desired educational outcome. Each of the two majors consists of required and elective HKIN courses, selected skill courses, arts/science electives, approved and open electives.

Depending on course selection, the major in kinesiology prepares students for a variety of professional and educational options: professional programs such as medicine, dentistry, physiotherapy, athletic therapy, occupational therapy, and massage therapy; direct employment in the health and fitness sector, including coaching, recreation therapy, fitness training; graduate programs in sport psychology, sociology, philosophy, history, exercise physiology, biomechanics, child growth and development, health promotion and adapted physical activity/adapted physical education.

Students interested in teaching in the school system should select the pre-education major. Students who plan careers in other teaching-related professions should also choose the major in pre-education. Students may consult the department chair to ensure course selection for acceptance to B.Ed. programs. See chapter 6 for admission requirements to the StFX B.Ed. program.

Candidates must follow the degree regulations in chapter 4 (BA) or chapter 7 (BSc).

The normal sequence for the human kinetics degrees are below.

Subject A is an arts minor in the BA HKIN.
Subject B is an arts pair in the BA HKIN.
Science A is a science minor in the BSc HKIN.
Science B is 6 credits of a second science in the BSc HKIN.
Arts X is an arts pair in the BSc HKIN.
Arts Y is 6 credits of a second arts subject in the BSc HKIN.
The HKIN sociocultural courses are 253, 264, 332, 352, 354, 431, 443, 455.

BA in Human Kinetics with Major in Kinesiology

Year 1
3 credits 300-level HKIN elective; 3 credits 400-level HKIN elective; 3 credits approved electives; 6 credits arts subject A; 6 credits arts/science electives

Year 2
3 credits HKIN 115, 136, 151, 152, 150 or 154; 6 credits HKIN 125, 139, 143, 147; one of HKIN 126, 146, 148, 202; one of HKIN 119, 121, 122, 123, 124, 128, 129, 131, 132, 133, 134, 135, 140, 142, 144, 149; one additional 200-level skill course.

BA in Human Kinetics with Major in Pre-Education

Year 1
3 credits HKIN 115, 136, 151, 152, 150 or 154; 6 credits HKIN 125, 139, 143, 147; one of HKIN 126, 146, 148, 202; one of HKIN 119, 121, 122, 123, 124, 128, 129, 131, 132, 133, 134, 135, 140, 142, 144, 149; one additional 200-level skill course.
### BA in Human Kinetics with Major in Kinesiology and Minor in Sport Management

<table>
<thead>
<tr>
<th>Year</th>
<th>Credits</th>
<th>Course(s)</th>
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<tbody>
<tr>
<td>1</td>
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<td>3 credits skills; HKIN 115, 136, 151, 152; HKIN 150 or 154; SMGT 101; 6 credits arts subject B; 3 credits arts/science elective</td>
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<tr>
<td>2</td>
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<td>3 credits skills; HKIN 215, 264*, 265, 352*; STAT 101; BSAD 231, 261; 6 credits arts/science electives</td>
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<td>3</td>
<td>HKIN 376; one of HKIN 374, 396, 397; 3 credits 300-level HKIN elective; 3 credits HKIN elective; SMGT 322, 327; 3 credits SMGT designated course; 3 credits arts/science elective; 6 credits approved electives</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>3 credits 400-level HKIN elective; 9 credits HKIN electives; SMGT 423; 3 credits SMGT designated course; 6 credits arts subject B; 6 credits open electives</td>
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*HKIN 264 and 352 fulfill the 6 credits of required sociocultural courses.

### Sport Management Designated Courses for BA in Human Kinetics

Departmental prerequisites will apply.

### Business Administration

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<tr>
<th>Course(s)</th>
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<tr>
<td>BSAD 221 Introductory Financial Accounting</td>
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<tr>
<td>BSAD 223 Introductory Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 251 Foundations of Business Information Technology</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 356 Entrepreneurship/New Venture Development</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 384 Data Management and Analytics</td>
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### Economics

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<tr>
<td>ECON 291 Economics of Leisure, Recreation and Sports</td>
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### Mathematics

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<td>MATH 471 Selected Topics: Sports Analytics</td>
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### Sociology

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<tr>
<td>SOCI 387 Hockey and Canadian Culture</td>
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### B.Sc. in Human Kinetics with Major in Kinesiology

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<th>Year</th>
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<th>Course(s)</th>
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<tr>
<td>1</td>
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<td>3 credits skills; HKIN 115, 136, 151, 152; HKIN 150 or 154; 6 credits science A; 6 credits science B (or arts X)</td>
</tr>
<tr>
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<td>3</td>
<td>3 credits skills; HKIN 215, 265; STAT 101; 6 credits HKIN electives; 6 credits science A; 6 credits arts X (or science B - see year 1)</td>
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<tr>
<td>3</td>
<td>3</td>
<td>HKIN 376; one of HKIN 374, 396, 397; 3 credits 300-level HKIN elective; 3 credits HKIN elective; 6 credits science A; 6 credits arts Y; 6 credits approved electives</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>3 credits HKIN sociocultural; 3 credits 400-level HKIN elective; 6 credits HKIN electives; 6 credits science A; 6 credits arts X; 6 credits open electives</td>
</tr>
</tbody>
</table>

If science A is biology then science B is normally chemistry.

### B.Sc. in Human Kinetics with Major in Pre-Education

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<tr>
<th>Year</th>
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<th>Course(s)</th>
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<tr>
<td>1</td>
<td>3</td>
<td>3 credits skills; HKIN 115, 136, 151, 152; HKIN 150 or 154; 6 credits science A; 6 credits science B (or arts X)</td>
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<tr>
<td>2</td>
<td>3</td>
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<td>3</td>
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If science A is biology then science B is normally chemistry.

The 12 credits of skill courses must be HKIN 127, 137, 141, 227; one of HKIN 125, 139, 143, 147; one of HKIN 126, 146, 149; one of HKIN 119, 121, 122, 123, 124, 128, 129, 131, 132, 133, 134, 135, 140, 142, 144, 149; one additional 200-level skill course.

### B.Sc. in Human Kinetics with Minor in Kinesiology and Minor in Health Sciences

<table>
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<tr>
<th>Year</th>
<th>Credits</th>
<th>Course(s)</th>
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<td>3</td>
<td>HKIN 376; one of HKIN 374, 396, 397; 3 credits 300-level HKIN elective; 3 credits HKIN elective; CHEM 255; PHYS 101, 102; one of BIOL 201 or 204**; 6 credits arts Y (ENGL, PSYC, or SOCI)*</td>
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### B.Sc. in Human Kinetics with Major in Kinesiology and Minor in Nutrition

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<th>Year</th>
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<tbody>
<tr>
<td>1</td>
<td>3</td>
<td>3 credits skills; HKIN 115, 136, 151, 152, 150 or 154; CHEM 101, 102; BIOL 111, 112 (or 6 credits arts X)</td>
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<td>2</td>
<td>3</td>
<td>3 credits skills; HKIN 215, 265; STAT 101; 6 credits arts X (or BIOL 111, 112 - see year 1); 6 credits arts Y; 6 credits approved electives</td>
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<td>3</td>
<td>3</td>
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</tr>
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<td>4</td>
<td>3</td>
<td>6 credits HKIN electives; 6 credits open electives</td>
</tr>
</tbody>
</table>

For completion of B.Sc. in HNU in 5th year, see required course pattern below.

### BA & B.Sc. in Human Kinetics with Honours

Students in the kinesthesiology honours program must complete, in addition to the major requirements, HKIN 491 (non-credit seminar) and 493 (thesis). HKIN 493 replaces an HKIN elective. In addition to HKIN 493, 6 credits of HKIN electives must be at the 400 level. Honours students with the nutrition minor will have only one HKIN elective, which must be a 400-level course.

Students in the pre-education honours program must complete, in addition to the major requirements, STAT 101; one of HKIN 374, 396, 397, 491 (non-credit seminar); and 493 (thesis). These additional 9 credits replace HKIN electives. The 6 credits of required 400-level HKIN electives for the honours degree are fulfilled by HKIN 425 and 426. The remaining 3 credits of HKIN elective may be at any level.

A student who fails to satisfy one or more requirements for the honours degree may be eligible for the advanced major degree.

### B.Sc. Joint Advanced Major in Human Kinetics & Biology

If human kinesthesiology is science B, the required 36 credits of HKIN courses are HKIN 115, 136, 151, 152, 215, 265, 376; 6 credits HKIN skills; one of HKIN 150 or 154; 3 credits HKIN sociocultural; 3 credits HKIN elective. If human kinesthesiology is science A, the required 42 credits of HKIN courses are the same as those for science B, plus one of HKIN 374, 396, 397 and HKIN 493 (for an advanced major thesis). Science C must be 6 credits of calculus.

See chapter 7 for basic degree requirements, and section 9.5 for biology requirements.
additional SFX credits above the first degree requirements (for a minimum total of 150 credits).

Students must submit re-entry application through Admissions.

Note: HKIN skills, 115, 151, and 152 are restricted to human kinetics students. Other HKIN courses are open to students outside of the human kinetics program with permission of the professor and the department chair.

Skills
Skills courses have a credit value of 1.5. Grades will be pass/fail and are not included in the academic average. The maximum number of skills for the pre-education major is 15 credits and for the kinesiology major is 12 credits. Credit will be granted for only one of the same or a similar skill. (i.e., if one previously took Outdoor Soccer in 2017-2018, then credit cannot also be granted for HKIN 132 Soccer).

The following 100-level skills will introduce students to the basic skills:
119 Aquatic Activities (snorkeling, water polo, aquafit)
121 Badminton
122 Ball & Wall (handball, squash, racquetball)
123 Basketball
124 Batting & Fielding (baseball, softball, cricket)
125 Contemporary Dance
126 Fitness
127 Gymnastics
128 Football
129 Hockey
131 Rugby
132 Soccer
133 Volleyball
134 Golf
135 Ice Games (power skating, ringette, broomball)
136 Low Organized Games
137 Movement Education
138 Net Games (pickle ball, tennis, team handball, Sepak)
139 Outdoor Education Camps (Sep 20-22), (Oct 25-27)
140 ParaSport (goal ball, wheelchair basketball, sitting volleyball)
141 Social Dance
142 Target Games (curling, bowling, bocce)
143 Track & Field
144 Weight Training
145 World Dance
146 Yoga
147 Invasion/Territory Games (ultimate frisbee, lacrosse, field hockey)
148 Selected Topics: Sailing (Aug 28-31)

The following 200-level skills involve advanced instruction and coaching instructional strategies and analysis:
202 Instructional Group Fitness
203 Judging and Officiating
227 Advanced Instruction in Gymnastics; prerequisite: HKIN 127
228 Advanced Instruction in Football; prerequisite: HKIN 128
229 Advanced Instruction in Hockey; prerequisite: HKIN 129
231 Advanced Instruction in Rugby; prerequisite: HKIN 131
232 Advanced Instruction in Soccer; prerequisite: HKIN 132
233 Advanced Instruction in Volleyball; prerequisite: HKIN 133

115 Principles of Human Movement
This course provides an introduction to human kinetics. The functional and psychosocial aspects of human movement form the core components of this course. Topics include physical activity, physical fitness, sedentary behaviours, healthier eating, stress, chronic diseases, mental health, body composition and issues with weight management, and behaviour change. Three credits and lab.

136 Foundations of Sport and Exercise Psychology
This course provides an introduction to the basic concepts and principles of sport and exercise psychology, and how they apply to teaching, coaching, and fitness instruction. Credit will be granted for only one of HKIN 136 or HKIN 236. Three credits and lab.

150 Introduction to Sport in the Humanities
This course serves as an introduction to the philosophical and sociocultural dimensions of sport. Topics include the nature of sport, rules and values in sport, and avenues for further study of sport in the humanities. Issues to be addressed include the conceptualization of sport, the significance of sport, knowledge in sport, excellence in sport, the beauty of sport, right and wrong in sport, and the morality of sport. Three credits. Credit will be granted for only one of HKIN 150 or HKIN 250. Three credits.

151 Applied Human Anatomy and Physiology I
The human body is able to operate by the intricate coordination of multiple systems. Each has a purpose, and is regulated at cellular, tissue, and organ levels. The focus of this course is to understand the structure, function, and organization of major systems. Individual and combined functions will be outlined for the nervous, skeletal, and muscular systems. Students will explore these concepts in complementary laboratory activities. Credit will be granted for only one of HKIN 151 or BIOL 251. Three credits and lab.

152 Applied Human Anatomy and Physiology II
The human body is able to operate by the intricate coordination of multiple systems. Each has a purpose, and is regulated at cellular, tissue, and organ levels. The focus of this course is to understand the structure, function, and organization of major systems. Individual and combined functions will be outlined for the cardiorrespiratory, endocrine, and digestive systems, among others. Students will explore these concepts in complementary laboratory activities. Credit will be granted for only one of HKIN 152 or BIOL 252. Prerequisite: HKIN 151. Three credits and lab.

154 Introduction to Ethics of Sport
This course will introduce students to some of the main themes, topics and issues in ethics of sport. The course is designed to provide an introduction and critical analysis of classic and contemporary readings in the ethics of sport. We will explore issues such as fair play and cheating, doping, equity and gender, the use of animals in sport, violence, and disability. Credit will be granted for only one of HKIN 154 or HKIN 254. Three credits.

215 Introduction to Motor Control and Learning
This course offers students a comprehensive overview of the major areas of study in motor control and learning. Students will first learn how the nervous system perceives and integrates sensory input and generates motor output through the musculoskeletal system (motor control). They will then be introduced to the processes involved in motor skill acquisition (motor learning) and the factors that enhance or inhibit an individual’s capability to perform a motor skill. Three credits and lab.

222 Care and Prevention of Athletic Injuries
A study of the injuries that occur in popular physical activities, including the nature, course, prevention, and non-medical management of these injuries. Prerequisite: BIOL 251 or HKIN 151. Three credits and lab.

226 Focus on Personal Health
This multidisciplinary and self-reflective course addresses personal health of university students. Topics include healthier living and behaviour change, mental health and illness, communication, dietary intake, physical activity, sedentary behaviours, drugs, the environment and sexuality. Three credits.

234 Coach Leadership and Planning
This practical course seeks to introduce students to the practice of coaching through the development of five core competencies: problem solving, valuing, critical thinking, leading, and interacting. This course design allows students to earn a NCCP certification in ‘Introduction to Competition’. Credit will be granted for only one of HKIN 234 or HKIN 334. Three credits.

253 Sport Philosophy
This course serves as a philosophical inquiry into the nature, meaning, and existential significance of sport. The advancement of a Utopian philosophy of existential fitness represents a central feature of the curriculum. Topics include the relationships between work, game and play, mind, body and spirit, and game playing and the ideal of existence. Ideas to be explored include being-in-the-zone, sporting intelligence, sport as a mental and spiritual health practice, and the game of life. Credit will be granted for only one of HKIN 253 or HKIN 353. Three credits.

262 Performance-Enhancing Substances
The drive to succeed in sports and exercise has led to the use of nutritional, chemical, pharmacologic, and physiologic means of performance enhancement. The purpose of this course is to provide an overview of substances used in sports and exercise, addressing their mechanisms of action, safety and efficacy in consultation with valid scientific literature. Prerequisite: HKIN 115. Three credits.

264 The Sociology of Sport
This course provides students with a sociological interpretation of sport in contemporary Canadian society. By contextualizing sporting behaviours and activities, the course challenges dominant ideas about sport in society and positions sport as an institution that both liberates and limits possibilities. The course will demonstrate the connection between sport and issues of deviance, violence, gender, race, the economy, media, and politics. The role of sport in constructing specific values in Canadian society will be emphasised. Credit will be granted for only one of HKIN 264 or HKIN 331. Three credits.
265 Exercise Physiology
An introduction to the responses and adaptations (acute and chronic) of the musculoskeletal, cardiovascular, and respiratory systems to disruptions to homeostasis due to muscular activity. Credit will be granted for only one of HKIN 265 or HKIN 365. Prerequisites HKIN 151/152 or BIOL 251/252. Three credits and lab.
HKIN 265.11 and HKIN 265.21 (Langley) is for third-year students. HKIN 265.12 and HKIN 265.22 (Kane) is for second-year students.

316 Motor Control in Special Populations
First and foremost, students will come to appreciate that perception and action are interdependent processes. They do not work independently, rather they interact and influence one another. Deficits in perceptual processing can manifest itself as atypical social and motor behaviour in special populations (e.g., Down syndrome, Parkinson’s disease). Students are asked to refrain from making assumptions about the behaviours they observe but rather consider how unobservable brain processes come into play in these behaviours. An optional service learning placement will provide students with the opportunity to integrate meaningful community service and what they learn in the classroom. Prerequisite: HKIN 215. Three credits.
Service Learning option.

321 Advanced Care & Prevention of Athletic Injuries
An in-depth study of the assessment and management of athletic injuries. Students will learn proper assessment protocol, advanced assessment techniques, and specialized taping techniques. Prerequisites: HKIN 151 or BIOL 251; HKIN 222. Three credits.

332 Gender in Sport and Physical Activity
Explores the role of women, men, femininity, and masculinity in sport and physical activity from a historical, philosophical, and sociocultural perspective. This course covers embodiment, objectification, equity, racism, homophobia, politics of difference and identity. Cross-listed as WMGS 332. Three credits.

345 Essential of Personal Training
An introduction to exercise program prescription and leadership. Students will learn techniques for prescribing, following, and leading exercise programs; participate in and analyze exercise activities and programs; design and lead group, individual, and periodized exercise programs. Students will be prepared to meet national criteria for recognition as a certified personal trainer. Credit will be granted for only one of HKIN 345 or HKIN 446. Prerequisites: HKIN 151/152 or BIOL 251/252; HKIN 265 or 365. Three credits and lab.

347 Rehabilitation Techniques of Athletic Injuries
This course will provide upper level HKIN students with an interest in further pursuing rehabilitation therapy as a career, a guide to understanding, designing, implementing and supervising rehabilitation programs for sports related injuries. Credit will be granted for only one of HKIN 347 or HKIN 447. Prerequisites: HKIN 222, 321. Three credits.

352 Historical Foundations of Sport and Physical Activity in Canada
An overview of the history of sport in Canada. Using the forces of class, ethnicity, race and gender as an interpretative foundation, the class will examine the context and social conditions under which Canadians have created, refined, participated in and interpreted sports. Three credits.

354 Sport Morality
This course serves as a philosophical inquiry into the moral significance of sport. The advancement of a Utopian philosophy of moral excellence represents a central feature of the curriculum. Topics include the good of the games we currently play and what they learn in the classroom. Prerequisite: HKIN 215. Three credits.

357 Aging and Exercise
Aging is an innate feature of human biology, and among the greatest known risk factors for most human diseases. This course involves an in-depth study of the changes in exercise capacity and sport performance that occur beyond adulthood, with a focus on changes attributable to aging itself compared to aspects linked to an increasingly sedentary lifestyle. The role of physical activity and exercise training in minimizing aging-related losses in performance capacity and physical conditioning is also addressed through practical, experiential learning with older adults. Credit will be granted for only one of HKIN 357 or HKIN 398 (2017-2018). Prerequisites: HKIN 151/152 or BIOL 251/252; HKIN 265 or 365. Three credits.

371 Selected Topics
The topic for 2019-2020 is Motor Control in Everyday Life. The ability to move accurately and efficiently is fundamental to our success and survival in any society in the world. For this reason, an in-depth understanding of the neural and cognitive mechanisms that lead to motor control is critical to a number of applied disciplines which include, but are not limited to: health sciences, biomedical engineering, and robotics. The topics that will be covered in this course include human factors and design; the startle effect; electrophysiological measures; internal simulations of movements; two visual systems; and joint action. Credit will be granted for one of HKIN 371 or HKIN 416. Prerequisite: HKIN 215. Three credits.

374 Mixed Methods in Research
This course introduces students to mixed methods research design (qualitative and quantitative). The course will help answer such questions as why, what, how and where to mix research methods. Specifically, the course is designed to provide an understanding of a research purpose, research process, research approaches, research design, data collection methods, and research proposal development and report in human kinetics. Students also will have the opportunity understand ethical issues related to the conduct of research. Credit will be granted for only one of HKIN 374, HKIN 371 (2016-2017, 2017-2018), HKIN 396 or HKIN 397. Three credits. Not offered 2019-2020.

376 Biomechanics
Students will be exposed to the concepts of kinetic analysis of motion through the application of Newton’s Laws. The course will provide the mechanical information necessary to enable the student to objectively critique any human movement which the student may one day have to teach, coach or ergonomically evaluate. Three credits and lab.

385 Adapted Physical Education
Future educators learn about advocacy, the philosophy and implementation of inclusion as well as the nature of various physical, intellectual, developmental and emotional disabilities. Students translate theoretical knowledge into practice through collaborative partnerships with local schools, families and peers, designing individualized education plans and participating in the Motor Activities with X applied lab alongside people with disabilities. Credit will be granted for only one of HKIN 385 or HKIN 395. Three credits and lab.

386 Sports Biomechanics
This course will focus on understanding the key biomechanical principles in executing individual sporting skills. Students will spend about 30% of the regular class time in the sports biomechanics research lab learning to use selected equipment and collect data. Students will gain hands-on experiential learning in a research lab environment analysing sporting skills and developing recommendations for athletes and/or coaches. An emphasis will be placed on understanding the biomechanics of the golf swing. Credit will be granted for only one of HKIN 386 or HKIN 474. Prerequisites: HKIN 376. Three credits.

387 Exercise Physiology in Extreme Environments
Human physiology is marvellously adaptable, and we are able to function in variable environments and under a wide variety of stresses. Exercise is one such stress, but coupling exercise with extreme temperatures, pressures, etc. can lead to catastrophic failure. It is the goal of this course to explore how the human physiological system operates in “non-normal conditions”. Emphasis will be placed on interpretation and critical analysis of primary research relating environmental exercise physiology and performance. Credit will be granted for only one of HKIN 387 or HKIN 473 (2016-2017, 2017-2018). Prerequisites: HKIN 151/152 or BIOL 251/252; HKIN 265 or 365. Three credits.

395 Disability, Health and Community Rehabilitation
This applied course focuses on clinical research design in the field of disability, health and community rehabilitation. Emphasis is placed on implementation science and the social, behavioural and physical characteristics of diverse populations. Evidence-based service learning allows students to gain community and research experience with vulnerable populations including autism, Down syndrome, intellectual disability, orthopedic impairment, mental health, deafness and unique medical cases. Credit granted for only one of HKIN 395 or HKIN 385. Three credits.

396 Quantitative Research Methods
An overview of the scientific method of problem solving. The course covers problem identification, hypothesis testing, data collection, and analysis of research findings. A detailed examination of experimental design assists the student in conducting research, writing the proposal and the report, and critically analyzing published literature. Restricted to upper year students; required for third-year honours students. Three credits.

397 Qualitative Research Methods
An overview of qualitative research methodologies, including the major theories, methods, and approaches (i.e. case studies, content analysis, interviews, observations, and ethnography). Problem identification, literature review analysis, research design, theoretical and empirical analysis, and dissemination are the major...
focus of this course. Practical experience will be included. Restricted to upper year students; required for third-year honors students. Three credits.

398 Selected Topics
The topic for 2019-2020 is Physical Activity in Health and Disease. The initial aspect of this course will examine physical activity/exercise, their definitions, classifications and related training principles. The second aspect of the course will examine how the human body responds to different types & intensities of exercise from both an acute and chronic perspective. Lastly, it will examine the role of physical activity and exercise as prevention/treatment or rehabilitation modalities in a number of chronic diseases prevalent in society today. Credit will be granted for only one of HKIN 398 or HKIN 365/466. Restricted to students in B.Sc., BASc. and B.Sc. Nursing programs. Prerequisites: BIOL 151, 152 or BIOL 251, 252. Three credits.

416 Control of Human Movement
Movement is central to our nature. This course offers students a broad overview of the neural contributions to motor control. First, students will come to appreciate that humans, much like a computer, inputs, processes, stores, and outputs information. They will learn about how the brain has developed a sophisticated predictive ability, relying on internal models. The notion of two visual systems will be introduced; one responsible for perception, the other for action. Furthermore, how the discovery of the mirror neuron system has changed the study of motor control will also be explored. Lastly, the phenomenon of neuroplasticity, the idea that the brain can reorganize itself, will be considered. Prerequisite: HKIN 215. Three credits and lab. Not offered 2019-2020.

425 Child Growth and Development
This course covers the physical growth, maturation, and development in children and adolescents. The implications of changes in structure and function as they relate to physical education, physical activity, and physical fitness will be discussed. Prerequisites: HKIN 111/152 or BIOL 251/252; HKIN 265 or 365. Three credits and lab. Service learning option.

426 Health Education
This course introduces the basic concepts and topics associated with physical, and mental health with specific application to children and adolescents. Emphasis will be placed upon the application of these concepts to the promotion of health in the school system and more broadly in the community. Service learning option. Three credits.

431 Sport and Identity
This course explores the intersection of sport with social identities. Using seminars, lectures, readings, and films, students will explore how various social identities have been and continue to be shaped through the sport institution, are reinforced by sport participants, and affect the shape of sport itself. Through the lens of sport, students will also explore the historical foundation of social categories of identity, as well as the ways they intersect to produce unique sporting experiences. Credit will be granted for only one of HKIN 431 or HKIN 471 (2017-2018). Prerequisites: HKIN 264 or 331 or 332 or 352. Three credits.

432 Introduction to Policy for Health-Interdisciplinary Strategies
Designed to create an interdisciplinary learning experience for nursing, human nutrition and human kinetics students, this seminar course is an introduction to public policy change for health. The objective is to develop a basic understanding of healthy public policy development, analysis, and change from interdisciplinary and social justice perspectives. Issues such as healthy public policy, social determinants of health, social justice, health equity, and interdisciplinary/cross-sectoral and citizen leadership policy action are explored. This course would be beneficial for students pursuing professions in the health care field. Credit will be granted for only one of HKIN 433 and NURS 455, HKIN 485, HNU 495. Cross-listed as NURS 433 and HNU 433. Three credits.

435 Psychology of Motivation and Performance in Sports

443 Modern Olympic Games
This advanced seminar course is designed to provide opportunities for students to critically examine the Olympic Games and the modern Olympic Movement. Students will examine the Olympic Games from a sociocultural interdisciplinary approach. Restricted to third and fourth year HKIN students. Prerequisites: one of HKIN 253, 264, 332, 352 or 354. Three credits. This course will only be offered in the second term of Olympic years: 2020, 2022 and 2024.

445 Instructional Strategies in Human Kinetics
Future educators are increasingly expected to familiarize themselves with inclusive practices. In this applied course, students familiarize themselves with both traditional and alternative teaching and learning strategies. Students simultaneously apply this theoretical knowledge while teaching physical activity classes to diverse learners. Students will practice various instructional strategies in order to design an effective inclusive learning environment and accommodate for individual differences and learning objectives. Three credits and lab.

455 Games, Life & Leadership
This course serves as a philosophical inquiry into the cooperative human condition. The conceptualization of Utopia as the ideal state of the world to be established by those playing the game of life represents a central feature of the curriculum. Topics include rules in the game of life and games Utopians play. Ideas to be discussed include the ideal of human existence, moral absolutism, social justice, jurisprudence, and servant leadership. Prerequisite: HKIN 253 and/or 354. Three credits. Not offered 2019-2020.

456 Fitness Assessment and Exercise
This course is designed to provide the theory and practical experience in a wide range of exercise science-related laboratory techniques and exercise training principles. Components of this course are intended to provide students with the necessary background information to pursue personal trainer certification through the Canadian Society of Exercise Physiology. Prerequisites: HKIN 265 or 365; HKIN 151/152 or BIOL 251/252. Three credits and lab.

457 Designing Interventions for Population Health
This advanced course explores the scope and current trends with respect to the design and implementation of sustainable evidence-based interventions for populations at-risk for adverse health outcomes. Subject matter encourages design thinking and innovation. Topics include preventative medicine, universal design, rural and remote health care, social determinants of health, and human rights. Interdisciplinary perspectives on health equity, community-engaged scholarship and knowledge translation. The service learning component focuses on implementation science and applying theoretical knowledge in intervention settings with vulnerable populations. Credit will be granted for only one of HKIN 457, HKIN 437 or HKIN 495 (2017-2018). Prerequisites: HKIN 151/152 or BIOL 251/252; HKIN 265 or 365. Three credits.

466 Clinical Exercise Physiology
This course examines several chronic diseases prevalent in our society, which are positively influenced by regular exercise or physical activity, and include: obesity, osteoporosis, cardiovascular disease, diabetes, arthritis, certain cancers and depression. The nature of the disease, methods of assessment, the role of exercise in the possible prevention, treatment and/or rehabilitation of these diseases are considered. Restricted to fourth-year students. Prerequisites: HKIN 151/152 or BIOL 251/252; HKIN 265 or 365. Three credits and lab.

474 Applied Biomechanics
This course will further the student’s understanding of the qualitative approach to biomechanics, and provide the necessary skills for conducting a quantitative biomechanical analysis of human motion. Students will be introduced to several techniques used in biomechanics research. Emphasis will be placed on the collection and analysis of biomechanical data. Concepts will be illustrated with examples taken from areas of sport and exercise with a special focus on the practical applications to golf. Prerequisite: HKIN 376; MATH 106 or 126 and PHYS 102 recommended. Three credits and lab. Not offered 2019-2020.

491 Senior Seminar
In addition to classroom seminars and round table discussions, the senior seminar may include lectures by visitors, faculty, and staff on aspects of human movement. Required for all honours students. The theses of honours students form the basis of their presentations. No formal credit is given for the senior seminar; however, satisfactory attendance 1 seminar presentation is a requirement for the BA or B.Sc. in Human Kinetics with Honours. No credit.

492 Exercise Metabolism
An in-depth study of the metabolic adaptations (acute and chronic) by the human body to disruptions to homeostasis caused by muscular activity. Credit will be granted for only one of HKIN 492 or HKIN 392. Prerequisites: HKIN 151/152 or BIOL 251/252; HKIN 265 or 365. Three credits.

493 Honours Thesis
Honours students must submit a thesis under the direction of a faculty member. The thesis will document the student’s research work. Students must meet all department deadlines and requirements, and submit an acceptable thesis to earn a B.A. or a B.Sc. in Human Kinetics with Honours. Restricted to honours students. Prerequisites: HKIN 301/STAT 101; HKIN 374 or 396 or 397. Three credits.

495 Selected Topics
The topic for 2019-2020 is Motor Control in Everyday Actions. The ability to move accurately and efficiently is fundamental to our success and survival in any society.
in the world. For this reason, an in-depth understanding of the neural and cognitive mechanisms that lead to motor control is critical to a number of applied disciplines which include, but not limited to, health sciences, biomedical engineering, and robotics. The topics that will be covered in this course include human factors and design; the startle effect; electrophysiological measures; internal simulations of movements; two visual systems; and joint action. Credit will be granted for only one of HKIN 495 and HKIN 416. Prerequisite: HKIN 215. Three credits.

499 Directed Study
Designed for students with high academic standing who wish to pursue a directed, in-depth study in a selected topic. See section 3.5. Three credits.

SPORT MANAGEMENT COURSES

101 Introduction to Sport Management
An introduction to sport management. Primary focus is on sport industry, including professional sport entertainment, amateur, for-profit & nonprofit sport participation, sporting goods, and sport services. Students will examine applications of managerial concepts and processes, and look at the ways in which sport organizations interact with each other, and with corporations, the government and non-governmental organizations. Micro aspects of management applied to sport, including human resources, sport marketing, sponsorship, finance, event management, and sport law. Credit will be granted for only one of SMGT 101 and HKN 241. Restricted to students in BBA and HKN. May be used in a minor in sport management or as an elective in BBA or HKN. Three credits.

322 Human Resource Management in Sport Organizations
This course covers the theory and practice of building, developing and optimizing a competitive workforce within the context of sport organizations, teaching students the personnel related knowledge leveraged in the management and leadership of such organizations. Credit will be granted for only one of SMGT 322 and BSAD 363. Restricted to students in the sport management minor program. Prerequisite: SMGT 101. Three credits.

327 Sport Management Ethics and Law
This course investigates moral issues in sport and judgments about right and wrong behavior amongst all stakeholders in sport. Examination of ethical theories, principles and applications, with case study analyses, and personal and professional ethical issues in sport management. Focus on the three major areas of the law that have a direct impact on the management of sport: tort liability and risk management; contract law, employment law, and constitutional law. Restricted to students in the sport management minor program. Prerequisite: SMGT 101. Three credits.

423 Sport Marketing and Event Management
This course introduces the concepts, theories, and marketing strategies utilized in the context of the sport industry. Topics include, but are not limited to the marketing planning process, components of the marketing mix, branding, event planning, operational logistics, media marketing and sponsorship. Restricted to students in the sport management minor program. Prerequisites: BSAD 231; SMGT 101. Three credits. Not offered 2019-2020.

9.23 HUMAN NUTRITION
M. English, Ph.D.
A. Fox, Ph.D., P.Dt.
J. Jamieson, Ph.D.
L. Reid, M.Ed., P.Dt.

Part Time
P. Mazier, Ph.D.
P. St. James, M.Sc., P.Dt.
Senior Research Professor
L. Wadsworth, Ph.D.

The B.Sc. in Human Nutrition is a professional program which integrates foundational knowledge meeting core requirements in foods, nutrition and related areas with studies in biology, chemistry, statistics, business, humanities and social sciences. Collectively, the course requirements are designed to provide graduates with the expertise needed by food and nutrition professionals today. Depending upon the choice of emphasis, the Human Nutrition program prepares graduates for careers in areas such as dietetics, education, health promotion, industry, food service management, and research, development and entrepreneurship in food and nutrition. Graduates may qualify for entrance to a dietetic internship accredited by the Partnership for Dietetic Education and Practice (PDEP) in Canada. In second year, students who meet the requisite average may apply for either the advanced major program, which has a seminar requirement; or the honours program, which has a seminar requirement, a three-credit thesis course and 21 credits HNU electives (minimum 12 credits at the 400-level). Students' selection of seminar topics will reflect the research areas of faculty members.

With the proper selection of courses, (including HNU 325, 352, 353, 356, 456 and 485 as HNU electives), students may meet the requirements for admission to a graduate dietetic internship and/or the StFX Integrated Dietetic Internship. Both programs are accredited by the Partnership for Dietetic Education and Practice (PDEP) in Canada and admission is competitive. The StFX Integrated Dietetic Internship enables students to attain PDEP competencies for entry level practice. Students must normally declare their intent to apply for the StFX Dietetic Internship Program by the end of their second year at the normal time of application for the advanced major or honours program. This Integrated Internship consists of three 14-week practicum courses. Each practicum includes one or more supervised placements in dietetic practice settings. At the earliest, students may commence the first practicum after completing the third-year sequence of HNU courses. Students must have an overall average of 70 in the HNU program, a minimum overall average of 75 in HNU courses, and satisfy the criteria for acceptance. Formal submission of the full application must be made by January 31.

With an appropriate selection of courses, students may also meet the requirements for admission to a B.Ed. program. In order to qualify for a family studies teachable, students must present a core of at least 18 credits of human nutrition. These courses must be augmented by a combination of courses in other subject areas which address the field of family dynamics. In general, these courses may be drawn from biology, psychology, sociology, and business administration. Students interested in pursuing this particular option should consult with the Faculty of Education. In addition, courses such as HNU 353 and HNU 461 can be used towards a biology teachable either as a minor or as a second major. (See section 6.1.4 for more details).

See chapter 7 for information on degree patterns, applications for advanced major and honours, advancement and graduation requirements.

All third- and fourth-year human nutrition students are required to attend the presentations in HNU 491. The attendance of first- and second-year students is recommended.

Bachelor of Science in Human Nutrition
The normal sequence for the program is shown below.

Year 1
BIOL 111, 215; CHEM 101/102; HNU 142(161), 145; 12 credits

Year 2
BSAD 251, 252; HNU 146, 235, 242/261, 262; STAT 101

Year 3
HNU 351, 365, 384; 12 credits HNU electives;
6 credits humanities or social sciences electives for a pair;
3 credits open electives

Year 4
HNU 405, 475; 12 credits HNU electives; 12 credits open electives

B.Sc. in Human Nutrition with Advanced Major
The normal sequence for the advanced major program is identical to that of the program above, with the addition of HNU 491 in year 4.

B.Sc. in Human Nutrition with Honours
The normal sequence for the honours program is shown below.

Year 1
BIOL 111, 215; CHEM 101/102; HNU 142(161), 145; 12 credits

Year 2
BSAD 251, 252; HNU 146, 235, 242/261, 262; STAT 101

Year 3
HNU 351, 365, 384, 485; 9 credits HNU electives;
6 credits humanities or social sciences electives for a pair;
3 credits open electives

Year 4
HNU 405, 475, 491, 493; 15 credits HNU electives (minimum 12 credits at the 400-level); 6 credits open electives

Bachelor of Science with Minor in Food and Nutrition
Required: HNU 142(161), 242(162), 262
Electives: 15 credits from HNU

Application to the StFX Integrated Dietetic Internship and the Dietitian of Canada's Graduate Internship
Students planning to apply for dietetic internship programs follow the normal course sequence for B.Sc. in Human Nutrition with the exception of years 3 and 4.

Year 3
HNU 325, 351, 352, 356, 365, 384, 485; 6 credits humanities or social sciences for a pair; 3 credits open electives

Year 4
HNU 353, 405, 456, 475; 9 credits HNU electives; 12 credits open electives
Co-operative Education Program in Human Nutrition
Co-operative education is offered as an option for HNU students. Through co-op, students have the opportunity to complete professional development training, 12-16 months of relevant and paid work experience, and COOP 405 (3 credits). The co-op education HNU graduate will be prepared to work within the food industry (product development and evaluation, food safety, and etc.), public relations, consumer affairs or marketing with various employers including not-for-profits, industry or government and other related areas of practice. The human nutrition co-op program is accredited by the Co-operative Education & Work-Integrated Learning Canada (CEWIL Canada). COOP 405 can be used as a HNU elective as an open elective. For further information on work term sequencing options and professional development training topics see section 9.13.

B.Sc. in Human Nutrition degree in 5th year for B.Sc. Human Kinetics students with Minor in Nutrition
B.Sc. Human Kinetics students majoring in kinesiology and minorin in nutrition who wish to pursue a degree in human nutrition in 5th year should follow the course pattern below. The required six credits of open electives in the HKIN degree must be BSD 102 and HNU 145. In third year, students must take HNU 145, moving the 3 credit HKIN elective to fourth year. In fourth year, students must take HNU 142(161), 235, 351 and 365 as their required 12 credits of HNU electives. HKIN 374, 396 or 397 will fulfill the requirement of HNU 384 in the HNU degree program. Recommended Course Pattern
Years 1-4
HNU 142(161), 145, 146, 235, 242(261), 262, 351, 363, 365; BSD 102
Year 5
HNU 405, 475, 21 credits HNU electives; 3 credits open electives
Students who select HNU 325, 352, 353, 356, 456 and 485 as HNU electives while completing year 5 are eligible to apply for the SIFX Integrated and Graduate Dietetic Internship programs.

To obtain a second degree from SIFX, students must complete a minimum of 30 additional SIFX credits above the first degree requirements (for a minimum total of 150 credits).

Students must submit re-entry application.

B.Sc. in Human Kinetics degree in 5th year for B.Sc. Human Nutrition students
B.Sc. Human Nutrition students who wish to pursue a degree in human kinetics should complete the normal sequence of their HNU program and be sure to include BIOL 112 and 3 credits of HKIN electives. In year 5 students will complete a HKIN degree with the following courses: HKIN 136, 215, 265, 367, 150 or 154; 6 credits of skills, and 1 of HKIN 253, 264, 332, 352, 354, 431, 443, 455, 6 credits of HNU electives. Students must submit re-entry application.

135 Introductory Nutrition for Nursing
This course introduces nursing students to the fundamentals of nutrition with emphasis on macronutrients and micronutrients along with their functions, dietary sources, digestion and metabolism, and how and why nutrient needs change throughout stages of the life cycle. Discussion will include use of current dietary recommendations and guidelines for health and wellbeing by health professionals. The importance of inter-professional practice for nutritional care will also be introduced. Credit will be granted for only one of HNU 135, HNU 142, HNU 161, HNU 215, HNU 253 or HNU 261. Restricted to current nursing students. Three credits.

142 Introduction to Food and Health
This introductory course exposes students to the range of subject matter covered in the degree program and provides an introduction to the field of nutrition. The role of nutrients in a healthy diet is featured along with identifying the behavioural, understanding foods as a complex chemical system. It includes a study of the properties of food components affected by chemical and physical changes; the foundations of various food preservation methods; food safety; and the principles of food evaluation by sensory and objective methods. Students will complete the TRAINCAN Management Level Food Safety Training. Three credits and lab.

215 Nutrition for a Healthy Lifestyle
This course introduces nutritional science and the role that nutrition, exercise, and other lifestyle behaviours play in the promotion of health. Topics include the function of food and its role in maintaining and promoting health, vegetarianism, food safety, body weight, and healthy eating. Credit will be granted for only one of HNU 215, HNU 135, HNU 261 or HNU 142. Not acceptable for credit in the HNU, HKIN (minor in HNU) or NURS programs. Three credits.

235 Communication
This course introduces the principles of human communications and the development of interpersonal, group, and public communication skills. It enables students to understand (through lectures) and apply (through labs) the written and oral communication process and the factors that influence its effectiveness in a wide range of dietetic practice and health promotion settings. Credit will be granted for only one of HNU 235 or HNU 355. Prerequisite: HNU 161. Three credits and lab.

424 Foundations of Nutrition Science
Students will learn the fundamentals of the science of nutrition with emphasis on energy, macronutrients, vitamins and minerals required by humans. The functions of these nutrients, their food sources and how the body handles them will be discussed within the framework of nutrition in the promotion of health and the prevention of chronic disease. Credit will be granted for only one of HNU 242, HNU 135, HNU 215 or HNU 261. Prerequisites: HNU 142 or 161; CHEM 101/102; BIOL 111. Three credits.

261 Introduction to Nutrition
Students will learn the fundamentals of the science of nutrition with emphasis on energy nutrients, minerals and vitamins, their functions, their dietary sources, and how the body handles them from ingestion through excretion. Topics include the recommended nutrient intakes and guidelines for healthy eating. Credit will be granted for only one of HNU 261 or HNU 135 or HNU 215. Prerequisites: CHEM 101, 102/105 or 150; BIOL 111 or 105. Three credits.

262 Principles of Nutrition in Human Metabolism
Building on HNU 261, students will apply the principles of nutrition with an emphasis on nutrient functions and metabolism while drawing on foundational knowledge in biology and chemistry. Topics will include: energy metabolism, weight management, nutritional concerns across the life course and the emerging role of nutritional genomics. Credit will be granted for only one of HNU 262 or HNU 263. Prerequisites: HNU 261; BIOL 251, 252, completed or concurrent; CHEM 225, 255, completed or concurrent. Three credits.

325 Professional Practices in Dietetics
This course provides an introduction to the foundational knowledge and competencies integral to the profession of dietetics. It will examine the role of the nutritional care process as applied across the spectrum of diverse dietetic practice settings. Students will be engaged in simulation exercises involving critical thinking and evidence-based decision making. Key topics will include reflective practice, ethical practice, nutrition education and counselling, cultural competence and interprofessional practice. Credit will be granted for only one of HNU 325 and HNU 398 offered in 2016-2017. Prerequisites: HNU 235, 351. Three credits.

351 Nutritional Assessment
This course addresses the principles and methods in nutritional assessment of individuals and populations with consideration for variations in health status and stages across the life course. It provides the theoretical foundation for nutritional assessment in the nutritional care process. Methods for dietary, anthropometric, biochemical, ecological and clinical evaluations of individuals and populations are examined, along with the development and appropriate use of the Dietary Reference Intakes. Prerequisites: HNU 262; CHEM 225, 255; BIOL 251, 252. Three credits and lab.

352 Nutrition in Chronic Disease Prevention & Management
Nutrition care principles will be applied while examining the epidemiology, pathophysiology, and role of nutrition in the prevention and management of chronic diseases including, but not limited to, weight management, cardiovascular disease, diabetes mellitus, and renal disease. The course will explore and provide applications of the nutrition care process including medical terminology and documentation of care. Credit will be granted for only one of HNU 352 or HNU 361. Prerequisite: HNU 351 concurrently. Three credits.

353 Nutritional Management of Human Disease
This course examines the etiology, pathophysiology, and nutritional management (including conventional feeding, enteral and parenteral nutrition therapy) of specific clinical conditions related to the upper and lower gastrointestinal tract, the liver and...
pancreas, the pulmonary system, neoplastic disease, HIV/AIDS, and metabolic stress. The nutrition care process and drug-nutrient interactions permeate the content. Case studies provide an opportunity to apply the knowledge from lectures. Credit will be granted for only one of HNU 353 or HNU 362. Prerequisite: HNU 352, completed or concurrent. Three credits.

356 Introduction to Food Service & Quantity Food Production
In this introduction to food service systems and quantity food production, principles, policies, and practices applied to the successful operation of quantity food service systems are examined. Topics include menu management; quantity recipe standardization and costing; procurement, production and service of quality food; marketing; quantity food service equipment; and environmental management. Prerequisites: HNU 262, 146. Three credits and lab.

363 Sport Nutrition
This course involves identification of the specific nutrient needs of the individuals engaged in vigorous physical activity, with a focus on the role of nutrients in energy metabolism as a means to support exercise performance. Students will demonstrate an understanding of energy, nutrient and fluid guidelines appropriate for power, endurance and team sports and apply the guidelines to food choices for training and competition. Skills in evaluating scientific evidence in the field of sports nutrition will be emphasized. Prerequisite: HNU 262. Three credits.

365 Community Nutrition
An introduction to the field of community nutrition and its role in health and health care, which assumes students familiarity with the theories and principles of normal nutrition. Students will explore the role of the community nutritionist in determining the needs of specific population groups; factors that influence eating behaviour; processes available for planning, delivering, and evaluating community nutrition services; and necessary tools, skills and techniques for practice. Prerequisite: HNU 262. Three credits.

366 Maternal and Child Nutrition
This class takes a life-course approach to examine the role of nutrition within the context of normal human development from pre-conception to adolescence. Emphasis is placed on nutritional concerns and recommended dietary practices during pregnancy, lactation, and early childhood. The management of common childhood and adolescent dietary concerns is also discussed. Prerequisites: BIOL 252; HNU 262. Three credits.

384 Research Methods: Theory and Design
This course introduces the research methodologies and techniques used to study human nutrition. Focusing on the research question, students will develop a research plan, through the review of existing literature, and articulation of methods that will best answer the research question. Different approaches to research will be covered including qualitative, quantitative and mixed methodologies, noting that each approach consists of multiple methods that may be used. Credit will be granted for only one of HNU 384 or 385. Prerequisites: STAT 101 and credit for all courses in the first two years of the human nutrition program sequence. Three credits.

392 Selected Topics
The topic for 2019-2020 is Global Food Systems and Agriculture. This course will explore the social, economic and environmental relationships underpinning global food and agricultural systems, and benefits and who is harmed in these relationships the ecosystem necessary to supply the human population with the food essential to its survival, and the various movements who are pursuing global food security and agricultural equality. The course will be interdisciplinary, with an emphasis on sustainable and equitable international development, with a focus on food insecurity and rural poverty in the Global South that result from these global systems. Cross-listed as DEVS 392. Three credits.

398 Selected Topics
Three credits.

405 Food Availability
An examination of the vital issues that surround our national and global food supply from production to consumption. The course will explore interdependence of the many factors underlying the science of food and feeding of people, including the relation of nutrition to health and social policy decisions, the food supply, and access to food, food security, food technology, and domestic and global food distribution. Open to students in all faculties. Three credits.

421 Food and Nutrition for Global Health Equity
This course focuses on nutrition in tackling global disease burdens and achieving global health equity. It explores concepts, actors, governance, interventions, Sustainable Development Goals, nutrition transition, and other nutrition-related risk factors. The knowledge-translation framework, together with assets-based and integrated “bottom-up” approaches to community development, permeates the course and gives basis to the major course assignment. Various local and international guest speakers broaden the understanding of lecture topics. Credit will be granted for only one of HNU 421 and HNU 497(2017-2018). Prerequisite: HNU 351. Three credits.

425 Nutrition in Aging
A study of nutrition related to older adults. Emphasis is on nutritional concerns and dietary recommendations for the older adult population. Topics covered include healthy aging, attitudes and demographic trends around aging in Canada. Dietary management of common concerns in older adulthood (including dementia and osteoporosis) is discussed. Prerequisites: HNU 262; BIOL 251, 252. Three credits.

428 Functional Foods
This course will introduce students to the growing global food industry trend of functional foods and their relationship to health and disease. Bioactive components of functional foods, their sources, chemistry, efficacy, safety, and metabolism will be examined. Evaluation of aspects of marketing and the regulatory environment related to health claims for functional foods will focus on consumer perceptions and roles of health professionals. Credit will be granted for only one of HNU 428 or HNU 496 (completed in 2015, 2016). Prerequisites: HNU 145, HNU 146; HNU 262 completed or concurrent. Three credits with lab.

433 Introduction to Policy for Health-Interdisciplinary Strategies
Designed to create an interdisciplinary learning experience for nursing, human nutrition and human kinetics students, this seminar course is an introduction to public policy change for health. The objective is to develop a basic understanding of healthy public policy development, analysis, and change from interdisciplinary and social justice perspectives. Issues such as healthy public policy, social determinants of health, social justice, health equity, and interdisciplinary/cross-sectoral and citizen lead policy action are explored. This course would be beneficial for students pursuing professions in the health care field. Credit will be granted for only one of HKN 433 and NURS 495, HKN 495. Cross-listed as NURS 433 and HKN 433. Three credits. Three credits.

445 Food Product Development
This course is designed to advance the scientific practices leading to the development of new and improved food products. Students will work with the Instructor and industry partners to carry out market research evaluations, and create and test the acceptability of new product formulations using the sensory evaluation laboratory. Prerequisites: HNU 145, 146; CHEM 225, 255; STAT 101. Three credits and lab.

456 Food Service System Management
Building on material introduced in HNU 356, this course focuses on managerial decision-making relevant to human resource and financial management of food service systems in a range of settings in the public and private sectors. Using a problem-based learning approach, students working in small groups on problems assigned by the professor will examine current issues in food service practice and learn to apply quality assurance mechanisms in their management. Prerequisites: HNU 356; BSAD 102. Three credits.

461 Nutrition in Metabolic Disease
This course examines the etiology and pathophysiology of rare, nutrition-related metabolic diseases which affect the body’s biochemical reactions. Topics include inherited defects in nutrient metabolism resulting in phenylketonuria, homocystinuria, glycogen storage diseases, thalassemias, and hemochromatosis, for example. Designed for senior students, this course develops skills in finding and understanding clinical research, as well as translating research findings into nutrition guidelines, with a focus on the evidence leading to clinical practice guidelines for these disorders. Prerequisite: HNU 351. Three credits.

467 Advanced Nutrition
An in-depth study of energy metabolism in human beings, with emphasis on integration and regulation. The application of current research and the rationale for current dietary guidelines will be emphasized. Prerequisites: HNU 262; BIOL 251, 252; CHEM 225, 255. Three credits.

471 Entrepreneurial Practices for Nutrition Professionals
This course examines the relationship of a variety of factors for entrepreneurial behaviours both in the workplace and in new venture development. Creativity and self-awareness are emphasized while basic business skills and planning processes are developed as the necessary tools for bringing goals and ideas to reality. Guest speakers from nutrition-related enterprises and business support agencies will augment the learning and creative experience in the classroom. Prerequisites: BSAD 102; HNU 262, completed or concurrent. Restricted to HNU students. Three credits.
475 Effecting Change
This capstone course focuses on the study of change, particularly as it relates to promoting and supporting healthy eating and nutritional health among individuals and population groups. Students will learn about various theories of change and their applications to effecting individual and social change for the purpose of enhancing nutritional aspects of health and wellness. Prerequisites: HNU 365 and credit for all courses in first two years of the HNU program sequence. Three credits.

481 Internship Practicum I
A 14-week practicum course which prepares students to meet the entrance requirements for dietetic practice. Students work with preceptors in institutional and community settings to develop their assessment and communication skills; learn to plan; learn the basis of nutritional care; and choose a practice-based research project. Prerequisites: HNU 145, 146, 161, 235, 325, 351, 352, 353, 356, 365, an overall average of 70 in the HNU program and an overall average of 75 in HNU courses; acceptance into the IDI program. Six credits. Graded as pass/fail.

482 Internship Practicum II
A second 14-week (minimum) practicum course which provides opportunities to integrate theory and practice in a preceptor-supported environment, and to acquire the competencies required for entry-level dietetic practice. Interns will improve their skills in communicating, assessing, and implementing nutritional care, and complete a practice-based research project. Prerequisites: completion of the HNU program with an overall average of 70 and an overall average of 75 in HNU courses; HNU 353, 456, 481. Six credits. Graded as pass/fail.

483 Internship Practicum III
The final 14-week (minimum) practicum course of the IDI program provides an opportunity to integrate theory with practice in a preceptor-supported setting of the IDI program. Students will develop their communication, assessment, implementation, and evaluation skills through participation in nutrition care activities. Completion of HNU 483 enables students to write the Canadian Dietetics Registration Exam (CDRE). Prerequisite: HNU 482. Six credits. Graded as pass/fail.

485 Research Methods: Application and Analysis
This course will provide an advanced understanding of approaches, theories and methods used in human nutrition research. Building on topics covered in HNU 384, students will apply, analyze and critique qualitative, quantitative, and mixed methods approaches. Formative research approaches using mixed methodologies will highlight nutrition program development and evaluation. Knowledge mobilization and dissemination of research findings is emphasized. Credit will be granted for only one of HNU 485, 486, 495, 497 (offered in 2016-2017). Prerequisite: HNU 384. Three credits.

491 Advanced Major and Honours Seminar
A critical study of current research in areas related to human nutrition. No credit.

493 Senior Thesis (Honours)
A full-year program of research in nutrition. An acceptable thesis based on original research must be submitted by the deadline to satisfy department requirements for a B.Sc. HNU honours degree. Three credits.

499 Directed Study
Designed for students with high academic standing who wish to explore, in depth, some aspect of human nutrition not available in other course offerings. See section 3.5. Three credits.

9.24 INTERDISCIPLINARY STUDIES

Service Learning Program
M. Oxner, Ph.D., Co-ordinator
M. Turner, MA, Program Manager

Service learning is an innovative way to integrate experiential learning, academic study, and community service. It is an opportunity for students to apply what they learn in the classroom in a community setting. The goal is to blend service and learning so that the service reinforces, improves, and strengthens learning. Service learning is possible in many disciplines and in a broad range of courses and service experiences. Third and fourth year students can also enrol in the independent course, IDS 306.

Course-Based Service Learning
Course-based service learning is a form of experiential education where students work with community members on community problems and where academically rigorous assignments are designed to explicitly link those experiences to specific learning outcomes. Students complete a service experience in the local community, the nature and length of which will be determined by the professor. Students prepare a final report for the professor which determines the grade on this assignment. For information on courses offering a service learning component, see https://sites.stfx.ca/service_learning/index.html and click on information for students.

Immersion Service Learning
Students become involved in intense service experiences in communities, including inner-city settings and international locations. Guided by faculty, students will explore community issues and dynamics in a development context. Students can participate in immersion as a personal (non-credit) experience or may integrate an immersion experience into their chosen course of study through optional course credit with the approval of the professor or through IDS 305. Students must apply for admission. The deadline is mid-October; for more information, contact servicelearning@stfx.ca

305 Immersion Service Learning
Designed for third- and fourth-year students who have applied and been accepted to participate in the immersion service learning program during the winter term. Under faculty supervision, students will develop their information retrieval, term paper writing, and presentation skills through completion of an academic paper connected with the immersion service learning experience. Students must apply to the service learning office for admission to the immersion program (mid-October deadline) as well as registering on-line for this course. Oral presentation component. This course can be used as part of DEVS requirement or as an elective in any program. Three credits.

306 Service Learning: Theory and Practice
At the core of this course, students will spend 30 hours working with a community organization. In seminar style classes, students will explore theories about service learning, experiential learning, volunteerism, social justice and community-university partnerships. Students will reflect on, question and discuss how these ideas relate to their service learning experiences. The course encourages a deep understanding of education and community engagement. This course can be used as part of DEVS requirement or as an elective in any program. Three credits.

398 Selected Topics
Six credits.

9.25 MATHEMATICS AND STATISTICS

J. Apaloo, Ph.D.
K. DeBell, Ph.D.
S. Finbow, Ph.D.
D. Lee, Ph.D.
R. Lukeman, Ph.D.
T. Taylor, Ph.D.
M. van Bommel, Ph.D.
R. van den Hoogen, Ph.D.
P. Wang, Ph.D.
P. Zhou, Ph.D.

Professor Emeritus
S. Aalto, Ph.D.
J. Quinn, Ph.D.

Senior Research Professor
W. MacCaull, Ph.D.

The Department of Mathematics and Statistics offers degrees in both the Faculty of Science and the Faculty of Arts. A minor in mathematics is also possible in nearly every degree. Because of the diversity of programs offered, students are encouraged to consider their academic goals at an early stage in their studies, and to consult the chair and other members of the department regarding course selection.

MATHEMATICS AND STATISTICS

The scope of mathematics ranges from computer science to philosophy, from physics to finance, from biology to art. Mathematics emphasizes precision and logic, but also creativity, elegance and problem-solving. While mathematics is a subject with a rich history (some techniques, results and open problems go back thousands of years), it is also a subject that is very much alive, with new theories and applications continually arising. While mathematical and statistical models
and methods form the basis of scientific and engineering fields, they are also used in such diverse areas as modern communication, cryptography, animation, banking and finance, policy development and consultation, public health care, and architecture. With an undergraduate degree in mathematics, students often go on to pursue an education degree to become a teacher or a graduate degree to become a researcher or professor. However, the career options are much broader. Students with a strong background in mathematics and statistics develop problem-solving skills, logical thinking, and creativity, which serve them well for any career path.

Statistics is the science of data and is a useful tool for research in virtually all areas of human endeavor. It involves collecting, organizing, summarizing, and analyzing information in order to draw conclusions. The practice of statistics takes into account the notion of uncertainty (variability), which leads to error when estimating something, predicting something, or making a decision. It is important, therefore, to measure and, if possible, control error. The framework for quantifying uncertainty is probability, which is a mathematical theory used to describe and analyze chance events. For this reason, probability is the foundation of statistics. Statistics is used in many different fields: medical studies, economics, GNP growth, forecasting, stock market valuations, futures pricing, sociological studies, social policy, marketing research, opinion polls, political polls, industrial processes, environmental processes, and ecological processes and issues.

**Degrees Offered**

- **BA with Major, Advanced Major, Honours**
- **BA with Joint Major, Joint Advanced Major, Honours with Subsidiary**
- **B.Sc. with Major, Advanced Major (including an option with Business Administration), Honours**
- **B.Sc. with Joint Advanced Major, Joint Honours; see sections 7.1.6 and 7.1.7 for options**
- **B.Sc. with Major or Advanced Major concurrently with a Diploma in Engineering**

Students interested in any of these programs should consult with the department chair or any member of the department. General requirements for these degrees are in chapters 4 and 7.

**Concentrations**

There are diverse career paths possible within the mathematical sciences. Concentrations are selections of courses designed for students planning to pursue a career in secondary teaching, statistics, or actuarial science. Information on course selection for other career paths within the mathematical sciences are available from the department chair.

**Mathematics Core Courses**

All students who want to pursue a major, advanced major, or honours degree in mathematics must take the following core courses: MATH 106 or 126, 107 or 127, 253, 267, 277, 491; STAT 231(101 if the degree is in the Faculty of Arts). CSCI 161 is required for advanced major and honours students but cannot be counted in the advanced major or honours credits. CSCI 162 is required for honours.

In addition the senior seminar, MATH 491 (or STAT 491 for statistics concentration), is required for all major, advanced major and honours candidates. Further, MATH 493 (or STAT 493 for statistics concentration) is required for all honours students.

**Department Regulations**

The following pairs or groups are considered so similar that a student may only receive credit for 1 in each group: MATH 106, 111, 126, 121; MATH 107, 112, 127, 122; STAT 101, 201, 231, 224, 226, 231, 367; MATH 222, 226, 227, MATH 223, 225, 253. MATH 100, 101, 102, 105 cannot be counted in the major, advanced major or honours credits.

**Major in Mathematics**

In addition to core courses, 18 credits of MATH/STAT are required.

**Typical Pattern:**

<table>
<thead>
<tr>
<th>Year</th>
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<tbody>
<tr>
<td>1</td>
<td>MATH 106 or 126, 107 or 127</td>
</tr>
<tr>
<td>2</td>
<td>MATH 253, 267, 277; STAT 231 or 101</td>
</tr>
<tr>
<td>3</td>
<td>9 credits MATH/STAT</td>
</tr>
<tr>
<td>4</td>
<td>MATH 491 (or STAT 491 for statistics concentration); 9 credits MATH/STAT</td>
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</table>

**Major, Advanced Major or Honours in Mathematics (Actuarial Science Concentration)**

Students wishing to pursue a concentration in actuarial science should follow the applicable major/advanced major/honours program in mathematics as listed, with 12 of the MATH/STAT credits being STAT 333, STAT 334, MATH 236, and one of STAT 331 or 357(435). In addition, the following courses are required: ECON 101, 102; and BSAD 221, 241, 342, any of which may be used as approved electives for this concentration in the B.Sc. degrees.

**Major in Mathematics (Pre-Education Concentration)**

Students wishing to pursue the pre-education concentration should follow the applicable major in mathematics as listed above. In years 3 and 4, 15 credits of MATH/STAT must be chosen from MATH 254, 347, 371, 372, 387; STAT 333. Second teachable may be chosen from any subject category identified in section 6.1.4. Candidates must follow the degree regulations in sections 4.1 or 7.1.

**Major in Mathematics (Statistics Concentration)**

Students wishing to pursue the statistics concentration should follow the applicable major in mathematics as listed above. In years 3 and 4, nine of the 15 credits of MATH/STAT must be STAT 311, 331, 333.

**Advanced Major in Mathematics**

In addition to core courses, MATH 254 and one of 354 or 366 are required. Additional courses must include nine credits of MATH or STAT courses at the 300 or 400 level, and an additional three credits (nine for B.Sc. students), which may be chosen from MATH/STAT, MATH 493 or STAT 493 is optional.

**Typical Pattern:**

<table>
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<th>Year</th>
<th>Courses</th>
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<tr>
<td>1</td>
<td>MATH 106 or 126, 107 or 127; CSCI 161</td>
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<tr>
<td>2</td>
<td>MATH 253, 254, 267, 277; STAT 231 or 101</td>
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<tr>
<td>3</td>
<td>MATH 354 or 366; additional MATH/STAT courses</td>
</tr>
<tr>
<td>4</td>
<td>MATH 491 (or STAT 491 for statistics concentration); additional MATH/STAT courses</td>
</tr>
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</table>

**Advanced Major in Mathematics (Statistics Concentration)**

Students wishing to pursue the statistics concentration should follow the applicable advanced major in mathematics as listed above. In years 3 and 4, 12 credits of MATH/STAT must be STAT 311, 331, 333, 334.

**B.Sc. Advanced Major in Mathematics with Business Administration**

Students wishing to pursue the B.Sc. Advanced Major in Mathematics with Business Administration should follow the advanced major in mathematics as listed above. The degree awarded is a B.Sc. with Advanced Major. Students must take ECON 101, 102, BSAD 101, 102, 471, and 12 credits from BSAD 221, 223, 231, 241, 261, 281, plus 9 additional BSAD credits.

**Honours in Mathematics**

In addition to core courses, MATH 254, 354, 366, 367, 493 (or STAT 493 for statistics concentration), CSCI 162 and one of MATH 454 or 466 is required. Additional courses must include at least twelve credits in MATH or STAT credits at the 300 or 400 level, with no fewer than three credits at the 400 level, plus 12 credits which may be chosen from MATH/STAT.

**Typical Honours Pattern:**

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<th>Year</th>
<th>Courses</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>MATH 106 or 126, 107 or 127; CSCI 161, 162</td>
</tr>
<tr>
<td>2</td>
<td>MATH 253, 254, 267, 277; STAT 231 or 101</td>
</tr>
<tr>
<td>3</td>
<td>MATH 354, 366, 367; additional MATH/STAT courses</td>
</tr>
<tr>
<td>4</td>
<td>MATH 454 or 466; MATH 491, 493 (or STAT 491, 493 for statistics concentration); additional MATH/STAT courses</td>
</tr>
</tbody>
</table>

**Honours in Mathematics (Statistics Concentration)**

Students wishing to pursue the statistics concentration should follow the applicable honours in mathematics as listed above. In years 3 and 4, 15 credits of MATH/STAT must be STAT 311, 331, 333, 334, 357(435); and STAT 493 must be chosen as the thesis course.

**Minor or Subsidiary in Mathematics**

Students planning to complete a minor or subsidiary in mathematics should complete 6 credits of calculus, 3 credits of statistics, and 15 additional credits of MATH or STAT courses. Students completing a minor or subsidiary and who plan to pursue a career in secondary school teaching with mathematics as their second teachable are advised to select the remaining 15 credits of MATH or STAT from the following: MATH 253, 277, 347, 371, 372; STAT 311. If your degree is not B.Sc. with Major, (including advanced major, honours, and joint degrees) then MATH 101, 102 are also options.
Co-operative Education Program in Mathematics
This optional academic program offers mathematics students the opportunity to gain 12 months of professional, paid work experience in a range of opportunities in industry, government and not-for-profit across Canada. Students can gain valuable technical and professional experience in areas including (but not limited to) modelling, analysis and design to reinforce classroom-based instruction and to increase students’ networks and employability. COOP 405 can be used as a MATH elective or as an open elective. For further information on work term sequencing and professional development training topics see section 9.13.

MATHEMATICS COURSES
101 Mathematical Concepts I: Sets, Logic, and Number Theory
This course surveys topics from diverse areas of mathematics, including problem solving, set theory, logic, historical numeration systems, and number theory. Students will solve problems using processes such as abstraction, pattern recognition, deduction and generalization. Credit will be granted for only one of MATH 101 or MATH 100. Acceptable for credit in all BA, BASC, BBA, HKIN, HNU, MUSI and NURS degrees. Prerequisite: Grade 12 math or equivalent. Three credits.

102 Mathematical Concepts II: Graphs, Functions, Geometry, and Probability
The course surveys interesting and useful topics from diverse areas of mathematics, including problem solving, algebra, graphs and functions, geometry, counting methods, and probability. Students will solve problems using processes such as abstraction, pattern recognition, deduction and generalization. Credit will be granted for only one of MATH 102 or MATH 100. Acceptable for credit in all BA, BASC, BBA, HKIN, HNU, MUSI and NURS degrees. Prerequisite: Grade 12 math or equivalent. Three credits.

105 Business Mathematics
This course will give an introduction to some of the quantitative methods used in the fields of business. A presentation of mathematics applicable to business, including functions, modelling, finance, regression, forecasting, simulation, and linear programming. Use of spreadsheets will be a fundamental part of this course. Acceptable for credit in all programs. May only be used as an open or an approved elective in mathematics or computer science programs. Credit will be granted for only one of MATH 105 and MATH 205. Three credits and one-hour lab.

106 Calculus I
An introduction to differential calculus of a single variable, with applications to physical, life, and social sciences. Topics include limits, differentiation of polynomial, exponential, logarithmic, and trigonometric functions, inverse functions and their derivatives, implicit differentiation, curve sketching, and applied max-min problems. The format of MATH 106 has been structured to provide students with additional learning resources to support and foster a conducive learning environment. Credit will be granted for only one of MATH 106, ENGR 121 or MATH 126. Prerequisite: Grade 12 pre-calculus or equivalent. Six credits of calculus is required in the B.Sc. major, advanced major or honours program. Three credits and one-hour problem-session and one-hour lab.

107 Calculus II
An introduction to integral calculus for functions of one variable. Topics include definite and indefinite integrals; fundamental theorem of calculus; methods of integration; numerical approximation of definite integrals; applications to area and volume; probability density functions and distributions; differential equations; and Taylor polynomials. The format of MATH 107 has been structured to provide students with additional learning resources to support and foster a conducive learning environment. Credit will be granted for only one of MATH 107, ENGR 121 or MATH 127. Prerequisite: MATH 106 or 111 or 126. Six credits of calculus is required in the B.Sc. major, advanced major or honours program. Three credits and one-hour problem-session and one-hour lab.

111 Calculus I for Engineers
This course examines the main idea of calculus of a single variable. It covers functions, limits, continuity; differentiation and integration of polynomial, exponential, logarithmic, and trigonometric functions; product, quotient, and chain rules; applications of differentiation to graphing; maximum-minimum problems, and related rate problems; definite and indefinite integrals, and the fundamental theorem of calculus. Credit will be granted for only one of MATH 121 or MATH 106 or 126(111). Cross-listed as ENGR 121. Prerequisite: grade 12 pre-calculus or equivalent. Three credits and one-hour lab and one-hour problem session.

112 Calculus II for Engineers
A continuation of ENGR 111, this course covers the applications of integration, including areas, volumes, moments, pressure, and work; techniques of integration; numerical integration; length of curves; surfaces of revolution; parametric equations; polar co-ordinates; sequences and series; and Taylor series. Credit will be granted for only one of MATH 122 or MATH 107 or 127(112). Cross-listed as ENGR 122. Prerequisite: MATH 121. Three credits and one-hour lab and one-hour problem session.

126 Calculus I
An introduction to differential calculus of a single variable, with applications to physical, life, and social sciences. Topics include limits, differentiation of polynomial, exponential, logarithmic, and trigonometric functions, inverse functions and their derivatives, implicit differentiation, curve sketching, and applied max-min problems. Credit will be granted for only one of MATH 106, ENGR 121 or MATH 126. Prerequisite: Grade 12 pre-calculus or equivalent. Six credits of calculus is required in the B.Sc. major, advanced major or honours program. Three credits and a one-hour lab every other week.

127 Calculus II
An introduction to integral calculus for functions of one variable. Topics include definite and indefinite integrals; fundamental theorem of calculus; methods of integration; numerical approximation of definite integrals; applications to area and volume; probability density functions and distributions; differential equations; and Taylor polynomials. Credit will be granted for only one of MATH 107, MATH 127 or ENGR 122. Prerequisite: MATH 106 or MATH 111 or MATH 126. Six credits of calculus is required in the B.Sc. major, advanced major or honours program. Three credits and a one-hour lab every other week.

221 Differential Equations for Engineers
Covers first order linear and non-linear ordinary differential equations; ordinary differential equations of higher order with constant coefficients; applications to engineering problems; power series solutions; Laplace transforms; periodic functions; applications of Laplace transforms to linear systems; Fourier series. Credit will be granted for only one of MATH 221 or MATH 367. Cross-listed as ENGR 221. Prerequisite: MATH 122. Three credits and two-hour problem session.

222 Calculus III for Engineers
Extends the ideas introduced in MATH 121 to the calculus of several variables, and covers space curves, arclength, curvature; partial derivatives; implicit functions; constrained and unconstrained extrema; multiple integrals; line, surface, and volume integrals; change of variables in multiple integrals; scalar and vector fields; gradient, divergence, and curl; Stokes theorem. Credit will be granted for only one of MATH 222 or MATH 267. Cross-listed as ENGR 222. Prerequisite: MATH 122. Three credits and two-hour problem session.

223 Linear Algebra for Engineers
Covers geometric vectors in three dimensions; dot product; cross product; lines and planes; complex numbers; systems of linear equations; matrix algebra; matrix inverse; determinants; Cramer’s rule; introduction to vector spaces; linear independence and bases; rank; linear transformations; orthogonality and applications; Gram-Schmidt algorithm; eigenvalues and eigenvectors. Credit will be granted for only one of MATH 223 or MATH 253. Cross-listed as ENGR 223. Prerequisite: MATH 122. Three credits and two-hour problem session.

236 Data Modeling for Business
Evidence-based decision-making in business required the use of the mathematical models to analyze data and to help identify and assess possible answers to what-if questions. This course introduces the student to what should be considered when using mathematical models for business. Topics include model construction, analyzing and modeling data sets, optimization, risk analysis and model testing. Prerequisite: MATH 106 or 126 or 105. Three credits. Offered 2019-2020 and in alternate years.

253 Matrix Algebra
An introduction to solution of linear systems, algebra of matrices, determinants, two- and three-dimensional vector spaces, and the matrix eigenvalue problem. Credit will be granted for only one of MATH 253 or MATH 223. Prerequisite: MATH 101/102 or 107 or 127 or 122 or CSCI 162. Three credits.

254 Linear Algebra
An introduction to abstract vector spaces, including discussion of bases, dimension and homomorphisms of vector spaces; linear transformations, including invariant subspaces; matrix representations and diagonalization procedures. Prerequisites: MATH 253 and MATH 107 or 127 or 122. Three credits.

267 Calculus III
Topics include the Taylor polynomial theorem; indeterminate forms and l’Hôpital’s rule; improper integrals; infinite and power series and tests of convergence; parametric equations; partial differentiation; and selected concepts from multivariate differential calculus, and multiple integration. Credit will be granted for only one of
MATH 267 or MATH 222. Prerequisite: MATH 107 or 127 or 122. Three credits.

277 Discrete Structures
An introduction to sets, binary relations and operations; induction and recursion; partially ordered sets; simple combinations; truth tables; Boolean algebras and elementary group theory, with applications to logic networks, trees and languages; binary coding theory and finite-state machines. Cross-listed as CSCI 277. Prerequisite: MATH 101/102 or 107 or 127 or 122 or CSCI 162. Three credits.

287 Natural Resource Modelling
The course covers formulating real-world problems from renewable natural resources; using software to solve mathematical models; formulating and testing policies for managing dynamic systems; and developing communication skills through report writing. Prerequisite: MATH 107 or 127. Three credits. Offered 2019-2020 and in alternate years.

335 Management Science
This course prepares students for careers as analysts and consultants in industries with a focus on enhancing business value through operations, logistics and supply chain management. A variety of successful implementations of management science/operations research tools in different application areas will be studied. Tools such as linear programming, project scheduling with uncertain activity times, various inventory models and simulation will be introduced and coupled with application in the fields of managing operations in manufacturing, long term financial planning and management of healthcare systems. Cross-listed as CSCI 335. Prerequisites: MATH 106/126 or MATH 105 or CSCI 161. Three credits. Offered 2019-2020 and in alternate years.

347 Combinatorics
The course covers the principle of inclusion and exclusion; generating functions; recurrence relations; rings and modular arithmetic; finite state machines; group and coding theory; Pólya’s method of enumeration; finite field and combinatorial design; graph theory. Prerequisite: MATH 277. Three credits. Not offered 2019-2020; next offered 2020-2021.

354 Modern Algebra I
This course introduces algebraic structures such as groups, rings and fields along with fundamental algebraic concepts such as symmetries, permutations, isomorphisms and homomorphisms. Applications from diverse areas may include coding theory, crytallography; circuits, logic, geometry and graph theory. Prerequisites: MATH 254, 277. Three credits.

361 Advanced Vector Calculus
Topics include vectors; vector differentiation including gradient, divergence, and curl; vector integration including the Gauss and Stokes theorems. Prerequisites: MATH 222 or 267 and 223 or 253. Three credits. Not offered 2019-2020; next offered 2020-2021.

366 Real Analysis I
This course considers rigorous development of the real number system; numerical sequences and series; properties of continuous functions; metric spaces; sequences and series of functions. Prerequisites: MATH 254, 267 and 277. Three credits.

367 Differential Equations
Topics include first- and second-order linear differential equations; systems of linear differential equations; methods of solution including Laplace transforms and series solution; introduction to non-linear differential equations and numerical methods. Credit will be granted for only one of MATH 367 or MATH 221. Prerequisites: MATH 107 or 127. Three credits.

371 Modern Geometries
A survey of Euclidean and non-Euclidean geometries. Topics include geometric axioms, the parallel postulate, constructions, models of hyperbolic geometry, topology, and fractals. Prerequisite: MATH 253 or 277. Three credits. Not offered 2019-2020; next offered 2020-2021.

372 Number Theory
Topics include divisibility of integers; congruences; the Chinese remainder theorem; quadratic residues and non-residues; Gaussian reciprocity law; number theoretic functions; and the Moebius inversion formula. Prerequisite: MATH 277. Three credits. Offered 2019-2020 and in alternate years.

384 Numerical Methods
This course covers methods used to solve mathematical problems on computer systems, including mathematical background and error analysis of solutions to non-linear equations; polynomial interpolations; integration and differentiation; quadrature methods; systems of equations and differential equations. Prerequisites: MATH 223 or 253, CSCI 161 or 125. Three credits. Not offered 2019-2020; next offered 2020-2021.

387 Mathematical Modelling
This course teaches the use of mathematical models to solve real-world problems. The modelling cycle will be practiced using problems found in the real world. Prerequisites: MATH 222 or 267, and MATH 223 or 253. Three credits. Not offered 2019-2020; next offered 2020-2021.

389 Financial Mathematics
Topics include stochastic models of financial markets; forward and futures contracts; European options and equivalent Martingale measures; hedging strategies and management of risk; term structure models and interest rate derivatives; and optimal stopping and American options. Ito’s lemma and Girsanov’s theorem to develop methods for pricing financial derivatives are examined. Pricing problems are considered in discrete (Binomial option price model) and continuous-time (Black-Scholes Merton price model). Credit will be granted for only one of MATH 389 or MATH 471 offered in 2012-2013. Prerequisites: MATH 106 or 126, STAT 101 or 231. Three credits. Offered 2019-2020 and in alternate years.

454 Modern Algebra II
The topics are: polynomial rings, unique factorization, irreducible polynomials; Sylow theorems, solvability of polynomial equations; Galois theory; and the Jordan canonical form. Prerequisite: MATH 354. Three credits. Not offered 2019-2020; next offered 2020-2021.

462 Complex Variables
Topics include complex numbers, elementary functions, series and integration, Laurent series, and residue theory. Prerequisites: MATH 221 or 267 or 222 or 267. Three credits. Not offered 2019-2020; next offered 2020-2021.

466 Real Analysis II
Material includes: topology of Euclidean nspace; differentiation; Riemann-Stieltjes integration; limits and continuity in n-dimensions; differentiation of nonlinear transformations; and the implicit function theorem. Prerequisite: MATH 366. Three credits. Offered 2019-2020 and in alternate years.

471 Selected Topics in Mathematics
The topic for 2019-2020 is Sports Analytics. Modern sports science and professional teams increasingly require the use of applied statistical and analytical techniques. This course introduces the use of statistical analysis in a variety of contexts applicable to sport, including models, prediction, inference, simulation, performance and notational analysis as found in statistical sports science. A major component will be a research-based project based on real-world data. Prerequisites: One of STAT 101, STAT 224, STAT 231 or HKIN 301. Three credits.

481 Partial Differential Equations
The study of special functions and partial differential equations, including the wave, heat, and Laplace equations in various coordinate systems. Prerequisites: MATH 254 and MATH 221 or 267 and (MATH 267 or 222). Three credits. Offered 2019-2020 and in alternate years.

491 Senior Seminar
Cross-listed as STAT 491. The purpose of this non-credit course is to assist students in carrying out research, composition, and oral presentation. Students will present a project topic in the fall term and their project in the spring. Attendance at departmental seminars is mandatory. No credit.

493 Senior Thesis
Students will prepare and present a thesis based on original research conducted under the supervision of a faculty member. Required for honours students; permitted for advanced major students. Three credits.

STATISTICS COURSES

101 Introductory Statistics
This course will give an introduction to descriptive and inferential statistics. Topics include descriptive statistics; graphical display of data, random variables and probability distributions, parameter estimations, hypothesis testing and simple linear regression. Students will learn to use statistical software tools; to identify bias in data collection; to organize and summarize data; to make inferences from data and to be able to test the significance of the results. Acceptable for credit in the Faculties of Arts and Business, and the Departments of Human Kinetics, Human Nutrition and B.Sc. Nursing. STAT 101.H will focus on applications to business and economics. Credit will be granted for only one of STAT 101, STAT 224, STAT 231. PSYC 292(290), HKIN 301. Three credits.

224 Probability and Statistics for Engineers
This course covers probability laws and the interpretation of numerical data, probability distributions and probability densities, functions of random variables, joint distributions, characteristic functions, inferences concerning mean and
variance, tests of hypotheses, linear regression, and time series analysis. Engineering applications are emphasized and statistical computer packages are used extensively. Credit will be granted for only one of STAT 224, STAT 101, STAT 231, PSYC 292(290). Cross-listed as ENGR 224. Prerequisite: ENGR 122 or MATH 122. Three credits and two-hour problem session.

231 Statistics for Students in the Sciences
Topics include descriptive statistics; data collection, tabulation, and presentation; measures of central tendency and variability; elementary probability; binomial, normal and chi-square distributions; parameter estimation and tests of hypotheses; linear regression and correlation. Students will learn about statistical significance and the communication of statistical evidence, and be introduced to a statistics computer package. Credit will be granted for only one of STAT 231, STAT 101, STAT 224, PSYC 292(290). Prerequisite: MATH 107 or 127 or 122. Three credits and a one-hour lab.

311 Survey Sampling Design
Topics include simple random sampling, stratified sampling, systematic sampling, cluster sampling, multi-stage sampling, bootstrap samples. Prerequisite: STAT 101 or 224 or 231. Three credits and a one-hour lab. Not offered 2019-2020; next offered 2020-2021.

331 Statistical Methods
An investigation of statistics and experimental design in the context of biological and health science issues. Topics include analysis of variance, categorical data; distribution-free tests; linear and multiple regression. Students will learn to analyze data and interpret conclusions using a statistical software package. Recommended strongly for all major, advanced major, and honours students. Credit will be granted for only one of STAT 331, PSYC 394, PSYC 390. Cross-listed as BIOL 331. Prerequisite: STAT 101 or 224 or 231. Three credits and a one-hour lab.

333 Introductory Probability Theory
Material will include: combinatorial analysis; axioms of probability; the law of total probability and Bayes’ Theorem; discrete and continuous random variables; mathematical expectation and variance; joint distributions; introduction to moment-generating functions and their applications; limit theorems. Prerequisites: MATH 222 or 267 and STAT 101, 231 or 224 or permission by the department chair. Three credits.

334 Mathematical Statistics
Topics include distribution theory; order statistics; point and interval estimation; MVUEs and the Rao-Blackwell theorem; consistency and sufficiency; the method of maximum likelihood; the method of moments; uniformly most powerful tests and the Neymann-Pearson fundamental lemma; likelihood ratio tests; least squares theory; statistical models and estimation in ANOVA. Prerequisite: STAT 333. Three credits. Offered 2019-2020 and in alternate years.

357 Regression Analysis
An investigation of the statistical techniques for modeling the relationship between a dependent variable and one or more independent or predictor variables. Topics include ordinary least squares method and linear regression, matrix algebra and multiple regression, variable selection, residual analysis, multicollinearity, and generalized linear models. Credit will be granted for only one of STAT 357 or STAT 435. Prerequisite: STAT 231 or 333. Three credits. Offered 2019-2020 and in alternate years.

445 Statistical Learning and Data Mining
The course covers the most current techniques used in data mining and machine learning and their background theoretical results. Two basic groups of methods are covered in this course: supervised learning (classification or regression) and unsupervised learning (clustering). The supervised learning methods include Recursive Partitioning Tree, Random Forest, Linear Discriminant and Quadratic Discriminant Analysis, Neural Network, Support Vector Machine. The unsupervised learning methods include Hierarchical Clustering, K-means, K-nearest-neighbour, model-based clustering methods. Furthermore, the course also covers the dimensional reduction techniques such as LASSO and Ridge Regression, and model checking criteria. Prerequisites: CSCI 161, STAT 224 or 231 or permission of department chair. Three credits. Offered 2019-2020 and in alternate years.

472 Selected Topics
This course will cover a selection of current statistical topics, such as epidemiology, sampling theory, time-series analysis, stochastic processes, design and analysis of experiments, bootstrap methods, multivariate analysis, and bioinformatics. See http://sitese.xfia.ca/mscs/stats_courses for more information. Three credits. Not offered 2019-2020; next offered 2020-2021.

491 Senior Seminar
Cross-listed as MATH 491. The purpose of this non-credit course is to assist students in carrying out research, composition, and oral presentation. Students will present a project in the fall term and their completed project in the spring. Attendance at departmental seminars is mandatory. No credit.

493 Senior Thesis
Students will prepare and present a thesis based on original research conducted under the supervision of a faculty member. Required for honors students; permitted for advanced major students. Three credits.

9.26 MODERN LANGUAGES
V. Kocay, Ph.D.
E. Langille, D. és L.
R. LeBlanc, Ph.D.
M. Paz, Ph.D.
W. Tokarz, Ph.D.

Part Time
M. Lade, M.Ed.

Placement of Students
Students registering for a French course for the first time at StFX should note that the Department of Modern Languages offers several courses to first-time registrants in French, depending on their background. Please note:

a) First time registrants in French at StFX must complete the online placement test prior to registering. This test is to assist in registering in the appropriate section (basic, intermediate or advanced level French). The link to the on-line placement test is http://moodle.stfx.ca, search French Placement Test.

b) First-time registrants who have not completed high school core French or its equivalent should enroll in FREN 111.

c) Results on the placement test are a determining factor in the enrolment for first-time registrants.

d) Students with native proficiency may register in any 200-level course.

e) The department reserves the right to place students. Students placed at the intermediate or advanced level of the placement test will not be able to receive credit for FREN 111 or 112.

Recommendations
Candidates for the major, advanced major or honours degrees in French are strongly encouraged to spend at least one summer (five weeks) in a French-speaking environment through an immersion program or one year in the junior year abroad program. Please see below for details.

Students hoping to pursue masters or doctoral studies in the humanities or social sciences are reminded that these programs often carry language requirements.

Minor or Subsidiary Program
A minor or subsidiary in French requires at least 6 credits at the 300- or 400-level. The minor or subsidiary in Spanish includes required courses: SPAN 306 and 334.

Major Program
Major in French
A student may take a major in French by completing 36 credits in FREN (excluding FREN 111/112), including FREN 312(215) and at least 15 credits at the 300- or 400-level. A thesis is not required.

Major in Spanish
The Department of Modern Languages offers a major in Spanish (language and literature) for students who have completed a minimum of one semester in a Hispanic country. Students completing the major requirement abroad will have to complete their course work at the 300- or 400-level, or equivalent, excluding courses already completed at StFX. Students who wish to apply for the major degree must seek permission from the department chair and submit relevant course descriptions of work to be done abroad to the Dean’s office for approval.

Joint Major in French and Spanish
A student may do a joint major in French and Spanish. The requirements for each subject are the same as for a major in French and a major in Spanish.

Advanced Major Program
A student may take an advanced major in French by completing 36 credits in FREN (excluding FREN 111/112), including FREN 312(215) and at least 21 other credits at the 300- or 400-level. Students registered in the advanced major program in French are required to do FREN 492, a three-credit senior seminar comprising a thesis in French of approximately 4,000 words.

Honours Program
A student may take an honours degree in French by completing 60 credits in FREN (excluding FREN 111/112), including FREN 312(215) and at least 33 other credits
at the 300- or 400-level. Twelve of the 60 credits may be taken in a related field with department permission. Students registered in the honours program in French are required to do FREN 492, a three-credit senior seminar comprising a thesis in French of approximately 6,000 words.

**Certificate of Proficiency in French**

This certificate is awarded to students who wish to have their proficiency in French officially acknowledged by a distinction appearing on their transcript. It is not necessary to do a major in French in order to take the test, although certain requirements must be met. Students who wish to sit for the exams should make their intentions known by 15 December. The exams will take place during the last week of classes.

Requirements:

a) At least 18 credits beyond the 100 level, including FREN 312(215), and at least 6 credits at the 300- or 400-level.

b) A minimum grade of 70 is required in each FREN course.

c) Written and oral examinations with a minimum of 70 on each part (exam may be repeated after one year). The structure of the exam includes:

   i) An exam covering grammar and usage (2 hours), specifically on the following points: verb conjugations (all tenses and moods), relative pronouns, object pronouns, prepositions, agreement of adjectives, plural of nouns and adjectives, complex sentence structures.

   ii) A composition on a subject prompt provided (1 hour)

   iii) An oral exam: 45 minutes to read a text provided, and 15 minutes to present its content and answer questions from three professors (1 hour).

**Transfer Credit for French Immersion Courses**

Students may request a maximum of six transfer credits for a successfully completed immersion course. The following guidelines apply:

a) Newly admitted students may request transfer credit in French only for courses taken after completing grade 12 French. Normally, transfer credit will not be granted for courses taken five years prior to admission.

b) Students must obtain a letter of permission from their Dean prior to enrolling in an immersion course if credit is sought.

c) The Explore summer immersion course in French may not be used in a major or minor, but may be used as part of a pair or as an arts elective in any degree program. Other immersion courses will be assessed on an individual basis.

**Summer Language Bursary Program**

Official Languages Programs

To promote the study of Canada’s official languages, the Council of Ministers of Education, Canada (CMEC), in co-operation with the provinces and territories, administers Accent (formerly OLMP, part-time), Odyssey (formerly OLMP, full-time), Explore (formerly SLBP), and CMEC also co-ordinates official-language programs as well as to students from French schools and French Immersion programs. For information on the summer language bursary program contact the provincial governments.

**Junior Year Abroad Program**

The department encourages students in a four-year program to spend their junior year in a French-speaking environment. To this end, a study abroad program has been put into place allowing students to spend their third year at the Centre International d’Etudes Francaises in Angers, France. See section 3.18. For information about this program, see the chair or designate.

**Department Requirements**

A pair or a minor must be in one language. Students who complete a minor or a major in one language may also count a pair in a second language.

**FRENCH**

**FRENCH 111 Basic University French I**

This course corresponds to level A1 of the Common European Framework of Reference for Languages (CEFR). Students will acquire the necessary competence in the four language skills: listening, speaking, reading and writing, to use familiar words and simple phrases for concrete communication situations such as introduction of self, answering basic questions about home, family and surroundings. This course is restricted to students with little previous background in French and who have not completed grade 12 core French. Credit will be granted for only one of FREN 111 or FREN 110. Three credits and one-hour lab.

**FRENCH 112 Basic University French II**

This course is a continuation of FREN 111 and corresponds to level A2 of the Common European Framework of Reference for Languages (CEFR). Students will learn to understand and communicate during easy or habitual tasks and will understand isolated phrases and common expressions that relate to areas of high personal relevance (like personal or family information, shopping, immediate environment, work). This course is recommended for students with some background in French or who have completed grade 12 Core French. Credit will be granted for only one of FREN 112 or FREN 110. Three credits and one-hour lab.

Notes:

a) The Department reserves the right to refuse admission to these courses to students whose knowledge of French is inadequate according to the department placement test.

b) FREN 111 and FREN 112 may not be used as credit toward a major, advanced major or honours degree. They may be used toward a minor or subsidiary in French, as part of a pair, or as electives.

c) Closed to students who have completed 200-level French courses or higher, as well as to students from French schools and French Immersion programs.

**211 Intermediate French I**

This course corresponds to level B1 of the Common European Framework of Reference for Languages (CEFR). Students will acquire the necessary competence in the four language skills: listening, speaking, reading and writing, and will then be able to communicate with some confidence on matters related to his/her interests and professional field. Students will be able to express thoughts on more abstract, cultural topics such as films, books, music etc. Recommended for students who have completed high school French Immersion Program, have completed FREN 112 (with a grade of at least 60), or who are placed into the course through the placement test. Credit will be granted for only one of FREN 211 or FREN 115. Three credits and one-hour lab.

**212 Intermediate French II**

This course corresponds to level B1 of the Common European Framework of Reference for Languages (CEFR). Students will acquire the necessary competence to interact with fluency and spontaneity and produce detailed text on a wide range of subjects. Recommended for students who have a strong background in French, who have completed FREN 211, or who are placed into the course through the placement test. Credit will be granted for only one of FREN 212 or FREN 115. Three credits and one-hour lab.

**225 (Français des affaires I) Business French I**

An introduction to the language in which the French-speaking world conducts business. Students will acquire solid communication skills, including knowledge of specialized vocabulary. Practical drill in the language lab will familiarize students with commercial correspondence and professional telephone etiquette. Prerequisite: FREN 211(115) or permission of the department chair. Three credits.

**235 (Français des affaires II) Business French II**

A continuation of FREN 225, this course introduces the language of specialized areas of business, such as marketing, finance, management, and teaches basic legal terminology. Students will learn the protocol of a formal business presentation in French as well as meeting procedures according to the Code Morin. Prerequisite: FREN 211 (115) or permission of the department chair. Three credits.

**253 Langue et culture: le francais en Europe**

A history of French language and culture, starting with its Latin, Celtic and Germanic origins, and stressing the ethnic, political, social, technological factors that have helped shape the language down through the centuries. Specifically examined are the influence of such institutions as feudalism, the monarchy, the Church, the universities, print culture, the French Academy, colonialism and so forth. Credit will be granted for only one of FREN 253 and FREN 220. Prerequisite: FREN 212. Three credits. Not offered 2019-2020.

**254 Langue et culture: Le francais dans le monde**

This course focuses on contemporary French language and culture as spoken and lived in the Francophone world. Emphasis will be on discovering cultural similarities and differences featured in literary texts, songs, cinema, legends, superstitions, beliefs, and celebrations in some of the 29 countries where French is an official language. This course may be of particular interest to current or prospective French teachers. Credit will be granted for only one of FREN 254 and FREN 220. Three credits.

**271 Survey of French Literature: Origins to Renaissance**

A study in historical context and sequence of the most important works written in French from 1000 to 1600. Extracts of literary works in modern translation extending from la Chanson de Roland to Montaigne’s Essays and including,
272 Survey of French Literature: Classical Period to 1900
A study in historical context and sequence of the most important works written in French from 1600-1900. Extracts taken from the literary works of Corneille, Racine and Mollière, and including eighteenth and nineteenth century writers such as Marivaux, Voltaire, Diderot, Hugo, Baudelaire, Verlaine, Balzac, Flaubert, Daudet, Zola and Maupassant. Recommended for all French major, advanced major, and honours students. Credit will be granted for only one of FREN 272 and FREN 216. Prerequisite: FREN 212. Three credits. Not offered 2019-2020.

311 Advanced French I
This course corresponds to level B2 of the Common European Framework of Reference for languages (CEFR). This focus is on complex sentence structure, the use of the verb tenses and moods, as well as on expressions of cause and consequence. Emphasis will be placed on language acquisition by means of text analysis, writing exercises (notably the structure of the résumé) and oral presentations. Credit will be granted for only one of FREN 311 or FREN 215. Prerequisite: FREN 212(115) or completion of French School, or an exceptional result on the placement test. Three credits.

312 Advanced French II
This course corresponds to the level B2 of the Common European Framework of Reference for languages (CEFR). The focus is on complex sentence structure, including the use of relative pronouns, active and passive voice structures, indirect discourse, terms of articulation, expressions of attenuation and restriction. Emphasis will be placed on language acquisition by means of text analyses, writing exercises (notably descriptive and argumentative texts) and oral presentations. Credit will be granted for only one of FREN 312 or FREN 215. Prerequisite: FREN 311 or permission of the department chair, or who are placed into the course through the placement test. Three credits.

314 Selected Topics in French Studies
The topic for 2019-2020 is Intercultural Communication. This course presents the structure of communication from the perspective of linguistics as based in sign recognition. It defines culture as the production of institutions and artefacts in relation to language use and likenes it to artistic creation. Given the structure of communication, an encounter with a culture different from one’s own cannot but challenge the cultural construct known as the subject and lead to its transformation. Readings will be chosen in linguistics, philosophy, literature, and aesthetics. Prerequisite: 6 credits of FREN at 200 level or permission of chair. Three credits.

318 Classical French Theatre
This class offers an introduction to 17th-century French literature with a primary focus on representative works by three major dramatists: Corneille, Mollière and Racine. It explores their vision of humanity and assesses their contribution to French literature and the history of ideas. Credit will be granted for only one of FREN 318 or FREN 316. Prerequisite: 6 credits of FREN at the 200 level or permission of the department chair. Three credits.

319 Literary Works of the grand siècle (Les Moralistes)
This course studies a selection of primarily prose and poetry works from the classical period that was 17th-century France. It includes a study of works by Pascal, Descartes, La Rochefoucauld, La Fontaine, Boileau, Mme de Lafayette, and La Bruyère. Credit will be granted for only one of FREN 319 or FREN 316. Prerequisite: 6 credits of FREN at the 200 level or permission of the department chair. Three credits.

321 French Cinema
A study of France’s unique contribution to the seventh art, starting with the Frères Lumière’s moving pictures in 1895 and covering the history of French cinema. Emphasis will be placed on such masterpieces as La Grande Illusion and Les Enfants du Paradis. Prerequisite: FREN 212(115) or permission of the department chair. Three credits. Not offered 2019-2020.

322 18th-Century French Theatre
An introduction to 18th-Century French theatre. This course focuses on the evolution of the field of theater during the Enlightenment. Presented in chronological sequence, the course gives special attention to works by Lesage, Voltaire, Marivaux, Diderot and Beaumarchais. Credit will be granted for only one of FREN 322 or FREN 326. Prerequisite: 6 credits of FREN at the 200 level, completed or concurrent or permission of the department chair. Three credits. Not offered 2019-2020.

324 18th-Century Literature: The Novel
An Introduction to the 18th-century French novel, this course gives special attention to works by Lesage, Montesquieu, Prévoit, Voltaire, Marivaux, Diderot, Rousseau and Bernardin de Saint-Pierre. Credit will be granted for only one of FREN 324 or FREN 326. Prerequisite: 6 credits of FREN at the 200 level or permission of the department chair. Three credits. Not offered 2019-2020.

327 French Writing I
An introduction to the techniques of composition through the study and practice of appropriate sentence structure. This course is designed to improve students’ expression of complex thought and to familiarize them with the idiomatic use of French language in a variety of contexts. The course combines vocabulary enrichment, detailed analysis of texts and a variety of writing activities: descriptions, portraits, narrations, and correspondence. Emphasis is on describing and narrating. Prerequisite: 6 credits of FREN at the 200 level or permission of the department chair. Three credits. Not offered 2019-2020.

329 Children's Literature
A critical survey of French children’s literature. Authors to be studied include La Fontaine, Perrault, Ségur, Daudet, Cendrars, Aymé, Gripari, Sempé et Goscinny, PEF, Tournaire. Prerequisites: 6 credits of FREN at the 200 level or permission of the department chair. Three credits. Not offered 2019-2020.

331 From Self-expression to Self-denial: 19th Century France
This presents 19th century texts in the context of events, ideas and schools of thought that shaped this period, events such as the French Revolution, the Napoleonic era, and the Franco-Prussian war. Major currents of thought of this period involve Romanticism, Realism, Naturalism and Symbolism. Readings will include extracts from well-known authors of the period. Credit will be granted only for one of FREN 331 or FREN 347/348. Prerequisite: 6 credits of FREN at the 200 level or permission of the department chair. Three credits. Not offered 2019-2020.

332 Ideas in French Literature: the 20th Century
This course proposes to present literary texts in the context of events, ideas and schools of thought that shaped 20th Century French literature, events such as the two world wars, and ideas associated with movements such as phenomenology, surrealism, communism, existentialism, and feminism. Readings will include extracts from texts of the period. Credit will be granted only for one of FREN 332 or FREN 347/348. Prerequisite: 6 credits of FREN at the 200 level or permission of the department chair. Three credits.

341 Linguistics I: Phonetics
An introduction to linguistics, this course presents the major concepts used in linguistics and outlines the phonetic structure of the French language as revealed in word formations and in sentence structures. It includes pronunciation exercises. Credit will be granted for only one of FREN 341 or FREN 340. Prerequisite: one of FREN 115, 211 or 212 or higher-level French course. Three credits. Not offered 2019-2020.

342 Linguistics II: Morphology, Syntax & Semantics
This course presents three of the major branches of contemporary linguistics, morphology, or word form, syntax, or sentence structure, and semantics, or word meanings. Students will acquire an understanding of linguistic concepts and linguistic analysis through the student of practical examples. Credit will be granted for only one of FREN 342 or FREN 340. Prerequisite: one of FREN 115, 211 or 212 or higher-level French course. Three credits.

351 Stylistic Comparison of French and English
This course develops theoretical and practical knowledge specific to the field of translation. Students will be initiated to the techniques and instruments of translation in order to reflect upon the notions of comparative stylistics and accordingly understand the fundamental differences between the English and French languages. Prerequisite: 6 credits of FREN at the 200 level or permission of the department chair. Three credits. Not offered 2019-2020.

361 Acadian Literature
A critical description of the historical, socio-cultural, linguistic, and literary significance of Acadian writing. Consideration will also be given to stylistic evolution, from oral literature to poetry, novels, and short stories. Credit will be granted for only one of FREN 361 or FREN 376. Prerequisite: 6 credits of FREN at the 200 level or permission of the department chair. Three credits. Not offered 2019-2020.

362 Acadian Language and Culture
This course will examine the current linguistic situation in the Acadian communities of the Atlantic provinces. Students will study the cultural, social and historical circumstances which have influenced and contributed to the distinct cultural identity of the Acadian people. Credit will be granted for only one of FREN 362 or FREN 376. Prerequisite: 6 credits of FREN at the 200 level or permission of the department chair. Three credits.
363 Québecois Literature I: Révolution tranquille to the Present
An introduction to the study of Québecois literature since the Quiet Revolution. Through a sampling of works representing the major literary genres, this course focuses on the role of literature in Québec’s political and social affirmation as a society. Special attention is given to the works of Marie-Claire Blais, Pierre Vallières, Michel Tremblay, Gaston Miron and Gabrielle Roy. Prerequisite: 6 credits of FREN at the 200 level or permission of the department chair. Three credits. Not offered 2019-2020.

364 Québecois Literature II: Origins to the Révolution tranquille
A study of the major literary forms and authors of French Canada from the beginning of the colony to the Révolution tranquille (ca. 1860). Emphasis is placed on a structural and thematic approach to narrative, set against a background of cultural and ideological influences. Prerequisites: 6 credits of FREN at the 200 level or permission of the department chair. Three credits. Not offered 2019-2020.

410 Medieval French Literature
A study of literary genres from the chanson de geste, courtly romance, and the novels of chivalry to early French poetry covering the five-hundred year period from 1000-1500. Credit will be granted for only one of FREN 410 or FREN 400. Prerequisite: 6 credits of FREN at the 200 level or permission of the department chair. Three credits. Not offered 2019-2020.

415 Renaissance French Literature
A study of the Renaissance period in literature and language through the works of Marot, Rabelais, Du Bellay, Ronsard, Montaigne and the poets of the baroque. The century’s concern with the French language provides a convenient introduction to the study of the development of modern French. Credit will be granted for only one of FREN 415 or FREN 400. Prerequisite: 6 credits of FREN at the 200 level or permission of the department chair. Three credits. Not offered 2019-2020.

456 Literary Criticism (Roman et Société)
The objective of this course is to introduce the field of French literary criticism and to illustrate several analytical methods based on current schools of literary theory. After establishing a socio-historical background, the class will focus in detail on five major schools of textual analysis, springing from the concepts of structuralism and post-structuralism: narratology, sémiotique, psychocritique, thématique, and sociocritique. Prerequisite: 6 credits of FREN at the 200 level or permission of the department chair. Three credits. Not offered 2019-2020.

457 French Poetry from the Symbolist Movement to the Present
A study of major French poets beginning with the Symbolist Movement at the end of the 19th century and concluding with current trends in poetry. Authors include Stéphane Mallarmé, Paul Valéry, Guillaume Apollinaire, Pierre Reverdy, Francis Ponge, Paul Claudel, Andre Breton, Henri Michaux, Francis Jammes, Blaise Cendrars, Jules Supervielle, Paul Eluard, René Char, Jacques Reda. Prerequisite: 6 credits of FREN at the 200 level or permission of the department chair. Three credits. Not offered 2019-2020.

492 Senior Seminar and Thesis
An in-depth study of an area of French or French-Canadian literature chosen by the student as the basis for his or her thesis. Working under the supervision of a chosen professor, students will research and write a thesis in French of approximately 4,000 words for an advanced major and 6,000 words for an honours student. Professor and student will meet once a month to review progress. Required for all advanced major and honours students in their final year of study. Three credits.

GERMAN
101 German for Beginners I
This course is an introductory course intended for students with no previous knowledge of the language. This course provides student with a sound basis for learning German as it is used in spoken and written communication today within the context of German-speaking culture. This course will also familiarize students with contemporary life and culture in German-speaking countries. Credit will be granted for only one of GERM 101 or GERM 100. Three credits and language lab.

102 German for Beginners II
This course is a continuation of GERM 101 and stresses progress and systematic practice in the four language skills: listening, speaking, reading and writing. This course will provide a more advanced foundation in the basic elements of grammatical and syntactical structures in the target language. It promotes understanding of the culture of German speaking countries. Credit will be granted for only one of GERM 102 or GERM 100. Prerequisite: GERM 101 or permission of department chair. Three credits and language lab.

201 Language and Culture I
This course corresponds with the A2 level of the Common European Framework of Reference of Languages (CEFR), and is designed for students desiring to broaden and enhance their knowledge in the four language skills: listening, reading, speaking and writing through the study of authentic materials gleaned from German cultural productions. Students will be given the opportunity to understand and appreciate German culture through the introduction of language, texts, film, music, etc. Credit will be granted for only one of GERM 201 or GERM 200. Prerequisite: GERM 102. Three credits.

202 Language and Culture II
A continuation of 201, this puts the emphasis on understanding, speaking, writing and reading. Students will review grammar structures, acquire active vocabulary and continue to familiarize themselves with various aspects of contemporary German culture and everyday life. Students will practice their language skills through group activities, individual presentations and discussions of short texts, video clips and songs. Credit will be granted for only one of GERM 202 or GERM 200. Prerequisite: GERM 102. Three credits.

300 German Language III
This course will develop proficiency in speaking and listening. Emphasis will be placed on advanced writing skills and grammatical structures. This course will also enhance knowledge of the German speaking world through insights into the cultural and literary life in German speaking countries. Prerequisite: GERM 200 or 201. Six credits. Not offered 2019-2020.

315 Selected Topics
The topic for 2019-2020 is Introduction to Latin American Cultural Studies. Prerequisite: GERM 200. Three credits.

M’KMAQ
105 Introduction to Mi’kmaq Language & Culture
Introduces students to the various aspects of the Mi’kmaq language: phonetics, morphology, semantics, syntax, and language acquisition. Comparison will be made between French and English language structures an applied to the language acquisition of Mi’kmaq students. Three credits.

205 Advanced Mi’kmaq
This course is intended for student whose first language is Mi’kmaq or who are proficient speakers of the language. The aim of the course is to develop substantive knowledge of Mi’kmaq literacy. Students will be introduced to the different writing systems used by the Mi’kmaq over time. Three credits.

SPANISH
101 Spanish for Beginners I
This course is intended for students with no previous knowledge of the language. Students will develop basic communicative skills in the target language, study Spanish grammar as a means to effective communication, express themselves in spoken and written Spanish, integrate their knowledge of grammatical structures and functions with thematically relevant vocabulary, and be introduced to the diversity of the Spanish-speaking world. Credit will be granted for only one of SPAN 101 or SPAN 100. Three credits and lab.

102 Spanish for Beginners II
This language course, in which communicative objectives are centred on personal life, and range from talking about family to narrating past events, focuses on past tenses, the use of indirect and direct object pronouns, and grammatical constructions with the present tense. This course continues to develop students’ writing, speaking, and comprehension skills through a variety of written, oral, and audio-visual activities that integrate cultural elements. Credit will be granted for only one of SPAN 102 or SPAN 100. Prerequisite: SPAN 101 or permission of the department chair. Three credits and lab.

221 Intermediate Spanish I
This course is an intermediate course intended for students with previous knowledge of Spanish. It combines language and cultural elements that will allow students to improve their communicative competence in Spanish, review and practice the grammatical structures studied in 100-level Spanish courses, refine their language skills in reading, writing, listening, and speaking, and learn about the cultures of the Hispanic world. Credit will be granted for only one of SPAN 221 or SPAN 200. Prerequisite: SPAN 102 or 100. Three credits and language lab.

222 Intermediate Spanish II
A continuation of SPAN 221, students will learn advanced grammatical structures and further develop skills in reading, writing, listening, and speaking in Spanish, while continuing to learn about contemporary Hispanic cultures. Credit will be granted for only one of SPAN 222 or SPAN 200. Prerequisite: SPAN 221 or SPAN 299. Three credits and language lab.
255 Cultural Production and Human Rights in Latin America
Conducted in English, this interdisciplinary course will examine the history and reception of contemporary Latin American cultural production related to the defense of human rights. The course will cover controversial topics concerning repressed social group with a focus on textual and visual artifacts. This course will include the study of literature, films, documentaries, testimonies, street theatre performances and photography. The course provides a foundation for subsequent courses in Hispanic literature and culture. Three credits. Not offered 2019-2020.

299 Selected Topics
The topic for 2019-2020 is Introduction to Latin American Cultural Studies. This course will focus on the analysis of institutions, experiences, and symbolic productions as they are connected to social, political, and material relations, to which these elements contribute. The objective of this course is to introduce students to the main ideas developed at the intersection of symbolic production and living experiences of social reality in Latin America. SPAN 299 will be conducted in English, however, students who are interested in counting it towards a minor or major in Spanish will have to submit their work in Spanish. Three credits.

306 Advanced Spanish
A follow-up to SPAN 222, this course is an extensive review of the conventions that govern grammar and language usage in Peninsular and Latin-American Spanish. Students will improve their overall communicative proficiency in spoken and written Spanish. Representative texts from the target culture with an aim in developing the critical reading and writing skills at the upper-intermediate level will be discussed. Required course for a minor in Spanish. Credit will be granted for only one of SPAN 306 or SPAN 305. Prerequisite: SPAN 222 or permission of the department chair. Three credits.

315 Hispanic Civilization to 1800
Students completing this course can expect to be able to read and discuss advanced texts in Spanish. Reading and course material for this course will be drawn from texts on Hispanic civilization in the Iberian Peninsula and in the New World to 1800, with emphasis on the age of exploration and discovery. Credit will be granted for only one of SPAN 315 or SPAN 300. Prerequisite: SPAN 222 or permission of the department chair. Three credits. Not offered 2019-2020.

325 Hispanic Civilization, 1800 to the Present
Students completing this course can expect to be able to read and discuss advanced texts in Spanish. Reading and course material for this course will be drawn from texts on the social and cultural development of Spanish speaking countries from 1800 onward. The decline of Spain as a major cultural power is counterbalanced by the emergence of Spanish American countries. Their quest for independence in the 19th century gives this course a natural narrative. Credit will be granted for only one of SPAN 325 or SPAN 320. Prerequisite: SPAN 222 or permission of the department chair. Three credits. Not offered 2019-2020.

327 Spanish Language Cinema
This course, for advanced students, is an introduction to Spanish language films. It studies films and their language in a cultural, historical and geographic context. Essays, readings and film analysis are the main activities for this course. Students are advised that film screenings will be in addition to scheduled class time. Prerequisite: SPAN 222 or permission of the department chair. Three credits.

334 Spanish Composition
An intermediate to advanced level composition course designed for students with a working knowledge of the language. Students will improve their overall proficiency in written Spanish, be exposed to representative texts from the target culture appropriate to their level, and develop their reading and writing skills, attain a deeper understanding of the significant socio-cultural aspects of the Spanish-speaking world, and learn the necessary writing skills to be able to participate in higher level academic courses in Spanish. Required course for a minor in Spanish. Prerequisite: SPAN 222 or permission of the department chair. Three credits. Not offered 2019-2020.

427 Spanish and Latin-American Literature and Cinema
This course will explore films based on novels. Students will acquire an understanding of the socio-cultural factors that engendered Spanish and Latin-American novels and cinema. These socio-cultural issues pertain to, but not limited to: race, ethnicity, gender, politics, globalization and human rights. At the same time, students will acquire a critical perspective of contemporary issues addressed and incorporated in Latin-American and Spanish novels and cinema. Prerequisite: SPAN 222 or permission of the department chair. Three credits. Not offered 2019-2020.

431 Topics in Latin American Literature
This course provides a survey of Latin American literature through the works of Latin American. This course will cover a selection of key literature readings, from the early nineteenth-century to present, with an emphasis on the ways in which literature gives a voice to value systems, traditions, and beliefs. The course is intended to complement language studies, and provides a sufficient grounding for subsequent courses in Hispanic literature and culture. Conducted in Spanish. Credit will be granted for only one of SPAN 431, 374 or 464. Prerequisite: SPAN 306 or SPAN 334. Three credits. Not offered 2019-2020.

434 Topics in Spanish Literature
This course covers Spanish literature from different regions of Spain. This course presents a selection of key literature readings from the early nineteenth-century to the present in their historical context. The course is intended to complement language studies, and provides a foundation to courses in Hispanic literature and culture. Conducted in Spanish. Credit will be granted for only one of SPAN 434, 363 or 463. Prerequisite: SPAN 306 or SPAN 334. Three credits. Not offered 2019-2020.

498 Selected Topics
Three credits.

9.27 MUSIC
R. Billington, M.Mus.
K. Brunkhorst, M.Mus.
J. Hanlon, M.Mus.
P. Tynan, M.Mus.

Part Time
B. Bannerman, BA
H. Choi, MA
T. Easley, B.Mus.
K. Omae, BA
T. Roach, B.Mus.

The Department of Music offers a curriculum that focuses on jazz studies and contemporary music. Degrees are windows to graduate study and commercial applications in the field of music. In addition to academically appropriate coursework, award-winning faculty stress performance and composition as part of a well-rounded program.

General Admission Requirements
In addition to the general admission requirements listed in chapter 1, candidates for admission to the music program are required to pass an audition on a major instrument or voice; see section 1.3 c. Re-entry students must re-audition.

Music students are initially admitted to the Bachelor of Music. Entrance to the Bachelor of Music Honours will be by application and based on grades. Qualifying students will be eligible to apply to the Bachelor of Music Honours program at the end of their second year of study. Students who fail to meet the admission requirements to the Bachelor of Music programs may be eligible for the BA with Major in Music.

Placement Auditions
It has become the practice of the department in certain instrument areas to provide instruction in the first year of study as a group format. The decision to place students in group/private lessons will be made in accordance with placement auditions held during registration/orientation week and private instructor availability.

Students in Applied Performance courses will participate in regular juried exams each term.

All courses offered by the Department of Music, except the Applied Performance courses, are available to any student who satisfies the prerequisite requirement. Applied Performance courses are only available to non-music majors with the permission of the instructor and the department chair.

Applied Music Fees
Students (including non-music majors) take music lessons with our outstanding faculty. Due to the costs associated with applied music instruction, additional fees, above tuition, are applicable. A fee of $750 will be applied for registration in a 3-credit Applied Performance course. Should a student withdraw from an Applied Performance course, regular refund policies will be applicable. See http://www2.mystfx.ca finanziALS/services/.

Bachelor of Music
Typical Course Pattern:

Year 1
MUSI 101, 103, 106 or 107, 165, 166*, 181, 195, 265; 6 credits arts/science

Year 2
MUSI 203, 207, 260 or 207, 263, 276, 281, 295; one from MUSI 117, 118, 119, 217, 219, 275; 9 credits arts/science and/or open electives

Year 3
MUSI 235, 304, 306 or 307, 322, 323, 325, 381; 9 credits of arts/science and/or open electives

Year 4
MUSI 395, 406 or 407, 426, 465, 492; 18 credits of arts/science and/or open electives
The 24 credits of arts/science electives must be 2 pairs with at least 1 pair from the arts faculty.

Students are required to obtain a minimum grade of 65 in Applied Performance courses.

Students with sufficient piano skill may test out of MUSI 166 upon passing a proficiency exam. Students exempted from this course are required to complete a music elective in place of MUSI 166.

**Bachelor of Music with Honours**

Typical Course Pattern:

Year 1: MUSI 101, 103, 106 or 107, 165, 166*, 181, 195, 265; 6 credits arts/science electives

Year 2: MUSI 203, 206 or 207, 235, 263, 276, 281, 295; one from MUSI 117, 118, 119, 217, 219, 275; 6 credits arts/science electives

Year 3: MUSI 304, 306 or 307, 322, 323, 325, 381, 395; 9 credits arts/science and/or open electives

Year 4: MUSI 360, 406 or 407, 426, 465, 481, 494, 495; 9 credits arts/science and/or open electives

The 24 credits of arts/science electives must be 2 pairs with at least 1 pair from the arts faculty.

Students are required to obtain a minimum grade of 65 in Applied Performance courses.

*Students with sufficient piano skill may test out of MUSI 166 upon passing a proficiency exam. Students exempted from this course are required to complete a music elective in place of MUSI 166.

**Bachelor of Arts with Major in Music**

Students may complete a major in music in the BA program by completing 36 credits from the following, or others in consultation with the chair:

a) MUSI 101, 103;


d) A maximum of 15 credits at the 100-level (including MUSI 101, 103) are permitted in the major.

See section 4.1.3 for other degree requirements.

**Minor in Music**

Students may complete a minor in music with 24 credits from the following courses, or others in consultation with the department chair: MUSI 101 (required), 103, 106, 107, 117, 118, 119, 165, 166, 203, 206, 207, 214, 217, 219, 275, 276, 312, 322, 465. Applied Music courses (x81, x91) are also permitted, but admission to those courses is by audition only.

**Pair in Music**

A pair in music requires 12 credits with a maximum of 6 credits at the 100-level.

**101 Structure of Music**

This course covers the fundamentals and basic concepts of music theory, notation, and aural skills. The ability to read music is required. Three credits.

**103 Jazz Theory I**

The material studied in jazz theory is designed to be applied to the performance and writing of jazz. Topics include chord-scale relationships; chord construction; three-, four-, and five-part harmony; substitution and function; construction and analysis of harmonic progression. Prerequisite: MUSI 101 with a minimum grade of 60. Three credits.

**106 Vocal Ensemble I**

Participation in the StFX University Choral and Vocal Jazz Program provides students with an opportunity to develop vocal fundamentals and musicianship through the rehearsal and performance of high quality choral music from all periods and cultures. Vocal Jazz Ensembles provide a more advanced ground for ear-training and performance through the study of complex harmony in many jazz and popular styles. All ensembles are open to all university students by audition during the first week of fall classes. Two sections will be offered: section 11 is for voice majors and students participating in more than one ensemble and section 12 is for non-majors participating in one ensemble. Three credits over the full academic year.

**107 Instrumental Ensembles I: Includes Jazz Ensemble, Combos, and Percussion Ensembles**

These courses integrate materials from applied music and other courses with ensemble playing. Ensembles meet weekly; extra rehearsal sessions are expected. Coaching comes from professors and advanced students. Repertoire will reflect aspects of jazz, popular, folk, or rock music. Assessment includes performance outside of the classroom. Concert attendance in the visiting artist series is required. Attendance in weekly department master classes is required. Prerequisite: Successful audition held in the first week of September. Three credits over the full academic year.

**112 The Art of Listening**

A survey course designed to acquaint students with the core elements of music, and musical periods, genres, and styles while developing critical listening skills. Not acceptable for credit in the Bachelor of Music programs. Three credits.

**117 History of Popular Music**


**118 World Music**

A survey course covering folkloric and ethnic musical traditions from around the world: Africa, Asia, North and South America, the Caribbean, Europe. Three credits.

**119 Music in Film, Television & Video Games**

A survey course designed to acquaint students with the music used in film, televisions and video games. Exploring the diverse relationship image and music share, the course will examine important composers, works and historical reasons why different styles of music are used in support of these various media. Three credits.

**165 Jazz History**

An introductory course in improvisational style specifically pertaining to the Jazz Idiom from 1900 to present. Extensive viewing and listening will be required. Three credits.

**166 Basic Keyboarding Skills**

The piano keyboard has historically been the workshop for the study of harmony and music theory. This class introduces basic piano skills for supplementing the musicianship of non-piano majors. The course includes weekly instruction and testing on fingering patterns for scales, common voicings for all chord types, common chord progressions, melody and bass-lines; all primarily for use in jazz and popular styles of music. Some basic reading skills are also covered. Students with sufficient piano skill may test out upon passing a proficiency exam. Students exempted from this course are required to complete a music elective in place of MUSI 166. Restricted to students in the programs of Bachelor of Music and Bachelor of Arts with Major in Music. Three credits.

**181 Applied Performance I**

This course provides students with private instruction on a major applied instrument or voice. Normally restricted to students in the Bachelor of Music program, or may be taken with permission of the chair. A jury performance is required at the end of term. Credit will be granted for only one of MUSI 181 or MUSI 190. Three credits.

**191 Secondary Instrument I**

This course provides students with instruction on an instrument other than their major instrument. Prerequisite: permission of the chair and studio teacher. Three credits over the full academic year.

**195 Applied Performance II**

This course provides students with private instruction on a major applied instrument or voice. Normally restricted to students in the Bachelor of Music program, or may be taken with permission of the chair. A jury performance is required at the end of term. Prerequisite: MUSI 181 with a minimum grade of 65. Three credits.

**203 Jazz Theory and Arranging**

A continuation of Jazz Theory I, this course introduces many devices used in small group arranging; writing intros, endings, background figures, voicing, and rhythm section parts. Prerequisite: MUSI 103 with a minimum grade of 60. Three credits.

**206 Vocal Ensemble II**

A continuation of MUSI 106. Prerequisite: MUSI 106. Three credits over the full academic year.

**207 Instrumental Ensembles II**

A continuation of MUSI 107. Prerequisite: MUSI 107. Three credits over the full academic year.

**214 History and Instrumental Techniques for Guitar**

An overview of the guitar and its influence as a musical instrument in western music. Key figures, innovators, builders and performers will be studied in depth. Students will learn the basics of the instrument from its history to actual techniques on how to play. A guitar is required. Three credits.

**217 The Beatles**

The Beatles’ influence on popular music and pop culture is indelible and continuing. This course examines their lives, their music and lyrics, and their context, musically and socially, in the 1960’s and beyond. Three credits. Not offered every year.
219  **Celtic Music**
An historical and musical survey of traditional music from Scotland, Ireland, and Cape Breton, including Gaelic song, bagpipe, fiddle, and harp music, with reference to modern “Celtic” music. Cross-listed with CELT 219.

235  **Music Technology**
This course introduces the basic technology used to notate and edit music. Students will also be introduced to standard industry practices for the production of commercial music. Three credits. Not offered every year.

263  **Improvisation Fundamentals**
This class introduces students to the skills and techniques of improvisation in music. The course will focus on skill development, with an emphasis on harmonic, melodic and rhythmic accuracy in a jazz setting. Prerequisite: MUSI 103 with a minimum grade of 60. Three credits.

265  **Jazz Styles and Literature: The Bebop Era**
A course in the analysis of players, particularly Thelonious Monk, Miles Davis, Charlie Parker, and Dizzy Gillespie, and their innovations which brought the music to its present maturity. Three credits.

275  **Songwriters and Their Songs**
The course is an in-depth study of songwriters and popular songs primarily from the second half of the 20th century to present day. Songs and songwriters of different styles and periods will be explored, as well as songwriters’ approaches to lyric writing. Lyric devices, song forms, and storytelling will be explored and analyzed. Three credits.

276  **Songwriting Workshop and Production**
This course puts into practice the lyrical and musical devices from many great popular songwriters of different styles. Students will create a portfolio of songs and will make demo recordings of their material using music department technology. Students not enrolled in a music degree must demonstrate proficiency on an instrument or voice and submit a portfolio of their creative work in order to be admitted to the course. Prerequisite: MUSI 103 with a minimum grade of 60. Three credits.

281  **Applied Performance III**
This course provides students with private instruction on a major applied instrument or voice. Normally restricted to students in the Bachelor of Music program, or may be taken with permission of the chair. A jury performance is required at the end of term. Credit will be granted for only one of MUSI 281 or MUSI 290. Prerequisite: MUSI 195 with a minimum grade of 65. Three credits.

291  **Secondary Instrument II**
This course provides students with instruction on an instrument other than their major instrument. Prerequisite: permission of the chair and studio teacher. Three credits over the full academic year.

295  **Applied Performance IV**
This course provides students with private instruction on a major applied instrument or voice. Normally restricted to students in the Bachelor of Music program, or may be taken with permission of the chair. A jury performance is required at the end of term. Prerequisite: MUSI 281 with a minimum grade of 65. Three credits.

298  **Selected Topics**
The topic for 2019-2020 is The Physics of Music. Musical scales, instrument tuning, the sound of musical instruments, and many other aspects of music are based on the physics of oscillations and waves. In this course, we will discuss how oscillating strings are behind the foundations of western and eastern music; why strings sound differently when plucked at different positions; just intonation; the difference between string and brass/wood instruments; how electric instruments work, and many other topics. Cross-listed as PHYS 298. Three credits.

304  **Small Ensemble Arranging**
Combines jazz arranging and orchestration with writing assignments for small ensembles. Prerequisite: MUSI 203 with a minimum grade of 60. Three credits.

306  **Vocal Ensemble III**
A continuation of MUSI 206. Prerequisite: MUSI 206. Three credits over the full academic year.

307  **Instrumental Ensembles III**
A continuation of MUSI 207. Prerequisite: MUSI 207. Three credits over the full academic year.

312  **Women and Popular Music**
A critical examination of the roles of the singing performer from the later 19th century to present through the development and changes of different musical styles and cultural context. Singer/audience relationships are explored as well as vocal lineage and the musical contributions of key artists. The course also surveys key singers over the last 100 years, through examining ideas fame, artistry, cultural/political significance race, and gender. Cross-listed as WMGS 312. Three credits.

322  **Music History I: Medieval, Renaissance, and Baroque**
An overview of musical styles and forms from the Middle Ages to the 18th century. This course addresses the broad spectrum of musical contributions that allowed for the development of Western music. The ability to read music is required. Credit will be granted for only one of MUSI 322 or MUSI 315. Prerequisite: MUSI 203 with a minimum grade of 60 or permission of the chair. Three credits.

323  **Music History II: Romantic and 20th Century**
An overview of musical styles and forms from the 18th to 20th centuries. This course addresses the broad spectrum of musical developments of Western music. Credit will be granted for only one of MUSI 323 and MUSI 316/416. Prerequisite: MUSI 203 with a minimum grade of 60 or permission of the chair. Three credits.

325  **Jazz Composition**
Designed to provide a foundation in the techniques of jazz composition with an in-depth study of modal harmony and its applications. Prerequisite: MUSI 203 with a minimum grade of 60. Three credits.

360  **Advancing Improvisation**
A continuation of MUSI 263 with a focus on the melodic, harmonic, and rhythmic vocabularies of jazz genres of 1960’s forward and its associated repertoire. Restricted to students in the Bachelor of Music Honours program or with permission of the chair. Prerequisite: MUSI 263. Three credits.

381  **Applied Performance V**
This course provides students with private instruction on a major applied instrument or voice. Normally restricted to students in Bachelor of Music programs, or may be taken with permission of the chair. A jury performance is required at the end of term. Credit will be granted for only one of MUSI 381 or MUSI 390. Prerequisite: MUSI 295 with a minimum grade of 65. Three credits.

385  **Selected Topics I**
Three credits.

386  **Selected Topics II**
Three credits.

391  **Secondary Instrument III**
This course provides students with instruction on an instrument other than their major instrument. Prerequisite: permission of the chair and studio teacher. Three credits over the full academic year.

395  **Applied Performance VI**
This course provides students with private instruction on a major applied instrument or voice. Normally restricted to students in Bachelor of Music programs, or may be taken with permission of the chair. A jury performance is required at the end of term. Prerequisite: MUSI 381 with a minimum grade of 65. Three credits.

406  **Vocal Ensemble IV**
A continuation of MUSI 306. Prerequisite: MUSI 306. Three credits over the full academic year.

407  **Instrumental Ensembles IV**
A continuation of MUSI 307. Prerequisite: MUSI 307. Three credits over the full academic year.

426  **Advanced Arranging/Orchestration**
This course will focus on advanced composition and arranging concepts using and expanding on the techniques gained in previous theory and arranging classes. Topics include orchestration, formal analysis, examining contemporary writers, and writing for various ensembles. Credit will be granted for only one of MUSI 426 and MUSI 420. Prerequisite: MUSI 304 with a minimum grade of 60. Three credits.

465  **Jazz Styles and Literature**
A seminar class that examines the historic so-called “ECM Explosion” of the late 60’s, 70’s, 80’s and the modern European influence. Important musicians and their contributions to improvised music will be examined. Current Canadian jazz and improvising musicians will also be covered. Three credits.

481  **Applied Performance VII**
This course provides students with private instruction on a major applied instrument or voice. Restricted to students in the Bachelor of Music Honours program. A jury performance is required at the end of term. Credit will be granted for only one of MUSI 481 or MUSI 490. Prerequisite: MUSI 395 with a minimum grade of 70. Three credits.
The Rankin School of Nursing offers a modern curriculum in the Bachelor of Music program. No credit.

**Directed Study**

In consultation with the department, students may undertake a directed study in an approved area of interest. See section 3.5. Three or six credits.

**NURSING**

- **Faculty**
  - M. Alex, MN, RN
  - M. Amott, MN, RN
  - D. Halpern, Ph.D., RN
  - P. Hansen-Ketchum, Ph.D., RN
  - P. Hawley, Ph.D., RN (on leave)
  - S. Lukeman, MN, RN
  - C. MacDonald, Ph.D., RN
  - E. McGibbon, Ph.D., RN
  - J. Purvis, MN, RN
  - D. Sheppard-LeMoine, Ph.D., RN
  - J. van Wijlen, RN, RN
  - J. Whitty-Rogers, Ph.D., RN

- **Nurse Educators**
  - D. Cabrera, MN, RN
  - M. Chisholm, B.Sc.N., RN (on leave)
  - D. Connolly, MN, RN
  - J. Daviau, B.Sc.N., RN
  - D. Delorey, M.Ad.Ed., RN
  - A.M. Dobbin, M.Ed., RN
  - Y. Fraser, M.Ed., RN
  - K. Kenny, M.Ed., RN
  - F. Lepage, MN, RN
  - S. Livingston, B.Sc.N., RN
  - L. Macdonald, M.Ad.Ed., MN, RN
  - A. MacDonnell, B.Sc.N., RN
  - P. MacKenzie, B.Sc.N., RN
  - M. MacNeil, M.Ad.Ed., RN
  - J. Mbogua, M.Ed., RN
  - W. Panagopoulos, M.Ed., RN
  - S. Wood, M.Ad.Ed., RN

- **Professor Emerita**
  - A. Gillis, Ph.D.

The Rankin School of Nursing offers a modern curriculum in the Bachelor of Science in Nursing program that supports best practice pedagogies and practice experience. The curriculum has an emphasis on concepts across the health-illness continuum, the life span, and health practice settings. Concepts are integrated horizontally and vertically across the curriculum and are the foci of courses. Competencies provide a guiding framework to describe a progression of learning about concepts and nursing practice from a basic, to an intermediary, to a final advanced level that culminates in knowledge, skills and attributes expected of an entry-level nursing graduate.

There are three options for completion of the B.Sc. in Nursing:

- a) The four-year option is completed over four academic years (Sep-Apr) and includes 8 semesters of study. This option primarily targets students entering from high school. During semesters 1 (Sep-Dec) and 2 (Jan-Apr), students will complete a required 39 credits of arts and science. During semesters 3 through 8, students will be primarily immersed in nursing courses, and complete three credits of electives in each of semesters 6 and 7.

- b) The accelerated two-year option primarily targets students who have completed the university-level entrance requirements for nursing. Beginning in January, complete six continuous semesters over 24 months. During semesters 3 through 8, students will be primarily immersed in nursing courses, and complete three credits of electives in each of semesters 6 and 7. Graduation is at the December ceremony.

- c) The LPN to B.Sc. in Nursing Pathway is a bridging program designed for licensed practical nurses to earn credit for their education and experience. Students who are successful in this program will join the accelerated option in semester 4 in May (refer to b) above.

**Progression Requirements**

The four-year option, students must successfully complete all courses in semesters 1 and 2 before progressing to semester 3. An overall average of 65 is required in the mandatory non-nursing courses: BIOL 115, BIOL 151, BIOL 152, ENGL 111 and STAT 101.

- a) In all subsequent semesters, students must complete all mandatory nursing courses in a semester in order to progress to the next semester of the program. Progression in the program requires a minimum grade of 65 in each nursing course (including nursing electives). An overall average of 65 in a semester is required to progress into the next semester.

- b) Students must be prepared to participate in nursing practice rotations in sites other than their location of residence.

- c) Students will be expected to participate in nursing practice rotations scheduled at various times including evenings, nights, and weekends.

- d) Students who fail two courses (the same non-nursing or nursing course twice, or two a combination of a different non-nursing or nursing courses including a nursing practice failure) will result in suspension from the program for a minimum of 2 semesters. Students are permitted to reapply to the program. Re-admission to the program is not guaranteed. Re-admission for the next academic year will be at the discretion of the Dean of Science in consultation with the Assistant Director and/or Director of the School of Nursing and seat availability. If the student is re-admitted, subsequent failure in any course (including non-nursing and nursing courses) will result in dismissal from the program. B.Sc.Nursing students who have been dismissed twice will not be permitted to reapply for admission.

- e) Performance in nursing clinical courses will be evaluated based on a combination of assignments, the development of plans of care and an evaluation of clinical practice performance. A grade of pass/fail will be awarded for the clinical practice portion of the course. Students must successfully complete the clinical practice in order to receive credit for the course.

- f) Students are required to make up missed nursing practice time. Extended absences for nursing practice are evaluated by the Assistant Director, School of Nursing.

- g) Current certification in standard first aid and HCP (CPR) is required; see 1.3 g. Students in the nursing program are responsible for re-certification yearly as necessary.

- h) All students must be screened through the child abuse registry of Nova Scotia. Documentation is required; see 1.3 g. Students are required to disclose to the Assistant Director, School of Nursing, any criminal record, including child abuse, that has occurred subsequent to admission.

**Professional Conduct**

In all nursing practice situations students are expected to be safe, ethical practitioners. They must perform in accordance with the legal, ethical, moral and professional standards set out in the profession’s Code of Ethics for Registered Nurses (CRNNS, 2008), the Entry-Level Competencies for Registered Nurses (CRNNS, 2013), the Standards of Practice for Registered Nurses (CRNNS, 2017) and the StFX Rankin School of Nursing graduate learning outcomes. Student nurses are expected to act in a manner comparable to the average prudent student nurse. Failure to act in this manner will managers of health care facilities, nurses, and educators. This may result in dismissal from the program. Prospective students are advised that the CRNNS, the licensure body for nurses, requires disclosure of Vulnerable Sector/Criminal records check prior to registration. Those considered a risk to others may not be considered for registration by the CRNNS. The StFX Rankin School of Nursing requires disclosure of Vulnerable Sector/Criminal records check and reserves the right to deny entry to the program based on criminal record. Failure to provide requested documentation will prevent progression and/or result in dismissal from the program. The results of students'
Vulnerable Sector/Criminal Record Check and child abuse registry screens are reviewed. In the event of a problematic result, a student may not be permitted to progress in the nursing program. New graduates must be registered in the same province as their educational program prior to registering elsewhere.

### Practical Skills Performance

The ultimate goal of nursing education is to prepare safe, competent, knowledgeable, and ethical practitioners of nursing. Practical testing of skill performance is required to ensure that students are able to perform nursing skills safely and competently.

This academic regulation provides direction to students on the expectations related to testing of nursing skills. Detailed information is available on the School of Nursing website: http://www2.mystfx.ca/nursing/rankin-school-nursing-policies-and-guidelines

### Costs

In addition to the university fees listed in section 2.1, expenses include room and board for off-campus placements during consolidated experiences; fees for field trips, practice experiences, uniforms, nursing books, vsim, stethoscopes, first aid and HCP (CPR) certification and re-certification; exam fees including preparatory resources (HESI) for NCLEX and licensing; and travel costs to and from practice areas while in the program.

Any nursing student who has not provided official proof of up-to-date immunization, Tuberculin Skin Testing, and other required documents, will not be permitted to practice in the clinical area. A charge of $150 will also be added directly to the students account and credit for the associated course will not be granted.

### B.Sc. in Nursing

Four-year program

| Semester 1 | BIOL 151; CHEM 151; ENGL 111; PSYC 155; STAT 101; 3 credits |
| Semester 2 | BIOL 115, 152; HNU 135; RELS 117 or PHIL 135; 3 credits |
| Semester 3 | NURS 206, 207, 208, 209 |
| Semester 4 | NURS 231, 232, 233, 234 |
| Semester 5 | NURS 306, 307, 308, 309 |
| Semester 6 | NURS 332, 333, 334, 3 credits NURS or open elective |
| Semester 7 | NURS 406, 408, 409, 3 credits NURS or open elective |
| Semester 8 | NURS 440 |

Accelerated option

| Semester 3 | NURS 206, 207, 208, 209 |
| Semester 4 | NURS 231, 232, 233, 234 |
| Semester 5 | NURS 306, 307, 308, 309 |
| Semester 6 | NURS 332, 333, 334, 3 credits NURS or open elective |
| Semester 7 | NURS 406, 408, 409, 3 credits NURS or open elective |
| Semester 8 | NURS 440 |

LPN to BSc.N. Pathway

| Semester 4 | NURS 231, 233, 234 |
| Semester 5 | NURS 306, 308, 309 |
| Semester 6 | NURS 332, 333, 334, 3 credits NURS or open elective |
| Semester 7 | NURS 406, 408, 409, 3 credits NURS or open elective |
| Semester 8 | NURS 440 |

### B.Sc. in Nursing with Advanced Major

The electives offered during semesters 6 and 7 provide an opportunity for students to complete the advanced major program. Students may choose to do an advanced major study and practice in a focused area of health starting in semester 6 (specialty nursing elective) and completed by the end of semester 7 (second specialty nursing elective and exploratory practice course).

### B.Sc. in Nursing with Honours

The electives offered during semesters 6 and 7 provide an opportunity for students to complete a honours degree. Students may choose to do a honours thesis in a focused area of health that is related to either their supervisor’s research or a research project of their own interest. The research would commence in semester 6 (research-related elective or independent study) and be completed by the end of semester 7 (exploratory practice course used to complete research).

### Nursing Core Courses

#### 206 Foundations of the Discipline & Profession of Nursing

Students learn about nursing as a profession, the role of the professional nurse and the evolution of nursing. Exploration of professional identity, comportment, and moral, altruistic, legal, ethical, and regulatory standards and principles are addressed. Concepts of collective collaboration, leadership and evidenced-informed practice and their core competences are introduced. Introduction to learning plans and portfolio development are also included. Prerequisite: Successful completion of all first-year courses. Three credits.

#### 207 Introduction to Human Functioning, Homeostasis and Nursing Therapeutics

Students learn about select human body structures and functions and adaptive responses that support health. Students gain foundational requisite skills that promote health, prevent illness, manage disease processes, restore optimal function, and alleviate suffering for persons across the lifespan. The course is divided into three modules: homeostasis; pharmacology; and communication and nursing informatics. Three-hour supervised lab practice is a required component for all course modules and a clinical application. Prerequisite: Successful completion of all first-year courses. Six credits.

#### 208 Foundations of Health and Health Systems

Students gain a broad understanding of health and wellness and how they are created in society, with emphasis on the determinants of health and social justice. A focus is on the Canadian health care system and concepts of person-centered care, primary health care, cultural competence, critical thinking, and population health promotion including person-centered teaching and learning. The role of theory and evidence, including best practice guidelines to support the care of healthy individuals, populations, and communities is introduced. Community practice application. Prerequisite: Successful completion of all first-year courses. Three credits.

#### 209 Introduction to Health Assessment and Clinical Nursing Practice

Caring and the nursing process are introduced, with a focus on health history and development of plans of care. Students gain basic psychomotor skills to assess normal body structures and functions and to conduct a comprehensive physical exam. Students apply professional and ethical practice, communication and relationship building skills, and evidence and best practice guidelines and critical thinking in the care of select healthy persons across the life course through a required three-hour supervised lab practice per week and clinical applications. Prerequisite: Successful completion of all first-year courses. Three credits.

#### 231 Fundamentals of Research and Collective Collaborative Practice

Students learn the fundamentals of research and the application of evidence in nursing and health care. The research process and research methodologies are examined, with an emphasis on critically reading and interpreting research evidence, selecting best practice guidelines, and making evidence-informed decisions. Collaborative approaches to research and knowledge translation strategies are introduced. Students also learn the role of the nurse within collaborative teams and are introduced to the concepts of leadership, management, models of care, health team member roles, and care coordination. Prerequisites: Successful completion of all semester three courses. Three credits.

#### 232 Alterations in Health and Nursing Therapeutics I

Students are introduced to pathophysiology and disease processes. The focus is on select human structures and functions that support health and well-being including fluid and electrolyte balance, acid-base balance, thermoregulation, oxygenation, perfusion, and comfort/pain. Reproductive health and sexuality are introduced. This course builds on pharmacological applications of select medication routes, calculations, and medication safety. Complementary therapeutics to manage pain is emphasized. More advanced communication skills are a focus with emphasis on communication challenges. Three-hour supervised lab practice is a required component for the course and clinical applications. Prerequisites: Successful completion of all semester three courses. Three credits.

#### 233 Care of Families in Transition: Childbearing and Childrearing Years

Students are introduced to the care of families in transition during the childbearing and childrearing years. Emphasis is on theories, concepts and relational practice related to family, maternity, and pediatric nursing practice. Understanding ethical dilemmas and legal issues and the application of cultural competence and safety and evidence-based practice for care of families at various transition points is a focus. The course is divided into three modules: family nursing and family-centered care; maternal-newborn nursing; and nursing of children and adolescents. Prerequisites: Successful completion of all semester three courses. Six credits.

#### 234 Integrating Nursing Roles & Practices II: Care of Childbearing & Childrearing Families

This integrated practice experience focuses on the care of families during the childbearing and childrearing years. Principles of primary health care and the nursing process are applied. Students integrate psychomotor skills and techniques and mental health assessments. Students also apply professional and ethical practice, communication, relationship building skills, evidence-based practice and best practice guidelines, and critical thinking and judgment to work effectively with families,
groups, and various health care teams/members. Includes clinical applications.
Prerequisites: Successful completion of all semester three courses. Three credits.

265 The Registered Nurse and Evidence Informed Practice
This pathway course for LPN to BScN students introduces students to inquiry and scholarship, ways of thinking and reasoning, global health and the use of theory to inform nursing practice. Concepts of theory, critical thinking, clinical judgment, evidence-informed practice, population health promotion, culture, and vulnerability are covered. The focus is on a broad understanding of health and wellness and how they are created in society, with emphasis on the determinants of health and social justice. Three credits.

306 Advanced Nursing Leadership, Management and Evidence-Informed Practice
Students learn the leadership and management roles of the nurse within collaborative teams. Concepts of power dynamics, management, human resource management, principles of assignment and delegation, conflict resolution, and program planning and evaluation are emphasized. Leadership is explored within the complexities of today's public policy systems and profession based systems and organizations. Strategies to critique and facilitate the use of evidence including research and practice guidelines for evidence-informed nursing and collaborative practice are examined. Prerequisites: Successful completion of all semester four courses. Three credits.

307 Alterations in Health & Nursing Therapeutics II
Students build on concepts of pathophysiology and disease and injury processes gained from NRS 232. The focus is on select human structures and functions that support physical and mental health and well-being including intracranial regulation, neurological, and sensory perception. Attention is given to pathophysiology and biological processes of cancer. Pharmacological applications and nursing therapeutics, including complementary therapies, related to major acute physical and mental health conditions for persons and families across the lifespan are a focus. Three-hour weekly supervised lab practice is a required component for the course. Clinical applications. Prerequisites: Successful completion of all semester four courses. Three credits.

308 Care of Persons Experiencing Acute, Episodic & Life-Threatening Mental and Physical Illness across the Life Span
Students learn about acute, episodic, and life threatening mental and physical illness for stable and unstable persons across the lifespan. Attention is specifically given to select cognitive, mood and affect, social functioning disorders, and psychiatric emergencies as well as select cardio-vascular, circulatory and hemolytic function, digestive and gastrointestinal, endocrine and metabolic, respiratory and gas exchange, and reproductive disorders. Understanding ethical dilemmas and legal issues and the application of cultural competence and safety and evidence-informed practice is a focus. The course is divided into three modules: mental health illness; physical health illness; and illness during pregnancy and childhood. Prerequisites: Successful completion of all semester four courses. Six credits.

309 Integrating Nursing Roles & Practices III: Care of Persons Experiencing Acute, Episodic, and Life Threatening Physical and Mental Health Challenges
This integrated practice experience focuses on the care of stable and unstable persons experiencing acute, episodic, and life-threatening physical health challenges or injuries and mental health issues. Principles of primary health care and the nursing process are applied. Students have opportunities to strengthen previous skills as well as integrate new psychomotor skills and techniques including professional and ethical practice, communication, evidence-based practice and best practice guidelines, and critical thinking and judgment. Includes clinical applications. Prerequisites: Successful completion of all semester four courses. Six credits.

332 Advanced Nursing Therapeutics for Care of Persons Experiencing Complex Multi-System Health Challenges
Students apply advanced critical thinking and judgment and apply the nursing process in care of persons experiencing complex multi-system physical and mental health problems across the life span. Emphasis is on the interaction among multiple developmental, biophysical, psychosocial, spiritual, and sexual functions and structures for persons experiencing complex co-morbidities and chronic illness. Students build their understanding of health assessment, health education, self-management, support, and restoration and apply advanced nursing therapeutics including pharmacological and complementary therapies. Three-hour weekly supervised lab practice is a required component for the course and a clinical application. Prerequisites: Successful completion of all semester five courses. Three credits.

333 Care of Persons Experiencing Acute, Episodic & Life-Threatening Illness across the Life Span: Physical Health II
Students build their competence in the care of persons experiencing acute, episodic and life-threatening illness with emphasis on the aging population. Students apply theories related to select common current and emerging acute, episodic and life-threatening illness. Concentration is given to biophysical concepts for select genital-urinary, immune and lymphatic, integumentary, muscular-skeletal, and neurological and sensory disorders. Students advance their application of evidence and best practice guidelines. Prerequisites: Successful completion of all semester five courses. Six credits.

334 Integrating Nursing Roles & Practices IV: Care of Persons Experiencing Complex Co-Morbidities and Chronic Health Challenges
During this integrated practice experience, students focus on the care of persons experiencing complex multi-system physical and mental health challenges (co-morbidities and chronic illness) and caring for multiple persons. Principles of primary health care and the nursing process are applied. Opportunities to strengthen previous theoretical application, critical thinking and judgment, evidence-informed practice, communication skills, and therapeutic skills through the care of persons and families experiencing complex co-morbidities and chronic physical and mental illness and in the care of multiple persons. Includes clinical applications. Prerequisites: Successful completion of all semester five courses. Three credits.

406 Preparing for Professional Role Transition
Students critically examine local and global contemporary issues in nursing, nursing education and delivery of health care. Students also critique theories that guide nursing practice, knowledge development approaches in nursing, and health information and communication technologies. Special emphasis is on transitioning from student to beginning practitioner role and on professional career development that includes values clarification, professional image, professional socialization, nursing licensure and regulation, and inter-professional practice. Prerequisites: Successful completion of all semester six courses. Three credits.

408 Advanced Population & Public Health
Students critically examine population and public health issues, with a particular focus on select local and global communicable diseases, chronic diseases, injuries, population emergencies and disasters, and millennium development goals. Understanding how nurses work inter-disciplinarily and inter-sectorally to prevent and address complex and current local and global population health issues is a focus. Emphasis is also on various roles of the inter-disciplinary team to influence determinants of health and systems change. Course open to non-nursing students with permission of the Assistant Director of the Rankin School of Nursing. Prerequisites: Successful completion of all semester six courses. Three credits.

409 Exploratory Nursing Practice
Students select a focused area of nursing from a variety of practice, policy, or research settings in order to integrate and refine competencies in professional and ethical practice, theoretical and critical thinking, leadership and inter-professional collaboration, application of evidence-informed practice, and psychomotor skills. Students pursuing a concentration in nursing practice are placed in practice settings related to their concentrated area of study. Includes clinical applications. Prerequisites: Successful completion of all semester six courses. Six credits.

440 Transition to Nursing Practice: Consolidation
During this final practice experience, students consolidate nursing knowledge and entry-to-practice competencies. The focus is the transition from the student to baccalaureate graduate registered nurse role through a mentored experience. Students assume responsibility for learning and increasingly complex assignments as they near the end of their baccalaureate education. Application of relevant evidence and best practice guidelines is required. Includes 480 hours of combined simulation and clinical practice experience. Prerequisites: Successful completion of all semester seven courses. Fifteen credits.

Nursing Electives

364 Social Justice and Health
Examines the relationship between injustice and health outcomes nationally and globally. Core social justice ideas are analyzed, including the cycle of oppression, distinctions between equality and equity, and achievement of human rights as an ethical imperative. Modern and historical contexts are explored in key justice related areas: corporatization of health care; policy-created poverty; worldwide water crisis; links between planetary health and human health; and global conflict as a key driver of injustice. Learning includes analysis of selected award winning films. Cross listed with WMGS 364. Three credits.
Certificate in Gerontological Nursing
A 12-credit certificate program in nursing gerontology is offered by distance education to graduates of nursing diploma programs. The required courses are NURS 115, 245, 425, 488.

For information on this limited enrolment program, write Distance Nursing, Continuing Education, StFX University, Antigonish, NS, B2G 2W5 or phone 902-867-5190 or 1-800-565-4371.

Certificate in Continuing Care
A 12-credit certificate course program in continuing care is offered by distance education to graduates of nursing diploma programs. The required courses are NURS 115, 135, 205, 425.

For information on this limited-enrolment program, write Distance Nursing, Continuing Education, StFX University, Antigonish, NS, B2G 2W5 or phone 902-867-5190 or 1-800-565-4371.

115 Health Teaching and Learning
In contrast to health protection and illness prevention, health promotion is a broad and holistic concept. This course explores the concept of health promotion; the nurse’s role in health promotion; the teaching-learning process; population health; social action and justice; the socio-cultural, economic, and political factors that influence health and behaviour. Three credits.

135 Contemporary Issues in Nursing
The foundation for all subsequent nursing courses, this class explores the evolution of nursing as a profession, including its theoretical and philosophical bases. Topics include Orem’s self-care theory; legal and ethical issues; health care reform; the image of professional nursing; changing health care priorities. Three credits.

201 Community Mental Health Nursing I
This required theoretical course provides a comprehensive introduction to community mental health nursing. The course focuses on changes in mental health nursing and the shift away from the acute care setting to the community. Emphasis is placed on prevention and health promotion in improving mental health outcomes. This course explores the foundations of mental health nursing practice and prepares the student for further study in mental health. Three credits.

202 Community Mental Health Nursing II
Examines the theory of and concepts in mental illness, treatment regimens, and nursing interventions. Students will apply mental health nursing principles to specific clinical disorders, building on the foundations of practice explored in NURS 201. Three credits.

205 Community Health Nursing
Explores community health nursing practice from a Canadian perspective and the role of the community health nurse in the context of a changing health care system. Topics include population health; community assessment; epidemiology; and communicable disease control. Three credits.

237 Nursing Concepts in the Care of Women, Children and Families
This course encompasses a contemporary overview of the health of women, children and families during the childbearing and childrearing years from a wellness-focused nursing perspective. Select topics and issues related to health promotion and illness prevention within this population will be explored in the context of the various social, political, cultural and economic factors which impact the health and wellness of women, children and families. Three credits.

245 Aging and the Older Adult
This course covers the process of growing older with reference to theories on universal aging. Students will learn to improve the function, quality of life, and self-care abilities of the elderly well, to assist them in maintaining independence. Topics include aging-related changes; the role of the family and other aggregates; how elderly adults define and promote their health; the use of community resources. Three credits.

248 Basic Concepts of Pathophysiology
This course provides the student with an understanding of the basic concepts of pathophysiology, and builds upon a foundational knowledge of anatomy and physiology to meet the challenges presented in the study of disease process mechanisms. Credit will be granted for only one of NURS 248 or NURS 473.
Prerequisites: BIOL 251, 252; NURS 115, 135. Three credits.

300 Research Methods
Introduces students to research methods used in nursing science. Topics include conducting and appraising research; concepts of research design, implementation, analysis, and interpretation; descriptive and inferential statistics; quantitative and qualitative research design; research ethics and bias. Credit will be granted for only one of NURS 300 and NURS 310. Six credits.
330 Legal and Ethical Issues in Nursing
Examines the moral and ethical implications of various practices in the field of health care as they affect human life and the basic dignity of the person. Also treats the moral, ethical, legal and theological issues raised by recent developments in the life sciences. Six credits.

405 Nursing of Adults I
Theory and clinical framework for providing comprehensive care to adults with acute and chronic health problems related to immune system dysfunction, cancer and other selected conditions. Three credits.

415 Nursing of Adults II
Theory and clinical framework for working with individuals at-risk for or experiencing chronic health issues related to diseases of the nervous, endocrine and sensory systems, among others. Nursing leadership component. Three credits.

425 Comprehensive Health Assessment
This theory and practice course focuses on a systematic assessment of the well adult. Students will incorporate health history and physical examination of body systems in identifying self-care requisites for a diverse population. Three credits.

483 Hospice Palliative Care Nursing
Provides an overview of theories, current practices, and relevant issues in the field of palliative care, with a focus on the nurse’s role. In line with the philosophy of nursing at SFX, students will explore concepts of self-care and health promotion as they relate to quality of life issues. Restricted to third- and fourth-year B.Sc. Nursing students and post-RN students. Three credits.

488 Challenges in Aging
Using nursing and sociological perspectives on aging, students will explore holistic care of the older client, including current gerontological issues and trends, and their implications for nursing. This course may be used as an open or NURS elective by third- or fourth-year B.Sc.Nursing students. Three credits.

490 Forensic Nursing
Forensic nursing refers to the application of nursing science and knowledge to legal proceedings. This course will examine the application of nursing science to the investigation and treatment of trauma, death, violent or criminal activity, and traumatic accidents within the clinical or community institution. This course may be used as an open or NURS elective by third- or fourth-year B.Sc.Nursing students. Six credits. Offered in on-line delivery format.

494 Leadership and Management in Nursing
Examines nursing leadership theories and management models, and their relationship to client care. The course explores the changing roles and expectations for registered nurses as leaders in the health care system. Three credits.

497 Nursing Informatics
Teaches the knowledge and skills necessary to ensure that computers have a positive impact on the nursing environment and delivery of patient care. Students learn computer concepts and terms, and examine ways computers can enhance nursing practice, education, administration, and research. Trends and issues related to the use of computers in nursing are explored. Three credits.

499 Independent Study and Practice
This nursing elective is designed to give registered nurses credit for a hospital-based course or program. Courses are evaluated for credit on an individual basis by the distance nursing education committee. Three credits.

9.29 PHILOSOPHY
D. Al-Maini, Ph.D.
S. Baldner, Ph.D.
C. Byrne, Ph.D.
L. Groarke, Ph.D.
W. Sweet, D.Ph., FRSC

What is the purpose of our existence? How do we discover the principles which ought to guide our actions? Can we prove that God exists? Philosophy is the reasoned study of these and other questions of fundamental importance. The study of philosophy also introduces students to the main currents of intellectual history, provides a basis for critically understanding their own ideas, and develops analytical reasoning skills.

Students planning the major, advanced major, honours or honours with subsidiary degree in this field are required to consult the department chair about the program of study. Degree requirements are outlined below and at the department’s website at https://www2.mystfx.ca/philosophy

Note: PHIL 100 is normally a prerequisite for advanced courses; exceptions are PHIL 213, 251, 331 and 335.

Major Program
Of the 36 credits of philosophy required for the major, a minimum of 12 credits must be in the history of philosophy, with at least 6 credits from the ancient or medieval periods and at least 6 credits from the modern or contemporary periods. A minimum of 12 credits in the major must be at the 300/400 level.

Advanced Major Program
Of the 36 credits of philosophy required for the advanced major, a minimum of 12 credits must be in the history of philosophy, with at least 6 credits from the ancient or medieval periods and at least 6 credits from the modern or contemporary periods. A minimum of 18 credits in the major must be at the 300/400 level, including 6 credits of 400-level senior seminar coursework. Advanced major students are also required to complete a senior research paper. In the case of a joint advanced major in which philosophy is subject B, the senior research paper is completed only in subject A.

Honours Program
Of the 60 credits of philosophy required for the honours program, a minimum of 18 credits must be in the history of philosophy, with at least 6 credits from the ancient or medieval periods and at least 6 credits from the modern or contemporary periods. For students considering graduate study in philosophy, 6 credits in logic (PHIL 251, PHIL 342) are very strongly recommended. A minimum of 33 credits in the honours courses must be at the 300/400 level, including 6 credits of 400-level senior seminar coursework and the honours thesis.

Honours with Subsidiary Program
When philosophy is the honours subject: Of the 48 credits of philosophy required for the honours program, a minimum of 18 credits must be in the history of philosophy, with at least 6 credits from the ancient or medieval periods and at least 6 credits from the modern or contemporary periods. A minimum of 27 credits in the honours courses must be at the 300/400 level, including 6 credits of 400-level senior seminar coursework and the honours thesis. Six credits in logic (PHIL 251, 342) are strongly recommended.

When philosophy is the subsidiary subject: Of the 24 credits of philosophy required for the subsidiary, a minimum of 12 credits must be in the history of philosophy, with at least 6 credits from the ancient or medieval periods and at least 6 credits from the modern or contemporary periods. A minimum of 12 credits in the subsidiary must be at the 300/400 level, including 6 credits of 400-level senior seminar coursework.

When religious studies is the honours or the subsidiary subject with philosophy, PHIL 245 will normally be included in the course pattern.

Humanities Colloquium
The humanities colloquium is an optional and interdisciplinary way of studying three first-year courses, usually ENGL 100, HIST 101 and 102, and PHIL 100. See section 4.4 for further information.

Ethics, Politics, and Law
The departments of philosophy and political science offer a concentration in ethics, politics, and law to students doing a joint degree in these two departments. Students following this concentration will take courses in ethics, critical thinking, the philosophy of law, and two of the four sub-fields of political science, namely Canadian politics, political philosophy, comparative politics, and international relations. Joint degrees in philosophy and political science can be done as an honours degree in one with a subsidiary in the other, a joint advanced major, or a joint major. This concentration will be of particular interest to students interested in a pre-law program. Interested students may consult the chairs of the two departments for additional advice on course selection.

The following courses must be included in the degree pattern: PHIL 251, 331, 372; one of PHIL 201, 202, 371; 15 credits from PSCI 306, 308, 321, 325, 335, 343, 344, 353.

100 Introductory Philosophy
An introduction to the study of philosophy that looks at major thinkers in the history of western philosophy as well as the fundamental and enduring questions they raised. Among the philosophers considered are Socrates, Plato, Aristotle, Aquinas, Descartes, and Hume. The questions raised by these thinkers include: What is it to think rationally and critically? Can we demonstrate the existence and nature of God? Can we discover any ethical principles that should guide our actions? What are the limits of human knowledge? Six credits.

135 Healthcare Ethics: Theories, Values, & Practice
This course introduces students to ethical reasoning about problems in healthcare. It does so by exploring four fundamental philosophical theories (Virtue Ethics; Contractarianism & Rights; Duty-Based Ethics; and Consequentialism), presenting the corresponding values in healthcare workers, and showing how these principles and values can be applied to specific cases. Restricted to students in the B.Sc. Nursing program. Three credits.
201 **Ancient & Medieval Political Thought**
This course will examine the political philosophies of Plato, Aristotle, Augustine, and Aquinas through a careful reading of primary texts. The relevance of these philosophies will be evaluated critically with a view to their contemporary relevance. Credit will be granted for only one of PHIL 201 or PSCI 200. Cross-listed as PSCI 201. Prerequisite: PHIL 100 or permission of the instructor. Three credits.

202 **Modern Political Philosophy**
A critical text analysis of modern philosophers such as Machiavelli, Hobbes, Locke, Rousseau, Kant, Mill, and Marx, with emphasis on their political philosophy. This course will stress the continuing relevance of these thinkers to current policies and the search for a just society. Credit will be granted for only one of PHIL 202 and PSCI 200. Cross-listed as PSCI 202. Prerequisite: PHIL 100 or permission of instructor. Three credits.

213 **Philosophy of Science**
Examines the methodology of the natural and social sciences, including the logic of scientific discovery and experimental testing, the confirmation of hypotheses, and the nature of scientific explanation. Credit will be granted for only one of PHIL 213 or PHIL 210. Three credits.

231 **Human Nature I: Consciousness & Epistemology**
A philosophical investigation of what it means to be human. Topics include: relation of mind and body; the problem of soul and body; immortality; free will; consciousness; and human knowledge. Credit will be granted for only one of PHIL 231 and PHIL 230. Prerequisite: PHIL 100 or permission of instructor. Three credits. Next offered 2020-2021.

232 **Human Nature II: Freedom and Responsibility**
A philosophical investigation of what it means to be human. Topics include: human emotions, love, friendship, and their relation to moral virtues; freedom and emotions; the basis for morality in human nature. Credit will be granted for only one of PHIL 232 and PHIL 230. Prerequisite: PHIL 100 or permission of instructor. Three credits.

245 **Philosophy of Religion**
Explores the philosophy of religion, including different concepts of God with emphasis on the Judeo-Christian tradition; arguments for the existence of God; classical and modern challenges to belief in God. Issues such as 'life after death', miracles, religious experience, and the concept of prayer may also be discussed. Cross-listed as RELS 245. Credit will be granted for only one of PHIL 245 or PHIL 240. Prerequisite: PHIL 100 or RELS 100 or 111/112 or permission of the instructor. Three credits.

251 **Critical Thinking**
What is an argument? How do arguments work? What makes some arguments better than others? This course will equip students to recognize and analyze arguments as they occur in a variety of contexts such as media editorials, speeches, textbooks, argumentative essays, and philosophical texts. To accomplish this, we will study the components of good arguments and techniques for criticizing and constructing arguments. Students will also be introduced to propositional logic. Prerequisite: normally at least one semester of successful university study. Three credits.

281 **Aesthetics**
Is beauty in the eye of the beholder? Is it necessary or possible to define art? What is the nature of aesthetic experience? This course will examine several classical and modern theories of art and beauty selected from such writers as Plato, Aristotle, Hume, Kant, Hegel, Maritain, Dewey, Goodman, Danto, Foucault. It will also draw on a variety of examples of art, including literature, visual arts, music, poetry, theatre, architecture, and artistic handiwork. Prerequisite: PHIL 100. Three credits.

331 **Introduction to Ethics**
This course introduces students to several major ethical theories, including utilitarianism, virtue-based ethics, natural law theory and deontology. It addresses such questions as: Is there an objective moral standard? Is there a common good? Do we have duties to others? What does morality have to do with personal happiness? Prerequisite: PHIL 100 or third-year standing or permission of the department chair. Three credits.

332 **Contemporary Moral and Social Issues**
Building on PHIL 331, this course examines contemporary moral and social issues such as freedom of speech and censorship; equality and affirmative action; legalization of non-medical drug use; the duty to alleviate suffering; assisted suicide and euthanasia; justifications for punishment and capital punishment. Prerequisite: PHIL 331. Three credits.

333 **Environmental Ethics**
This course examines the ethical relationship between humans and the natural environment. It begins with the theoretical principles that help determine human conduct within the natural world. Once these beliefs about nature have been examined, it assesses different normative models that might govern our behaviour regarding the environment. Prerequisite: PHIL 331. Three credits. Next offered 2020-2021.

335 **Ethics in Health and Medicine**
Introduces students to ethics as it bears on health and medicine. After a brief survey of ethical principles and values, the course addresses a number of contemporary issues such as: the ethical responsibilities of professionals and professional integrity; autonomy and consent; dying and euthanasia; abortion and infanticide; research involving human subjects; allocation of medical resources; confidentiality and privacy; reproductive technologies and rights. Credit will be granted for only one of PHIL 335, PHIL 135 or PHIL 336. Prerequisite: junior standing, or PHIL 100, or permission of the instructor. Three credits.

342 **Logic**
A course in formal logic. Presupposing a familiarity with propositional logic, it focuses on first order predicate logic (with identity) and metalogic. Topics to be covered include translating sentences from English into symbolic notation, the semantics of predicate logic, deductions, soundness and completeness. Prerequisite: PHIL 251. Three credits.

351 **Socrates and Plato**
Topics include the nature of Socratic dialectic, Socrates’ response to the pre-Socratic philosophers, and Plato’s contributions to ethics, political philosophy, metaphysics, and epistemology. Prerequisite: PHIL 100. Three credits. Next offered 2020-2021.

352 **Aristotle**
Topics include Aristotle’s contributions to metaphysics, natural philosophy, and epistemology; his response to Plato and the pre-Socratic philosophers; and the development of Greek philosophy in the subsequent Stoic, Epicurean, and Neo-Platonic schools. Prerequisite: PHIL 100. Three credits. Next offered 2020-2021.

361 **Early Medieval Philosophy**
A study of the Christian and Neo-Platonic influence on philosophy from the 4th- to the 12th-centuries. Principal thinkers: Augustine, Boethius, Anselm, and Abelard. Principal problems: faith and reason; knowledge; evil; providence; free will; immortality of the soul; universals; ethical principles. The course ends with an introduction to important medieval Islamic and Jewish thinkers: Avicenna, Averróes, Maimonides. Prerequisite: PHIL 100. Three credits.

362 **Philosophy in the High Middle Ages**
A study of the influence of Christian theology and Aristotelian philosophy on thinkers of the 13th- and 14th-centuries. Principal figures: Bonaventure, Thomas Aquinas, John Duns Scotus, William of Ockham. Principal problems: faith and reason; knowledge; evil; providence; free will; immortality of the soul; universals; and ethical principles. Prerequisite: PHIL 100. Three credits.

365 **The Rationalists**
A review of the intellectual developments of the Renaissance relevant to philosophy is followed by a study of Descartes and his rationalist successors, such as Spinoza and Leibniz. Prerequisite: PHIL 100 or permission of the instructor. Three credits. Next offered 2020-2021.

366 **The Empiricists**
British philosophy of the late 17th and 18th centuries is traced through a study of the writings of Locke, Berkeley, and Hume. Works by Kant may also be studied. Prerequisite: PHIL 100. Three credits. Next offered 2020-2021.

367 **Philosophy from Kant to Hegel**
In the 19th century, German philosophy found expression in the idealist movement. Major figures such as Kant, Fichte, Schelling, and Hegel were united in the belief that reality, and the categories we use to understand it, had a common origin and development. Out of this belief came new conceptions of science, history, theology, and politics. Prerequisite: PHIL 100 or permission of the instructor. Three credits. Not offered 2019-2020.

371 **Social and Political Philosophy**
Examines fundamental issues in social and political philosophy through a discussion of such questions as: What would an ideal society be like? Should there be limits on human freedom? Do human beings have rights that everyone should respect? Is it ever morally acceptable to disobey or rebel against the state? Texts will be selected from the classical, medieval, modern, and contemporary periods, but topics will focus on issues of current interest. Prerequisite: PHIL 100. Three credits. Not offered 2019-2020.

372 **Philosophy of Law**
Examines fundamental issues in legal philosophy through a discussion of such questions as: What is the nature and function of law? What is the relation between law and morality? What is the character of legal reasoning and judicial decision-making? What are the justifications and aims of punishment? Texts will be selected
from the classical, medieval, modern, and contemporary periods, including works on liberal, libertarian, Marxist, and feminist thought. Prerequisite: PHIL 100. Three credits.

381 Existentialism and Phenomenology
Examines 19th- and early 20th-century philosophical ideas in continental Europe. A look at the philosophical antecedents of existentialism and phenomenology will be followed by a discussion of the writings of some of the major figures in these movements: Kierkegaard, Sartre, Beauvoir, Marcel, Merleau-Ponty, Husserl, Arendt, and Heidegger. Prerequisite: PHIL 100 or permission of the instructor. Three credits.

391 Mind, Language and Logic
Presents some of the major currents of philosophy in the English-speaking world in the 20th century, up to 1950. The course includes a brief account of 19th-century empiricism, pragmatism, and idealism, before turning to ‘common sense analysis’ (e.g., G.E. Moore), early discussions of logical positivism and the place of metaphysics, ethics, and aesthetics (e.g., Bertrand Russell, A.N. Whitehead, Ludwig Wittgenstein, A.J. Ayer, and Karl Popper), and the beginnings of ‘ordinary language’ philosophy. Prerequisite: PHIL 100 or permission of the instructor; junior standing strongly recommended. Three credits.

451 Seminar in Ethics, Political Philosophy, and the Philosophy of Law I
A seminar course that focuses on questions of ethics, political philosophy, and the philosophy of law. Topics to be addressed may include: the state and society, rights and duties, justice and equality, freedom and punishment, the moral basis of political obligation, and the concept of law. Prerequisite: junior standing in any program or permission of the instructor. Three credits. Next offered 2020-2021.

452 Seminar in Ethics, Political Philosophy, and the Philosophy of Law II
A seminar course that focuses on questions of ethics, political philosophy, and the philosophy of law, not discussed in PHIL 451. Content varies from year to year. The course will include both classical and contemporary authors. Prerequisite: junior standing in any program or permission of the instructor. Three credits. Next offered 2020-2021.

461 Seminar in Metaphysics and Epistemology I
A seminar course that focuses on issues in classical and contemporary epistemology and metaphysics. Topics to be considered may include: an investigation of the ultimate structure of reality as a whole: the nature of material things; the existence of the immaterial; the meaning of being; what can and cannot be known of reality; whether there is a First Cause. Prerequisite: junior standing in any program or permission of the instructor. Three credits.

462 Seminar in Metaphysics and Epistemology II
A seminar course that focuses on issues in metaphysics and epistemology not discussed in PHIL 461. Content varies from year to year. The course will include both classical and contemporary authors. Prerequisite: junior standing in any program or permission of the instructor. Three credits.

489 Honours Thesis
Each student works under the supervision of a professor who guides the selection of a thesis topic, the use of resources, the methodological component, and the quality of analysis. Restricted to honours students. Three credits over full year.

9.30 PHYSICS
C. Adams, Ph.D.
K. LeBris, Ph.D.
K.-P. Marzlin, Ph.D.
P. Poole, Ph.D.
Professor Emeritus
D. Hunter, Ph.D.
N. Jan, Ph.D.
M. Steinitz, Ph.D.
Senior Research Professor
D. Pink, Ph.D.

Physics deals with the fundamental properties of matter and energy. Physicists explore phenomena both in analytical detail and through statistical or average results, to create precise descriptions of the way in which systems behave. Physics courses stress analytical thinking and problem solving, while trying to communicate the excitement of discovery and the beauty of nature. The physics program prepares students for graduate study in physical and related sciences, engineering, meteorology, oceanography, and business administration; for professional programs such as medicine, dentistry, law and education; and for careers in science, business, and industry.

The physics department offers honours, advanced major, and major programs; joint advanced major and honours programs combining physics with biology, chemistry, computer science, Earth sciences, economics or mathematics; an advanced major in physics with business administration; and an advanced major in physics with a diploma in engineering. Students interested in these programs should contact the department chair. Since physics depends on mathematics, most of the programs described below require at least four mathematics courses.

See chapter 7 for information on the degree patterns, declarations of major, advanced major and honours, advancement and graduation requirements. First-year students considering a physics program should consult the department chair before registration. See the department website at www.stfx.ca/academics/science/physics

Major Program
The typical program outlined below may be varied with approval of the department chair.

Year 1
PHYS 121, 122; MATH 106 or 126, 107 or 127 or 121, 122; CHEM 121, 122 or 101, 102; 6 credits arts electives; 6 credits open electives

Year 2
PHYS 201, 221, 241, 242; MATH 267, 367; 6 credits arts electives; 6 credits open electives

Year 3
PHYS 325, 6 credits PHYS elective; MATH 253, 254; CSCI 161 or ENGR 147; 6 credits arts electives; 6 credits open electives

Year 4
PHYS 302, 491 (no credit); 6 credits PHYS elective; 12 credits open electives; 9 credits approved electives

Advanced Major Program
The typical program outlined below may be varied with approval of the chair.

Year 1
Same as major program

Year 2
PHYS 201, 221, 241, 242; MATH 253, 254, 267, 367, CSCI 161 or ENGR 147; 3 credits approved elective

Year 3
PHYS 302, 322, 323, 325; 6 credits arts electives; 6 credits open electives; 6 credits approved electives

Year 4
PHYS 343, 344, 491 (no credit); 6 credits PHYS electives; 6 credits arts electives; 12 credits open electives; advanced major paper (consult the department chair).

Honours Program
The typical program outlined below may be varied with approval of the chair.

Year 1
Same as major program

Year 2
PHYS 201, 221, 241, 242; MATH 253, 254, 267, 367, CSCI 161 or ENGR 147; 6 credits approved electives

Year 3
PHYS 302, 322, 323, 325, 343, 344; MATH 462 or 481; 6 credits arts electives; 3 credits approved elective

Year 4
PHYS 422, 443, 491 (no credit); 493; four of 223, 303, 425*, 444*, 475*, 476* (*choice must include at least 2 marked); MATH 481 or 462; 6 credits arts electives.

Pre-Education Stream in Physics
If you are considering a career in secondary school teaching, you should consult with the department chair early in your physics program. It is straightforward to create a physics program that will qualify you to teach both physics and mathematics as first and second teachable (30 and 18 credits, respectively). Combined expertise in physics and mathematics is highly sought-after by school boards worldwide. With a suitable choice of electives in our major and advanced major programs, you may also be able to add a third teachable (18 credits), such as chemistry or computer science; and perhaps also a second-teachable subject in the humanities, social sciences, or a language such as French. Please consult with the department chair for more details.

101 Physics for the Life and Health Sciences I
An algebra-based introduction to physics focusing on mechanics. Topics include vectors; Newton’s Laws; static equilibrium of point and extended bodies; kinematics and dynamics in 1 and 2 dimensions; gravity; momentum and energy conservation; work; rotational dynamics; and fluids. Applications to biology, human physiology, and medical technology will be emphasized. Recommended for students in the life or health sciences. Students expecting to take additional physics courses above the 100-level should take PHYS 121. Credit will be granted for only one of PHYS 101, 121, 100, or 120. Three credits and lab.

102 Physics for the Life and Health Sciences II
An algebra-based introduction to physics focusing on periodic motion, waves, and electricity. Topics include a review of mechanics based on periodic motion; wave motion and standing waves; electric charge, field, potential, and circuits; the electromagnetic spectrum; optics; and thermodynamics. Applications to biology, human physiology, and medical technology will be emphasized. Recommended...
for students in the life or health sciences. Previous physics experience would be an asset but is not required. May only count as a science A course for advanced major and honors students in physics with permission of the Chair. Credit will be granted for only one of PHYS 102, 100, or 120. Three credits and lab.

121 Physics for the Physical Sciences and Engineering I
A calculus-based introduction to physics focusing on mechanics. Topics include Newton’s Laws; static equilibrium; kinematics and dynamics in 1 and 2 dimensions; momentum and energy conservation; work; and rotational dynamics. Recommended for those considering further study in any of the physical sciences, computer science, engineering, and mathematics. MATH 106 or 121 should be taken concurrently. Credit will be granted for only one of PHYS 121, 101, 100, or 120. Three credits and lab.

122 Physics for the Physical Sciences and Engineering II
A calculus-based introduction to physics focusing on electricity and magnetism. Topics include simple harmonic motion; electric charge, force, field, and potential; Gauss’s Law; simple electric circuits; magnetism, magnetic forces and fields; electromagnetic induction and Faraday’s Law. Recommended for those considering further study in any of the physical sciences, computer science, engineering, and mathematics. MATH 107 or 122 should be taken concurrently. Credit will be granted for only one of PHYS 122, 100, or 120. Prerequisite: PHYS 121; or PHYS 101 with permission of instructor. Three credits and lab.

171 Introduction to Astronomy I
This course provides an introduction to astronomy for students who have no background in mathematics or science. Topics include observing the night sky with and without optical aid, the development of astronomy and related sciences, time and calendars, the evolution of the solar system, sun, planets, comets, and meteors. Observing sessions will be arranged. This course is intended for non-science students, but may be taken by science students as an elective. PHYS 271 is recommended for science students. Credit will be granted for only one of PHYS 171 or PHYS 271. Three credits.

172 Introduction to Astronomy II
This course provides an introduction to astronomy for students who have no background in mathematics or science. Topics include stellar systems, galaxies, quasars, black holes, dark matter, dark energy, cosmology, cosmogony and life in the universe. Observing sessions will be arranged. This course is intended for non-science students, but may be taken by science students as an elective. PHYS 272 is recommended for science students. Credit will be granted for only one of PHYS 172 or PHYS 272. Three credits.

201 Modern Physics: Introduction to Relativity and Quantum Physics
Topics include Einstein’s special relativity; wave description of matter; early atomic quantum theory; introduction to nuclear and particle physics; Schrödinger’s quantum mechanics. Prerequisite: PHYS 122 or PHYS 120; MATH 107(112) or ENGR 122/ MATH 122. Three credits and lab.

221 Basic Electric Circuits Theory
Topics include introductory concepts; resistive networks; response to linear circuits with energy storage; exponential excitation functions; steady-state AC circuits; analysis; network analysis; systems. Cross-listed as ENGR 237. Prerequisites: PHYS 122(120), MATH 107(112) or ENGR 122/MATH 122. Three credits and lab.

223 Digital Electronics
This hands-on, practical course introduces digital electronics with applications to computer hardware and micro-computer peripherals. Topics include the families of digital electronic technology; combinational and sequential logic; digital device characteristics; micro-computer interfacing; data acquisition; instrument control; data transmission. Labs provide an opportunity to design and test practical digital devices. Cross-listed as ENGR 238. Prerequisite: PHYS 122(120). Three credits and lab.

241 Mathematical Physics: Oscillations and Waves
An introduction to complex numbers, treatment of experimental uncertainties, ordinary differential equations, partial differential operators, partial differential equations and Fourier series for dealing with the physics of oscillating systems and waves. Simple, damped, forced, and coupled oscillators are treated in detail. The one-dimensional wave equation is derived and solved. Fourier series are introduced in order to satisfy the initial conditions. Prerequisites: PHYS 122(120); MATH 107(112) or ENGR 122/MATH 122. Three credits and lab.

242 Classical Dynamics I
The course covers conservative systems and potential energy; non-inertial frames; multi-particle systems; calculus of variations; Lagrangian mechanics; the connection between symmetries and conservation laws; central force problems; orbital mechanics; coupled oscillators and normal modes; Hamilton’s equations of motion. Prerequisites: PHYS 122(120); MATH 107(112) or ENGR 122/MATH 122. Three credits.

246 Circuit Analysis
Covers advanced circuit analysis techniques, starting with sinusoidal excitation. Topics include grounding and harmonics; symmetrical components and dealing with unbalanced networks; real and reactive power flow; balanced three-phase circuits for power distribution; phases and complex impedance. Mutual inductance and magnetically coupled coils are used to introduce transformer behaviour and performance. Cross-listed as ENGR 246. Prerequisites: ENGR 144 or CSCI 125; ENGR 237 or PHYS 221. Three credits and three-hour lab.

271 Astronomy: The Solar System
This course provides a quantitative and more detailed treatment of the topics covered in PHYS 171. These topics include the evolution of the solar system, sun, planets, comets, meteorites, and solar wind. Observing sessions will be arranged. Credit will be granted for only one of PHYS 271 or PHYS 171. Prerequisites: PHYS 101(100) or 121(120); MATH 107(112) or 127; PHYS 122 recommended. Three credits. Offered 2019-2020 and in alternate years.

272 Astronomy: The Stellar System
This course provides a quantitative and more detailed treatment of the topics covered in PHYS 172. These topics include stellar evolution, supernovae, quasars, pulsars, neutron stars, black holes, the universe, our galaxy, and cosmology. Observing sessions will be arranged. Credit will be granted for only one of PHYS 272 or PHYS 172. Prerequisites: PHYS 101(100) or 121(120); MATH 107(112) or 127; PHYS 122 recommended. Three credits. Not offered 2019-2020.

278 Introduction to Atmospheric Physics
This course aims at developing an understanding of the physical processes that influence our climate. It is suitable for science students interested in atmospheric sciences, climate and air quality issues. Topics include introduction to radiation, atmospheric composition, planetary atmospheres, introduction to molecular spectroscopy and photochemistry, radiation balance - natural variability and anthropogenic effects, greenhouse effect, ozone depletion, clouds, methods of sounding atmospheric constituents, instrumentation, introduction to climate modeling. Cross-listed as ESCI 278. Prerequisites: MATH 107(112) or 127 or 122; CHEM 101/102(100) or 120, and one of PHYS 100, 101/102, 120, 121/122. Three credits. Offered 2019-2020 and in alternate years.

297 Selected Topics
he topic for 2019-2020 is Medical Imaging. The course examines the fundamental principles of medical imaging (radiography, CT, ultrasound, MRI, emission tomography, etc.). The basic physical concepts behind the interactions of light with matter, the production of X-rays and radioactivity will be introduced. Technical parameters important to all forms of diagnostic imaging such as image quality and data processing will be addressed. Three credits.

298 Selected Topics
The topic for 2019-2020 is The Physics of Music. Musical scales, instrument tuning, the sound of musical instruments, and many other aspects of music are based on the physics of oscillations and waves. In this course, we will discuss how oscillating strings are behind the foundations of western and eastern music; why strings sound differently when plucked at different positions; just intonation; the difference between string and brass/wood instruments; how electric instruments work, and many other topics. Cross-listed as MUSI 298. Three credits.

302 Modern Physics: Properties of Matter
This course considers the properties of matter in its various states of greater and lesser order. Topics include classical thermodynamic treatment of phase transitions; an introduction to fluid mechanics; crystallographic order in crystals; elasticity; magnetic order; electrons in metals; and electrical resistance. Prerequisites: PHYS 201, 241. Three credits and lab. Offered 2019-2020 and in alternate years.

303 Modern Physics: Subatomic Physics and Cosmology
Topics include nuclei; elementary particles; concepts of general relativity; cosmology. Prerequisite: PHYS 201. Three credits. Not offered 2019-2020.

322 Electromagnetic Theory I
This course presents a comprehensive study of electrostatics in the presence of conductors and dielectrics. Particular attention is paid to developing and solving the differential equations that describe the electric field and scalar potential. Topics include vector fields; Coulomb’s Law; Gauss’s Law; Poisson’s/Laplace’s equation; Green’s function; multipole expansion; method of images; polarization of materials; the displacement field; introduction to magnetostatics. Prerequisites: PHYS 122(120); MATH 267 or ENGR 222/MATH 222; PHYS 241 or MATH 361. Three credits. Offered 2019-2020 and in alternate years.
Electronics
An introduction to electronic devices and circuits. Devices and topics discussed include equivalent circuits, diodes, bipolar junction transistors, field effect transistors, linear models, single-stage amplifiers, operational amplifiers, and digital circuits. Prerequisites: PHYS 221/ENGR 237; ENGR 221/MATH 221 or MATH 367. Three credits and lab. Not offered 2019-2020.

Optics
Topics include the nature of light; geometric optics, aberrations, optical instruments; Maxwell's equations, vector nature of light, polarization; coherence and interference; Fourier transform spectroscopy and interferometry; Fraunhofer diffraction, Fresnel diffraction; optics of solids. Prerequisites: PHYS 201, 242; MATH 254, 267 or ENGR/MATH 223. Three credits. Not offered 2019-2020.

Quantum Mechanics I
Covers states as vectors, measurable quantities as operators in a linear vector space, eigenstates and eigenvalues; the process of measurement, superposition of eigenstates; Schrödinger's equation, applications; orbital and spin angular momentum, application; time-independent perturbation theory, applications. Prerequisites: PHYS 201, 242; MATH 254, 267 or ENGR/MATH 223. Three credits. Not offered 2019-2020.

Thermal Physics
This course introduces the statistical nature of physical systems from an energetic perspective. Topics covered: laws of thermodynamics; ideal gases and Einstein solids; entropy and its relation with temperature, pressure, and chemical potential; engines and refrigerators; Helmholtz and Gibbs free energy; chemical thermodynamics; Boltzmann statistics; partition functions; Maxwell distribution; Gibbs factors and quantum statistics; Fermi-Dirac and Bose-Einstein distributions; degenerate electron gases; blackbody radiation and Planck's distribution; Debye theory of solids. Prerequisites: PHYS 242; CSCI 161 or ENGR 144. Three credits and lab. Offered 2019-2020 and in alternate years.

Special Topics in Physics
The topic for 2019-2020 is Statistical Mechanics of Quantum and Nanoscale Systems. Applications of statistical mechanics to: quantum systems (Fermi gases, Bose-Einstein condensates, electrons in metals); phase transitions and critical phenomena (magnetism, Ising model, gas-liquid transitions, first and second order transitions, critical phenomena and universality); and nanoscale and soft matter systems (glasses, polymers, colloids, liquid crystals, self-assembly). Common themes emphasized: relationship of thermodynamic and statistical mechanics approaches; phase transitions in finite and infinite systems; experimental methods; role of computer simulations. Prerequisite: PHYS 344. Three credits.

Electromagnetic Theory II
This course, a continuation of PHYS 322, covers magnetic fields in magnetic and non-magnetic materials, electromagnetic induction, the electric and magnetic fields of moving electric charges; Maxwell's equations; and the propagation and radiation of electromagnetic waves in various media. Prerequisites: PHYS 322; ENGR 221/MATH 221 or MATH 367. Three credits. Offered 2019-2020 and in alternate years.

Lasers and Modern Optics
An introduction to the theory, operation, and applications of lasers. Topics include the principles of optical coherence; optical resonators; operating principles and the most important laser types; holography; wave mixing; harmonic generation; the optical Kerr effect; stimulated Raman scattering and fiber optics. Prerequisites: PHYS 201, 325, 343. Three credits and lab. Not offered 2019-2020.

Quantum Mechanics II
Topics include function space analysis; state vectors, pure and non-pure states described by density operators; unitary and antiunitary transformations, symmetries and group theory in quantum mechanics; Schrödinger, Heisenberg, and interaction pictures; angular momentum coupling, tensor operators, the Wigner-Eckart theorem; time-dependent perturbation theory, variational approach; scattering theory with applications to modern physics. Prerequisite: PHYS 343. Three credits. Not offered 2019-2020.

Statistical Mechanics
This advanced course explores thermodynamics and its relationship to statistical mechanics. Topics include review of the thermodynamic postulates and conditions for equilibrium; extensive and intensive quantities; entropic and energetic formulations; Euler equation and Gibbs-Duhem relation; Legendre-transformed representations; response functions and Maxwell relations; stability; first-order phase transitions; van der Waals fluid; critical point and second-order phase transitions; Ising model of magnetic systems; connection to statistical mechanics through numerical models. Prerequisite: PHYS 344. Three credits and lab.

Computational Physics
This course covers computational modeling of a variety of systems relevant to physics, physical chemistry, and engineering. Topics will include: deterministic and stochastic methods; drawing connections among different phenomena from underlying similarities revealed through the modeling process; implementing simulations and analyzing the results; numerical integration of neural networks and spin glasses. Prerequisites: PHYS 241; ENGR 221/MATH 221 or MATH 367, CSCI 161 or ENGR 144. Three credits and lab.

Atomic and Molecular Physics
Covers the development of atomic physics; one-electron and multi-electron atoms; fine and hyperfine structure; radiation and radiative transitions; the Pauli principle and atomic shell structure; atomic spectroscopy. Also covers a selection of current areas of research in the field such as lasers, laser cooling, and quantum computing. Prerequisite: PHYS 343. Three credits and lab. Not offered 2019-2020.

Solid-State Physics
An introduction to the theory of solids and important experimental results. Topics include crystal structure; diffraction methods; lattice vibrations; specific heat of solids; thermal conductivity; the behaviour of electrons in metals and semiconductors; magnetism; superconductivity. Prerequisites: PHYS 201, 302, 344. Three credits and lab.

Physics Seminar
All students in the fourth year of a physics program are required to attend department seminars as scheduled. No credit.

Honours Thesis
Students will prepare and present a thesis based on original research they have performed under the supervision of a faculty member. Required for honours students. Open to advance major students who have demonstrated aptitude in physics research with permission of the department chair. Three credits.

POLITICAL SCIENCE
D. Abelson, Ph.D.
J. Bickerton, Ph.D.
D. Brown, Ph.D.
Y. Cho, Ph.D.
J. Levin, Ph.D.
J. Spring, Ph.D.
L. Stan, Ph.D.
Senior Research Professors
P. Clancy, Ph.D.
S.K. Holloway, Ph.D.

The Department of Political Science offers the following BA degree programs: major; joint major; advanced major; joint advanced major; honours; and honours with subsidiary. Students in any of these programs can also pursue one of the following four optional subfield concentrations offered by the department: political theory; Canadian politics; comparative politics; and international relations. Additionally, the department offers, along with the Department of Philosophy, an optional concentration in ethics, politics and law. Minor and subsidiary programs are available for students majoring in another discipline. Degree candidates should consult the department chair for course selection, and they must have their programs of study approved by the chair.

Minor and Subsidiary Program
24 credits of PSCI required, including:
- a) PSCI 101 and 102
- b) 6 credits at the 200 level
- c) 12 additional credits, including at least 6 credits at the 300 level or above

Major and Joint Major Programs
36 credits of PSCI required, including:
- a) PSCI 101 and 102
- b) 9 credits from PSCI 201, 202, 211, 212, 221, 222, 251, 252
- c) 18 credits at the 300 level or above
- d) 3 additional credits at the 200 level or above

Advanced Major and Joint Advanced Major Programs
36 credits of PSCI required, including:
- a) PSCI 101 and 102
- b) 9 credits from PSCI 201, 202, 211, 212, 221, 222, 251, 252
- c) 18 credits at the 300 level or above, including PSCI 399 and 6 credits of 400-level seminars
d) Advanced major paper in a 400-level seminar

Honours Program
60 credits of PSCI required, including:

a) PSCI 101 and 102
b) 12 credits from PSCI 201, 202, 211, 212, 221, 222, 251, 252
c) 24 credits at the 300 level or above, including PSCI 399, 6 credits of 400-level seminars, and honours thesis (PSCI 490)
d) 18 additional credits at the 200 level or above

Honours with a Subsidiary Subject
48 credits of PSCI required, including:

a) PSCI 101 and 102
b) 12 credits from PSCI 201, 202, 211, 212, 221, 222, 251, 252
c) 24 credits at the 300 level or above, including PSCI 399, 6 credits of 400-level seminars, and honours thesis (PSCI 490)
d) 6 additional credits at the 200 level or above

Optional Concentrations

Concentration in Political Theory
For majors and joint majors, 18 credits of political theory required, including:

a) PSCI 201 and 202
b) 9 credits from PSCI 301, 303, 306, 308, 401
For advanced majors and joint majors, 18 credits of political theory required, including:

a) PSCI 201 and 202
b) 9 credits from PSCI 301, 303, 306, 308
c) PSCI 401
d) Advanced major paper in PSCI 401
For honours and honours with a subsidiary, 24 credits of political theory required, including:

a) PSCI 201 and 202
b) 9 credits from PSCI 301, 303, 306, 308
c) PSCI 401
d) Honours thesis (PSCI 490) in political theory

Concentration in Canadian Politics
For majors and joint majors, 18 credits of Canadian politics required, including:

a) PSCI 221 and 222
b) 12 credits from PSCI 321, 322, 323, 324, 325, 343, 344, 351, 421
For advanced majors and joint majors, 18 credits of Canadian politics required, including:

a) PSCI 221 and 222
b) 9 credits from PSCI 321, 322, 323, 342, 345, 343, 344, and 351
c) PSCI 421
d) Advanced major paper in PSCI 421
For honours and honours with a subsidiary, 24 credits of Canadian politics required, including:

a) PSCI 221 and 222
b) 9 credits from PSCI 321, 322, 323, 324, 343, 344, 351
c) PSCI 421
d) Honours thesis (PSCI 490) in Canadian politics

Concentration in Comparative Politics
For majors and joint majors, 18 credits of comparative politics required, including:

a) PSCI 211 and 212
b) 12 credits from PSCI 312, 314, 315, 316, 331, 335, 336, 345, 365, 371, 372, 373, 391, 395, 452
For advanced majors and joint majors, 18 credits of comparative politics required, including:

a) PSCI 211 and 212
b) 9 credits from PSCI 312, 314, 315, 316, 331, 335, 336, 345, 365, 371, 372, 373, 391, 395
c) PSCI 452
d) Advanced major paper in PSCI 452
For honours and honours with a subsidiary, 24 credits of comparative politics required, including:

a) PSCI 211 and 212
e) 9 credits from PSCI 312, 314, 315, 316, 331, 335, 336, 345, 365, 371, 372, 373, 391, 395
b) PSCI 452
c) Honours thesis (PSCI 490) in comparative politics

Concentration in International Relations
For majors and joint majors, 18 credits of international relations required, including:

c) PSCI 251 and 252
d) 12 credits from PSCI 311, 351, 352, 352, 354, 355, 356, 357, 358, 363, 451
For advanced majors and joint majors, 18 credits of international relations required, including:

a) PSCI 251 and 252
b) 9 credits from PSCI 311, 351, 352, 352, 354, 355, 356, 357, 358, 363
c) PSCI 451
d) Advanced major paper in PSCI 451
For honours and honours with a subsidiary, 24 credits of international relations required, including:

a) PSCI 251 and 252
b) 9 credits from PSCI 311, 351, 352, 352, 354, 355, 356, 357, 358, 363
c) PSCI 451
d) Honours thesis (PSCI 490) in international relations

Concentration in Ethics, Politics, and Law
This concentration is open to students pursuing a joint degree in political science and philosophy (joint majors, joint advanced majors, or honours with a subsidiary). Students in this stream must meet the credits requirements of both departments, including:

a) 15 credits from PSCI 306, 308, 321, 325, 335, 343, 344, 353
b) PHIL 251, 331, 372
c) 3 credits from PHIL 201, 202, 371

CONCENTRATION DESIGNATED COURSES

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<tr>
<th>Political Theory</th>
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<tr>
<td>PSCI 201</td>
<td>Ancient &amp; Medieval Political Thought</td>
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<td>PSCI 202</td>
<td>Modern Political Thought</td>
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<td>PSCI 301</td>
<td>Liberalism and Its Critics</td>
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<tr>
<td>PSCI 303</td>
<td>Contemporary Political Arguments</td>
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<td>PSCI 306</td>
<td>Theory and Politics of Human Rights</td>
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<td>PSCI 308</td>
<td>Global Justice</td>
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<td>PSCI 401</td>
<td>Political Theory Seminar</td>
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<tr>
<th>Canadian Politics</th>
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<tr>
<td>PSCI 221</td>
<td>Canadian Politics: Structures &amp; Institutions</td>
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<td>PSCI 222</td>
<td>Canadian Politics: The Political Process</td>
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<td>PSCI 321</td>
<td>Federalism</td>
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<td>PSCI 322</td>
<td>Atlantic Canada</td>
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<td>PSCI 323</td>
<td>Parties and Elections</td>
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<td>PSCI 344</td>
<td>Citizenship and Diversity</td>
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<td>PSCI 351</td>
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<td>PSCI 421</td>
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<th>Comparative Politics</th>
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<td>PSCI 211</td>
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<td>PSCI 312</td>
<td>Art and Politics</td>
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<td>PSCI 314</td>
<td>Topics in European Politics</td>
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<td>PSCI 315</td>
<td>Democratization around the World</td>
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<td>PSCI 316</td>
<td>Dictatorships</td>
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<td>PSCI 331</td>
<td>Comparative Nationalism</td>
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<td>PSCI 335</td>
<td>Human Rights and International Justice</td>
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<td>PSCI 336</td>
<td>Religion and Politics</td>
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<td>PSCI 345</td>
<td>Women and Politics</td>
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<td>PSCI 365</td>
<td>Russian Politics</td>
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<td>PSCI 371</td>
<td>Political Economy of Development</td>
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<td>PSCI 372</td>
<td>Politics in the Muslim World</td>
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<td>PSCI 373</td>
<td>Irish Politics and Society</td>
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<td>PSCI 391</td>
<td>Democratization and Development in Latin America</td>
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<td>PSCI 395</td>
<td>Mexican Politics</td>
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<td>PSCI 452</td>
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<tr>
<th>International Relations</th>
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<tr>
<td>PSCI 251</td>
<td>Foundations of Global Politics</td>
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<td>PSCI 252</td>
<td>Contemporary Global Politics</td>
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<td>PSCI 308</td>
<td>Global Justice</td>
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PSCI 352 American Foreign Policy 3
PSCI 353 International Organizations 3
PSCI 354 Global Political Economy 3
PSCI 355 Global Issues 3
PSCI 356 Arab-Israeli Conflict 3
PSCI 357 Model United Nations 3
PSCI 358 International Security 3
PSCI 363 International Relations of East Asia 3
PSCI 451 International Relations Seminar 3

Ethics, Politics, and Law

PSCI 306 Theory and Politics of Human Rights 3
PSCI 308 Global Justice 3
PSCI 321 Federalism 3
PSCI 325 Indigenous Politics in Canada 3
PSCI 335 Human Rights and International Justice 3
PSCI 343 Law and Politics 3
PSCI 344 Citizenship and Diversity 3
PSCI 353 International Organizations 3

Note: Not all courses are offered every year. Most 300-level courses are offered in alternate years. To confirm course offerings students should check the StFX timetable prior to registration.

101 Introduction to Power and Politics
This course provides a basic introduction to the study of politics by exploring key concepts, ideas and debates that are important for understanding political life. Topics covered include the nature of politics, varieties and dimensions of political power, political authority and the state. Students will be introduced to both traditional and contemporary political ideologies. Credit will be granted for only one of PSCI 101 or PSCI 100. Three credits.

102 Introduction to Comparative and Global Politics
International relations and national politics shape political life today. This course examines various forms of government and compares political systems and processes, electoral systems, and public policies. It introduces students to the international state system and relations among states, covering topics such as co-operation and conflict, alliances and international organizations, war and peace, the global economy and contemporary global issues. Credit will be granted for only one of PSCI 102 or PSCI 100. Three credits.

201 Ancient & Medieval Political Thought
A critical textual analysis of ancient and medieval thinkers such as Socrates, Plato, Aristotle, Aquinas and Augustine, with emphasis on their political thought. This course will stress the continuing relevance of these thinkers to current politics and the search for the just society. Credit will be granted for only one of PSCI 201 or PSCI 200. Cross-listed as PHIL 201. Prerequisites: PSCI 101, 102(100). Three credits.

202 Modern Political Thought
A critical textual analysis of modern thinkers such as Machiavelli, Hobbes, Locke, Rousseau, Kant, Mill, and Marx, with emphasis on their political thought. This course will stress the continuing relevance of these thinkers to current politics and the search for the just society. Credit will be granted for only one of PSCI 200 or PSCI 202. Cross-listed as PHIL 202. Prerequisites: PSCI 101, 102(100). Three credits.

211 Comparative Politics I
This course provides an introduction to comparative politics and/or regional politics as a field of study, and prepares students for upper level courses in the field. It will present the basic methodological and theoretical tools in the field and take a close look at countries whose history, political institutions, political culture, political processes and political outcomes are similar or closely related to Canada’s. Great Britain, France and the United States among others. Credit will be granted for only one of PSCI 211 or PSCI 210. Prerequisites: PSCI 101, 102(100). Three credits.

212 Comparative Politics II
This course provides an introduction to comparative politics and/or regional politics as a field of study, and prepares students for upper level courses in the field. It examines the evolution and diversity of governments in countries whose history, political institutions, political culture, political processes, and political outcomes differ from Canada’s. These countries may include Russia, China, Brazil, Japan, Iran, India or Nigeria, among others. Credit will be granted for only one of PSCI 212 or PSCI 210. Prerequisites: PSCI 101, 102(100); PSCI 211 recommended. Three credits.

221 Canadian Politics: Structures & Institutions
This course covers the key political structures and institutions of the Canadian state (the Constitution, the political executive, parliament, federalism, intergovernmental relations, the public service and the courts) which constrain, shape and give impetus to Canadian politics, governance and decision-making. Credit will be granted for only one of PSCI 221 or PSCI 220. Prerequisites: PSCI 101, 102(100). Three credits.

222 Canadian Politics: The Political Process
This course will cover the cultural and regional context of how citizens interact with the Canadian state. Topics covered include political parties, elections, advocacy groups, and other forms of political participation, the role of the media, and the implications for the political process of key social divisions such as gender, language and race. Language politics, multicultural groups, the women’s movement and aboriginal peoples will receive attention. The course concludes with a discussion of Canada’s place in the world. Credit will be granted for only one of PSCI 222 or 220. Prerequisites: PSCI 101, 102(100). Three credits.

231 United States Politics
This course introduces U.S. government with a focus on the historical development of American political institutions. It examines the U.S. federal system and constitutional development, as well as executive, legislative, and judicial powers with particular attention to the founding and its enduring legacy in American political culture. Credit will be granted for only one of PSCI 240 or PSCI 241. Prerequisites: PSCI 101, 102(100). Three credits.

241 Business and Government
This course examines the historical roots and the current contours of the business-government relationship. While the focus is on Canada, conditions in other advanced capitalist states will be considered. Topics include the mechanisms of business power, the micro-politics of industries and case studies of corporate-state relations. Credit will be granted for only one of PSCI 240 or PSCI 241. Prerequisites: PSCI 101, 102(100). Three credits.

251 Foundations of Global Politics
This course provides an introduction to international relations as a field of study, offering a comprehensive survey of the conceptual, theoretical, and historical foundations of global politics. It provides students with a wide range of analytical and interpretive tools to make sense of global politics and prepare them for more advanced courses in international relations. Credit will be granted for only one of PSCI 251 and PSCI 250. Prerequisites: PSCI 101, 102(100). Three credits.

252 Contemporary Global Politics
This course examines a set of contemporary problems and issues in global politics, focusing primarily on security-related questions, the politics of international economic relations, and transnationalism. Among the topics examined are: international security, nuclear deterrence and proliferation, humanitarian intervention, terrorism, economic globalization and its consequences, the problem of poverty and development for the global South, environmental challenges, new transnational actors, and global governance. Credit will be granted for only one of PSCI 252 and PSCI 250. Prerequisites: PSCI 101, 102(100); PSCI 251 recommended. Three credits.

291 Violence, Conflict, and Politics
An introduction to the comparative study of types of collective political violence: war, terrorism, ethnic or identity-based conflicts, coup d’état, revolution, civil war, and genocide. Specific case studies are examined along with the main theoretical approaches in the field. Prerequisites: PSCI 101, 102(100). Three credits.

301 Liberalism and Its Critics
A critical study of liberal political theory, its basic concepts and its limitations in a multi-cultural age. Theorists considered include John Stuart Mill, John Rawls, Joseph Raz, Charles Taylor, John Gray and Wendy Brown. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (201/202 recommended). Three credits.

303 Contemporary Political Arguments
Critical study of the major ideas and issues in contemporary political theory, focused on assessing and engaging central moral debates in domestic and global politics. Emphasis will be placed on applying political theories and concepts to examine real-world cases. Main themes: political authority and obligation, democracy, multiculturalism, human rights, global justice, war and intervention, environment, gender and power. Prerequisites: PSCI 101, 102/100) and 6 credits of PSCI at the 200-level (201/202 recommended). Three credits.

306 Theory and Politics of Human Rights
This course critically examines the theory and politics of human rights, including conceptual, historical, legal, and practical controversies surrounding human rights and the institutions that have been designed to protect them. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (201/202 recommended). Three credits.
308 Global Justice
This course critically explores political theories of global justice that fall in both the statist or nationalist camp and the cosmopolitan camp, along with rights-based approaches that address pressing global concerns through the lens of political philosophy, including global gender justice, world poverty and global responsibility, democracy and global governance, the ethics and politics of global migration, animal rights, climate change and intergenerational justice, and indigenous struggles. Credit will be granted for only one of PSCI 308 and PSCI 394 offered in 2016-2019. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (212/212 recommended). Three credits.

311 The European Union
This course examines European integration since World War II, with emphasis on the European Community (EC) and European Union (EU), their institutions and policy processes, and the consequences of European unity for the political process in European societies. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (251/252 recommended). Three credits.

312 Art and Politics
This course introduces students to what modern artists have to say about politics and what governments do and say about art. It provides some of the historical and theoretical tools needed to analyze the political role of art in our time. Students will examine literary works, painting, music, and architecture, and discuss specific policies on art. Cross-listed as ART 312. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (211/212 recommended). Three credits.

314 Topics in European Politics
This course examines themes and issues relevant to European politics and societies, ranging from political institutional arrangements, state-society relations, and the role of civil society and social capital to public policy, immigration, church-state relations, security, the EU Eastern enlargement, and the EU Neighbourhood Policy. By examining different European countries, Europe as a whole and the European Union, students are encouraged to develop their own project to understand politics in that part of the world. Credit will be granted for only one of PSCI 314 or PSCI 310. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (211/212 recommended). Three credits.

315 Democratization around the World
This course investigates the problems facing countries from different parts of the world that have sought to move from non-democratic political systems to democracy. Students will learn the social, cultural and economic conditions necessary for the process of democratization; analyze the institutional structures and constitutional designs most conducive to the transition from authoritarianism to democracy; and consider the consequences of democratization for development. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (211/212 recommended). Three credits.

316 Dictatorships
This course introduces students to the nature and varieties of dictatorships in our time by examining their causes of emergence, what sustains them, and why they (sometimes) fail. This comparative politics course covers cases of dictatorial rule in countries such as China, Cuba, Egypt, North Korea, Russia, and Rwanda. Students will examine the political institutions and the public policies (e.g. economic, cultural, human rights) of dictatorships. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (211/212 recommended). Three credits.

321 Federalism
This course examines the theory and practice of federalism, with a focus on Canadian federalism. Topics include theories of federalism, comparative federal systems, inter-governmental relations, fiscal arrangements, federal-provincial diplomacy, and constitutional reform. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (221/222 recommended). Three credits.

322 Atlantic Canada
A course on modern government and politics in the four Atlantic provinces. Regional development and dependence are the themes within which students will explore federal-provincial relations and administrative changes, development policies, political culture, and party systems. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (221/222 recommended). Three credits.

323 Parties and Elections
This course is concerned with parties and elections in Canada. Topics include party and electoral systems; intra-party politics and political personnel; party financing; representation and policy development; the political marketing, campaigns and voting behaviour. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (221/222 recommended). Three credits.

324 Provincial Politics
A comparative study of the differing political cultures, institutions, behaviour, and public policies of the Canadian provinces. Students will seek explanations for the similarities and differences in the social and economic structures and political histories of the provinces. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (221/222 recommended). Three credits.

325 Indigenous Politics in Canada
An introductory course to Indigenous politics and governance, this course will cover the history of Aboriginal-Crown relations, the political mobilization of Aboriginal Peoples and the constitutional entrenchment of their rights, key court decisions and political struggles, and the governance challenges of the contemporary era. Topics to be covered include the treaty process, the Indian Act, Aboriginal and non-Aboriginal perspectives, citizenship and sovereignty, land claims and modern treaties, and forms of self-government. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (221/222 recommended). Three credits.

331 Comparative Nationalism
An analysis of the historical origins of nationalism and of its central concepts and justifications. Both Western and non-Western nationalism (focusing on four or more cases) will be examined in a comparative context. Evidence for the recent decline of the nation state will be explored. Credit will be granted for only one of PSCI 331 or PSCI 330. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (211/212 recommended). Three credits.

335 Human Rights and International Justice
Human rights and international justice are important components of politics. This course examines the theoretical and practical concerns shaping the study and promotion of human rights today. Using a variety of material and case studies, we examine the debate over whether rights are universal; the institutions and organizations enforcing human rights; and the role states play in protecting human rights. A strong component of this class is state responses to massive human rights violations. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (211/212 recommended). Three credits.

336 Religion and Politics
An examination of the impact of religion on politics and policies on religion. Students will consider the relationship between religion and politics in the Middle East, Northern Ireland, India and Pakistan, Eastern Europe and North America. Case studies will demonstrate interactions between the state and Christianity, Islam, Hinduism, and Judaism, as well as the influence of religion on citizenship, education, the party system, and social issues. Credit will be granted for only one of PSCI 336, PSCI 295, RELS 295. Cross-listed as RELS 336. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (211/212 recommended). Three credits.

343 Law and Politics
This course explores the role of the courts in politics, particularly in Canada. Possible Topics include recent constitutional developments; the impact of the Charter of Rights; the judicialization of politics; philosophy of law; and strategic litigation. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (221/222 recommended). Three credits.

344 Citizenship and Identity
This course examines various aspects of Canadian citizenship and identity. Topics include citizenship theory, the evolution of the Canadian citizenship regime, processes of citizenization, majority and minority nationalisms, Aboriginal citizenship and multiculturalism. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (221/222 recommended). Three credits.

345 Women and Politics
An introduction to the study of women and politics, this course has three parts: feminist political thought and the women’s movement; political participation and representation; and public policy. Topics include feminist political thought in the Western political tradition; the evolution and politics of the women’s movement; political parties and legislatures; women and work; and women and the welfare state. Cross-listed as WMGS 345. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (221/222 recommended). Three credits.

351 Canadian Foreign Policy
This course is designed as a general historical survey of Canadian external interests, external policy-making processes, and contemporary themes and issues. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (251/252 recommended). Three credits.

352 American Foreign Policy
This course introduces students to the study of US foreign policy, examining major political, economic, and social forces that shape and constrain the making of American foreign policy. Among the issues examined are the historical and doctrinal context of US foreign policy, actors and institutions in the American foreign
policymaking process, and contemporary external security and foreign economic policies of the US. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (251/252 recommended). Three credits.

353 International Organizations
A study of the development and role of international organizations in global politics, examining the achievements and limits of institutionalized multilateral cooperation among states. Institutions examined include the UN, NATO, the WTO, the IMF, and the World Bank. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (251/252 recommended). Three credits.

354 Global Political Economy
This course examines the politics of international economic relations. Topics include transnational corporations and the globalization of production, the multilateral trade system and regionalism, the global monetary and financial system, and economic development in the global South. Cross-listed as DEVS 354. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (251/252 recommended). Three credits.

355 Global Issues
This course examines the state’s supremacy and its capacity to manage such global issues as transnational flows of goods, services, money, and ideas; the phenomenon of failed states in the post-Cold War period; global environmental issues; weapons proliferation; terrorism and other forms of transnational crime; and the rise of transnational social activist groups. Cross-listed as DEVS 355. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (251/252 recommended). Three credits.

356 Arab-Israeli Conflict
This course examines the multifaceted dimensions of the Arab-Israeli conflict. In addition to exploring various historical, political, societal, economic, and religious cleavages behind the conflict, the course also examines peace initiatives and the prospects for their success in the region. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (251/252 recommended). Three credits.

357 Model United Nations
Introduction to the structures, activities, and operations of the UN, the protocols and procedures of UN deliberations, and contemporary international issues and agendas faced by the UN and its member states. The course is built around student preparation for, and participation in, simulated UN deliberations at the Five-day annual NMUN Conference in New York scheduled for March. Conference attendance is mandatory; there are additional travel-related costs; and funding raising is required. Credit will be granted for only one of PSCI 357 or PSCI 392 offered in 2014-2015, 2015-2016, 2016-2017. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (251/252 recommended). Three credits.

358 International Security
This course examines both the causes of war and the various strategies and tactics pertaining to how war has been-and is presently-conducted, as well exploring conflict mitigation and peacemaking strategies. Taking a pluralistic view of security studies, the course uses various frameworks of analysis drawing from classical works, rationalist approaches, structuralist accounts, normative works, and constructivist explanations for war and peace. Credit will be granted for only one of PSCI 358, 392 offered in 2018-2019, 394 offered in 2017-2018, or 392 offered in 2016-2017. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (251/252 recommended). Three credits.

363 International Relations of East Asia
An examination of contemporary international relations and foreign policies of major regional actors in East Asia including China, Japan, North and South Korea, and the US. Topics include the political economy of East Asian regionalism, institution-building, the regional security complex, the rise of China, and the ongoing nuclear crisis in the Korean Peninsula. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (251/252 recommended). Three credits.

365 Russian Politics
This course explores the reasons for the collapse and the pursuit of political and economic alternatives to state socialism in the Russian Federation. Students are encouraged to develop their own project, examining the manner in which forms of ownership, constitutional developments, party formation, political personalities, and domestic and international pressure influence events in post-communist Russia. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (211/212 recommended). Three credits.

371 Political Economy of Development
Countries in the developing world face a distinct set of political challenges, particularly as they relate to fostering economic growth and providing effective public services. This course will explore the political determinants of development as well as the effect of economic conditions on political outcomes. Key issues include the origins of state weakness, the relationship between political institutions and economic growth, the causes of corruption, and the effect of diversity on governance outcomes. Credit will be granted for only one of PSCI 371 and PSCI 370. Cross-listed as DEVS 371. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (211/212 recommended). Three credits.

372 Politics in the Muslim World
A comparative examination of politics in Muslim-majority countries. This course will focus on the interaction of religion with issues of political order and development. We will consider the prospects of democracy, the strategies of religious political parties, the interplay of religious and national identities, and the constitutional status of religion across cases. Particular attention will be paid to politics of the largest Muslim countries. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (211/212 recommended). Three credits.

373 Irish Politics and Society
This course emphasizes the major factors that contributed to the making of modern Ireland. The topics to be covered include the role of the Great Famine in altering both the social structure of Ireland and claims to Irish identity, the Irish diaspora and Irish emigrants to Atlantic Canada, social and political changes in the Republic of Ireland from independence to the ‘Celtic Tiger’ phenomenon and continuity and change in the conflict in Northern Ireland. Cross-listed as SOCI 373. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (211/212 recommended). Three credits.

391 Democratization and Development in Latin America
This course examines issues related to the challenges of development and democracy in the region. It provides historical background as well as discussions of theoretical approaches and specific public policies. Credit will be granted for only one of PSCI 391 or PSCI 390. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (211/212 recommended). Three credits.

394 Selected Topics
The topic for 2019-2020 is Non-Traditional Security Threats: Terror, Asymmetric Warfare, Cyber Warfare and Counter Insurgency. Three credits.

395 Mexican Politics
This course looks at Mexico’s distinct political tradition. It presents and discusses Mexico’s main political actors (political parties, groups, social movements) and institutions (democratic, republican, federal, presidential), and examines the political challenges of democratization and liberalization. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (211/212 recommended). Three credits.

399 Research Methods and Statistics
Introduction to the fundamentals of research design and methods in political science. The course gives students a broad exposure to an eclectic set of methodological tools appropriate for carrying out undergraduate level research in political science, including both qualitative and quantitative methods. Cross-listed as PGOV 303. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level. Three credits.

401 Political Theory (Seminar)
This seminar will critically analyze selected political thinkers, themes, issues and/or controversies in political theory, and their current relevance to the discipline of political science and politics. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (201/202 recommended). Three credits.

421 Canadian Politics (Seminar)
This seminar deals with the analysis of power in Canada, through the study of selected institutions, policy fields and cases. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (211/212 recommended). Three credits.

451 International Relations (Seminar)
This seminar examines advanced theories of International Relations and contemporary issues in global politics. Prerequisites: PSCI 101, 102(100), 251, 252(250). Three credits.

452 Comparative Politics (Seminar)
This seminar discusses major issues in comparative politics and examines the advanced theories, methods, and concepts in the field. Prerequisites: PSCI 101, 102(100) and 6 credits of PSCI at the 200-level (211/212 recommended). Three credits.

490 Thesis
Restricted to students in the BA Honours program. Six credits.

499 Directed Study
See section 3.5. Six credits.
**9.32 PSYCHOLOGY**

E. Austen, Ph.D.
L. Berigan, Ph.D.
K. Blair, Ph.D.
K. Brebner, Ph.D.
T. Callaghan, Ph.D.
P. Hauf, Ph.D.
E. Koch, Ph.D.
C. Lomore, Ph.D.
K. MacLean, Ph.D.
P. McCormick, Ph.D.
J. McKenna, Ph.D.
K. Thompson, Ph.D.
M. Watt, Ph.D.
A. Weaver, Ph.D.
E. Wright, Ph.D.

Professor Emeritus
G.P. Brooks, Ph.D.
K.C. den Heyer, Ph.D.
R.W. Johnson, Ph.D.

Senior Research Professor
A. Bigelow, Ph.D.

**BA and B.Sc. Major Program**

Candidates must follow the degree regulations in chapters 4 and 7 and complete:

a) PSYC 101, 102
b) PSYC 291, 292; one of PSYC 210, 220, 225 or 230
c) 12 PSYC credits at the 300 or 400 level; and
d) 6 additional PSYC credits

Students contemplating pursuing an honours degree are strongly recommended to complete PSYC 291, 292 in second year.

**BA and B.Sc. Honours Program**

Candidates must follow the degree regulations in chapter 4 or 7 and complete:

a) PSYC 101, 102; one of PSYC 210, 220, 225 or 230; PSYC 291, 292, 301, 302, 303, 394
b) 6 credits at the 400 level
c) PSYC 391, 491 (non-credit) and PSYC 490, the honours thesis
d) a total of 60 PSYC credits.

**Psychology as a Subsidiary Subject**

If psychology is selected as a subsidiary subject by an honours student in the BA program, 24 PSYC credits are required. These credits must include PSYC 301, 302.

**B.Sc. Programs**

Candidates must follow the degree regulations in chapter 7 and should note the following:

a) PSYC courses are considered science courses only when they are taken as part of a major or honours subject in the B.Sc. program
b) B.Sc. major program must include BIOL 111, 112; MATH 106 or 126, 107 or 127, and 12 additional credits in science courses (excluding PSYC)
c) B.Sc. honours degree program must include BIOL 111, 112; CHEM 101, 102; MATH 106 or 126, 107 or 127; and 6 additional credits in science courses (excluding PSYC)
d) For the B.Sc. honours program, the 18 credits of electives approved by the department normally consist of courses in PSYC or in other science subjects

**B.Sc. with Joint Honours**

Students enrolled in joint honours programs in which psychology is one of the two honours subjects must take PSYC 230.

**Concentration in Forensic Psychology**

Students enrolled in the Bachelor of Arts may apply in their sophomore year to concentrate their psychology degree in forensic psychology. In the second year, applicants must take PSYC 291, 292 and 6 additional credits from the following: PSYC 210, 220, 225, 230. Candidates must complete PSYC 356, 357, 376, 378, 379, 381, 382 and one of the following: PSYC 364, 365, 367, 368.

Applications are submitted to the Co-ordinator of the Forensic Psychology program (please see co-ordinator for additional information on the program).

Note: PSYC 101, 102 are prerequisites for all other courses except PSYC 291 and 394.

**101 Introduction to Psychology as a Natural Science**

Topics include research methodology, neuroscience, consciousness, sensation and perception, learning, memory, and cognition. Students have an opportunity to be involved with ongoing research in the department by participating in experiments during the course of the academic term. Credit will be granted for only one of PSYC 101 and PSYC 100. Three credits.

**102 Introduction to Psychology as a Social Science and Profession**

Topics include lifespan development, motivation and emotion, health, social psychology, personality, abnormal, clinical, and forensic psychology. Students have an opportunity to be involved with ongoing research in the department by participating in experiments during the course of the academic term. Credit will be granted for only one of PSYC 102, PSYC 100 or PSYC 155. Prerequisite: PSYC 101. Three credits.

**155 Introduction to Psychology for Nurses**

A survey of the major topics of psychology applicable to the health professions, with a focus on age-related changes from conception to adolescence. Special emphasis will be placed on using critical thinking to evaluate scientific research, biological psychology, physical, cognitive and social development, health, stress, and coping, and the diagnosis and treatment of psychological disorders. Credit will be granted for only one of PSYC 155, PSYC 100, PSYC 102 or PSYC 354. Restricted to students in the B.Sc.Nursing program. Three credits.

**210 Learning**

A review of research on animal and human learning, and a consideration of the major issues that have shaped the study of learning. Topics include general principles of learning; classical conditioning; operant conditioning; radical behaviourism and its limitations; biological constraints on learning and social-cognitive learning. Recommended for students considering graduate work in clinical psychology. Prerequisite: PSYC 100. Lab component. Six credits.

**220 Cognitive Psychology**

This course deals with the basic cognitive processes: perception, attention, memory, language, thinking, and problem-solving. Prerequisite: PSYC 100. Lab component. Six credits.

**225 Sensation and Perception**

An examination of how the physical structure of sensory systems and the psychological interpretation of sensory information influence what is perceived. Major sensory systems will be covered. Theoretical and empirical work will be explored. Prerequisite: PSYC 100. Lab component. Six credits.

**230 Brain and Behaviour**

An introduction to behavioural neuroscience, including analysis of the anatomical, physiological, and biochemical mechanisms underlying behaviour. Recommended for students considering graduate work in clinical psychology. Prerequisite: PSYC 100. Lab component. Six credits.

**240 Social Psychology**

This course covers relationships among individuals and the effect of those relationships on behaviour and personality. Topics may include: aggression, altruism, conformity, attributions, and attitudes. Lab component. Prerequisite: PSYC 100. Six credits.

**260 Developmental Psychology**

The study of major environmental and maturational influences and their relationship to the growing person. Credit will be granted for only one of PSYC 260 or PSYC 354. Lab component. Prerequisite: PSYC 100. Six credits.

**291 Research Methods in Psychology**

An introduction to methods used to conduct psychological research. Topics include identifying research questions, theory development, experimental, correlational, and observational research designs, ethics, measurement, sampling, survey development, and APA style research proposals. Quantitative methods will be emphasized. Lab component. Credit will be granted for only one of PSYC 291 and PSYC 290. Three credits.

**292 Introductory Statistics for Psychological Research**

An introduction to the statistical methods used to conduct psychological research. Topics include inferential statistics including Z-test, t-tests, correlation and regression, basic analysis of variance, and non-parametric procedures such as chi-square. Students will learn to use statistical software. Lab component. Credit will be granted for only one of PSYC 292, PSYC 290, STAT 101. Prerequisite: PSYC 291. Three credits.

**301 History & Theory of Psychology I: From Ancient Times to the Rise of Experimental Psychology**

An examination of psychology’s evolution, including the theoretical issues that underlie past and present debates about the discipline’s subject matter and methodology. Approaches to historiography within the history of the sciences will...
also be discussed. Credit will be granted for only one of PSYC 301 or PSYC 300. Prerequisites: 6 credits of PSYC at the 200 level. Three credits.

302 History & Theory of Psychology II: From the Beginnings of Experimental Psychology to Current Psychological Science
An examination of psychology’s evolution, including the theoretical issues that underlie past and present debates about the discipline’s subject matter and methodology. Approaches to historiography within the history of the sciences will also be discussed. Credit will be granted for only one of PSYC 302 or PSYC 300. Prerequisites: 6 credits of PSYC at the 200 level. Three credits.

313 Health Psychology
This course provides an introduction to key issues in Health Psychology. In adopting a bio-psycho-social approach, the course will examine the ways in which biological, psychological, and social factors interact to affect health. Credit will be granted for only one of PSYC 313 or PSYC 310. Prerequisites: 6 credits of PSYC at the 200 level. Three credits.

315 Positive Psychology
Positive psychology is the scientific study of human strengths and optimal human functioning. The history of, and precursors to, positive psychology will be reviewed. Research and theory related to topics including character strengths, resilience, flow, mindfulness, optimism, gratitude, positive psychology in the workplace, and altruism will be discussed. Techniques and exercises designed to enhance each aspect of optimal functioning will be explored. The format of the course will be both experiential and research-based. Credit will be granted for only one of PSYC 315 and PSYC 396 offered in 2016-2017. Prerequisite: 12 credit PSYC at the 200-level. Three credits.

327 The Psychology of Pain
Contrary to popular belief, the experience of pain is not necessarily linked to bodily injury or detection of intense energy. Pain can be caused by various factors, including: tissue injury, visibility of wound or noxious stimulus, attentional state, expectation, mood, previous pain experience, conditioned responses, etc. This course provides a basic understanding of pain perception and of the physical and psychological means of modulating pain. Credit will be granted for only one of PSYC 327 or PSYC 325. Prerequisites: 6 credits of PSYC at the 200 level. Three credits.

328 Neural Mechanisms of Pain and Analgesia
This course examines the neurophysiological mechanisms of pain perception and related analgesic treatments. It provides a basic understanding of the neural activities underlying pain perception and the mechanisms that underlie pain-related neuroplasticy and various means of modulating pain. Credit will be granted for only one of PSYC 328 or PSYC 325. Prerequisites: 6 credits of PSYC at the 200 level. Three credits.

341 The Self
This course explores contemporary perspectives and research on the self as it relates to social behaviour. The nature and function of the self and the ways in which the self is both influenced by and influences other people will be examined from a social-psychological perspective. Topics include: knowledge of the self, self-motivation, self-esteem, self-regulation, self-prediction, the self in the context of relationships with others, and the influence of culture on views of the self. Prerequisite: 6 credits of PSYC at the 200 level. Three credits.

347 Communication and Language
This course explores the social psychology of language and communication. Topics include basic concepts in language; language attitudes; language variation; bilingualism and multiculturalism; language and culture; discourse analysis; the relationship between language and social identity. This seminar will consist largely of student presentations. Credit will be granted for only one of PSYC 347 and PSYC 345. Prerequisites: 6 credits of PSYC at the 200 level. Three credits.

353 Psychology of Personality
The purpose of this course is to explore the diverse body of contemporary research and theory on personality psychology. Although the course will also present some sense of history of personality psychology, the focus will be on the most recent empirical research. The course may involve small group research projects and/or an APA-style research proposal. Credit will be granted for only one of PSYC 353 or PSYC 350. Prerequisites: 6 credits of PSYC at the 200 level. Three credits.

355 Lifespan Developmental Psychology for the Health Sciences II (Adulthood & Aging)
Lifespan developmental is an exploration of the biological, cognitive, and psychosocial changes that occur across different periods of life. This course will provide a basic understanding of human development from early adulthood until death. Age-related changes in behaviour, thinking, emotions, personalities, and social relationships will be explored in relation to maturational processes, individual differences, and cultural expectations. Credit will be granted for only one of PSYC 355 and PSYC 387 offered in 2017-2018. Prerequisites: PSYC 260 or PSYC 354. Three credits.

356 Forensic Practicum I
Students in this concentration will be required to complete two practica in approved forensic-related settings; one practicum in each year of the program. The minimum number of hours per practicum will be 40 hours. Students will be encouraged to explore options and opportunities for doing a placement in their home communities. Restricted to BA students in the forensic concentration. Three credits.

357 Forensic Practicum II
Students in this concentration will be required to complete two practica in approved forensic-related settings; one practicum in each year of the program. The minimum number of hours per practicum will be 40 hours. Students will be encouraged to explore options and opportunities for doing a placement in their home communities. Restricted to BA students in the forensic concentration. Three credits.

362 Applications of Psychology to the Health Sciences
This is a lecture and seminar course in which contemporary applications of psychology to the health sciences will be considered. The psychological issues related to the design and implementation of technologies to improve the well-being and functioning of individuals with disabilities will be covered. Credit will be granted for only one of PSYC 362 or PSYC 375. Prerequisites: 6 credits of PSYC at the 200 level. Three credits.

364 Psychology of Gender
This course will review theories and research regarding gender in psychological development, social roles, and personality. Topics to be covered will include the history of research in gender; issues to consider in conducting gender research; gender role development and the socialization of gender; gender as a social variable in education and the workplace. Credit will be granted for only one of PSYC 363 or PSYC 375. Prerequisites: 6 credits of PSYC at the 200 level. Three credits.

365 Developmental Social Psychology of Gender
This course will review theories and research that integrate developmental and social perspectives on gender. Topics will focus on gender as a social construct and include gender role development, gender role socialization in the family and gender development in cross-cultural perspective. Credit will be granted for only one of PSYC 365 or PSYC 360. Cross-listed as WMGS 343. Prerequisite: 6 credits of PSYC at the 200 level. Three credits.

367 Basics of Psychopharmacology
This course surveys basic neuropharmacology and the actions of psychoactive drugs used to treat psychological disorders. It covers basic principles of neuropharmacology, distribution and elimination of drugs, drug-receptor interactions, neurotransmitter, neurochemistry and neurophysiology. This course is designed to provide an introduction to the pharmacological treatment of psychological disorders and to provide a foundation for advanced study in neuroscience, neuropharmacology and related areas. Credit will be granted for only one of PSYC 367 or PSYC 377. Prerequisite: 6 credits of PSYC at the 200 level; PSYC 230 recommended but not required. Three credits.

368 Pharmacology of Drugs of Abuse
This course covers various topics in the study of drug addiction, including pharmacological and pathophysiological effects of recreational drug use. Topics such as mechanisms of action, tolerance, long-term effects, side effects, and toxicity will also be included. The primary emphasis is on biological aspects of addiction, with only minor attention given to social aspects. The pharmacological properties of both legal and illegal addictive drugs will be examined. Credit will be granted for only one of PSYC 368 or PSYC 377. Prerequisite: 6 credits of PSYC at the 200 level; PSYC 230 recommended but not required. Three credits.

372 Cultural Psychology
The focus of this course is on how culture influences human behaviour and mind. The evolution of culture is considered as we dissect the debate surrounding claims that culture exists outside of the human species. Contemporary research and theory in human development and socialization, self-identity and cultural constructs of collectivism and individualism, acculturation and multi-culturalism,
building relationships with others, conceptions of health and healing, and the impact of culture on the basic psychological processes will be covered. Prerequisites: 6 credits of PSYC at the 200 level. Three credits.

373 Human Neuropsychology
Neuropsychology is the study of how damage to the brain causes changes in thoughts and behaviours. Cognitive changes associated with specific diseases/conditions will be the focus of the course (e.g., Alzheimer’s disease, multiple sclerosis, Parkinson’s disease, stroke, etc.). Examples of cognitive and behavioural symptoms will be presented via videos, audio recordings, and performance on neuropsychological tests. The assessment of cognitive processes will be introduced and relevant structural and functional neuroanatomy will be reviewed. Cross-listed as BIOL 374. Prerequisite: 12 credits PSYC at the 200 level; PSYC 230 recommended but not required. Three credits.

374 Human Development Across Cultures
This course examines the development of the individual from a cultural perspective. Development is considered to involve a process of co-construction of the individual and culture. The impact of cultural practices, traditions, and parental beliefs on the developing child are considered, along with the interplay between those cultural forces and the biological foundations that influence the course of development. Cognitive, social, emotional development will be studied, along with a consideration of applied issues that emerge from investigations of the impact of cultural environments on child development. Prerequisites: 6 credits of PSYC at the 200 level. Three credits.

376 Abnormal Psychology
This course deals with current perspectives and research on the various psychological disorders. Courses in learning, brain and behaviour, developmental psychology, and personality form a useful background for this course. Credit will be granted for only one of PSYC 376 or PSYC 370. Prerequisites: 6 credits of PSYC at the 200 level. Three credits.

378 Human Sexuality
This course provides a broad introduction to research and theory in human sexuality. It includes examination of fundamental topics such as the nature of human sexuality and contemporary issues. Specific topics include historical perspective, theories of sexuality, sex research, sexual anatomy, sexual variation, sexual response, gender, sexual dysfunction and sex therapy. Cross-listed as WMGS 378. Prerequisites: 6 credits of PSYC at the 200 level. Three credits.

379 Introduction to Clinical Psychology
This course provides an introduction to the theory, research and practice of clinical psychology. It assumes an evidence-based approach to assessment and treatment of psychological disorders, and examination of relevant ethical, professional, and theoretical issues. This course will be of interest to students intending to pursue graduate or professional studies in mental health or human services (e.g., clinical psychology, social work, counseling, nursing, law, medicine, corrections). Prerequisites: 12 credits of PSYC at the 200 level and PSYC 370 or 376. Three credits.

381 Forensic Psychology I: Correctional Psychology
This course refers broadly to the production and application of psychological knowledge to legal issues. This course covers the history and mandate of corrections; nature of offending, behaviour assessment, treatment, and rehabilitation of different types of offenders. Field trips to prisons and other correctional facilities are a required component of this course and involve significant commitment of time beyond scheduled class time. At times, trips may conflict with other classes. Students are responsible for managing their schedule and workload to facilitate participation in this course without needing accommodations in other courses. Credit will be granted for only one of PSYC 381 and PSYC 380. Prerequisites: PSYC 100, 376, 379. Three credits. Not offered 2019-2020.

382 Forensic Psychology II: Psychology & Law
A continuation of PSYC 381, this course covers the history of the relations between psychology and law, Canadian criminal law; basic concepts in criminal justice and the study of crime. The course will include attendance at provincial and Supreme Court sessions, organization of special events as well as hosting guest speakers from the criminal justice system. Students are responsible for managing their schedule and workload to facilitate participation in this course without needing accommodations in other courses. Credit will be granted for only one of PSYC 382 and PSYC 380. Prerequisite: PSYC 381. Three credits. Not offered 2019-2020.

391 Junior Seminar
The purpose of this non-credit course is to assist students in carrying out their thesis or senior paper research, choosing a career, and gaining admission to graduate or professional school. Attendance at colloquia and guest lectures relevant to psychology is mandatory. Prerequisite: junior standing in an advanced major or honours program in psychology.

394 Advanced Statistics for Psychological Research
An examination of intermediate and advanced statistical procedures for the psychology researcher, with emphasis on the use of statistical software packages. Lectures and lab sessions cover topics such as factorial analysis of variance; mixed designs; contrasts and comparisons; power; multiple regression and correlation; the MRC approach to factorial and mixed designs; and multivariate analysis. Credit will be granted for only one of PSYC 394, PSYC 390, STAT 331. Prerequisites: grades of 70 PSYC 290(291), 292). Lab component. Three credits.

421 Advanced Topics in Cognition
This seminar and laboratory course will examine current topics in cognition. Topics considered may include attention, memory, decision-making, consciousness, pattern recognition and artificial intelligence. Credit will be granted for only one of PSYC 421 or PSYC 420. Prerequisite: PSYC 220 or 225, advanced major or honours standing or permission of the chair. Lab component. Three credits. Offered 2019-2020 and in alternate years.

422 Advanced Topics in Perception
This seminar and laboratory course will examine current topics in perception. Topics considered may include multisensory integration, attention and action, sensory impairments, brain plasticity, visual perception, and haptic perception. Credit will be granted for only one of PSYC 422 or PSYC 420. Prerequisites: PSYC 220 or 225; advanced major or honours standing or permission of the chair. Lab component. Three credits. Not offered 2019-2020.

431 Advanced Topics in Behavioural Neuroscience I: Neurobiology of Psychological Disorders
Topics in the field of behavioural neuroscience will be considered. The precise topics covered in the seminar will change from year to year, however the focus of the course content will be on various aspects of the behavioural neuroscience, including, but not limited to the etiology, diagnosis and treatment of neurological disorders, broadly defined. Credit will be granted for only one of PSYC 431 or PSYC 430. Restricted to advanced major and honours students. Cross-listed as BIOL 453. Prerequisite: PSYC 230 or permission of the department chair. Lab component. Three credits. Not offered 2019-2020.

432 Advanced Topics in Behavioural Neuroscience II: Contemporary Issues
This is a seminar course in which current topics in the field of behavioural neuroscience are considered. Credit will be granted for only one of PSYC 432 or PSYC 430. Restricted to advanced major and honours students. Cross-listed as BIOL 454. Prerequisite: PSYC 230 or permission of the chair. Three credits.

441 Advanced Social Psychology
An examination of selected topics in experimental social psychology. The specific topics in this course will vary depending on the instructor. Topics include self-compassion, sexuality, and relationships. Credit will be granted for only one of PSYC 441 or PSYC 440. Restricted to advanced major and honours students. Prerequisite: PSYC 240 or 350 or 353 or permission of the chair. Lab component. Three credits.

442 Advanced Social and Personality Psychology
An examination of selected topics in experimental social psychology and consideration of the overlap between social psychology and personality psychology. The specific topics will vary depending on the instructor. Topics include self-esteem, interpersonal rejection, and prejudice and stereotyping. Credit will be granted for only one of PSYC 442 or PSYC 440. Restricted to advanced major and honours students. Prerequisite: PSYC 240 or 350 or 353 or permission of the department chair. Lab component. Three credits.

461 Advanced Developmental Psychology: Social & Emotional Development
This course will examine from an empirical standpoint specialized topics in developmental psychology with a focus on social/emotional development. Topics can include the development of emotional understanding, the development of typical and atypical attachment relationships, attachment across the life span, parent child interaction, and peer relationships. Credit will be granted for only one of PSYC 461 or PSYC 460. Restricted to honours and advanced major students. Prerequisite: PSYC 260 or PSYC 354 or permission of the department chair. Lab component. Three credits. Not offered 2019-2020.

462 Advanced Developmental Psychology: Perceptual & Cognitive Development
This course will examine from an empirical standpoint specialized topics in developmental psychology with a focus on perceptual and cognitive development. Topics can include the development of intentionality, understanding self and others, language, and memory. Credit will be granted for only one of PSYC 461 or PSYC 460. Restricted to honours and advanced major students. Prerequisite: PSYC 260 or permission of the chair. Restricted to honours and advanced major students. Lab component. Three credits.
490 Honours Thesis
Prerequisites: PSYC 394, completed or concurrent; honours standing in psychology. Six credits.

491 Senior Seminar
The purpose of this non-credit course is to assist students in carrying out thesis or senior paper research, choosing a career, and gaining admission to graduate or professional school. Students will present their thesis proposal orally in the fall term and their completed research in the spring. Attendance at colloquia and guest lectures relevant to psychology is mandatory. Prerequisite: senior standing in an advanced major or honours program in psychology. No credit.

499 Directed Study I and II
These are reading or laboratory courses in which the student pursues an individual program of study under the direction of a faculty member. See section 3.5. Three credits each.

9.33 PUBLIC POLICY AND GOVERNANCE
D. Brown, Ph.D., Coordinator

The program will introduce students to the broad spectrum of public affairs and leadership in Canada and abroad. Students will develop the ability to critically assess the institutions and processes associated with government and governance, as well as to analyze the processes and outcomes in the design, implementation, and assessment of public policy at all levels of social organization. Students will engage with historical and contemporary issues and topics in public policy and develop a critical account of their development, implementation, and implications. They will also consider alternative policies and their potential impact, as well as the broader implications of policies as part of governance models and their structural logic. Students will become proficient in a core set of skills and interdisciplinary knowledge with immediate application to the broad public sector as well as private organizations dealing with government and policy matters.

Major and Joint Major
Requirements:
  a) 36 credits in PGOV
    i) PGOV 101, 201, 202, 301, 302, 303, 401 21 credits
    ii) PGOV or Designated 15 credits
  b) ECON 101, 102, 241; PSCI 101, 102, 221, 222; STAT 101
No more than 12 credits of designated courses may be from a single department. None of the designated courses may be in the student's declared minor or other major subject.

Honours with Subsidiary
Requirements:
  a) 48 credits in PGOV
    i) PGOV 101, 201, 202, 301, 302, 303, 401, 402, 451, 490 33 credits
    ii) Designated PGOV 15 credits
  b) ECON 101, 102, 241; PSCI 101, 102, 221, 222; STAT 101
No more than 12 credits of designated courses may be from a single department. None of the designated courses may be in the student's declared minor or other major subject.

Minor or Subsidiary
Requirements:
  a) PGOV 101, 201, 202 9 credits
  b) ECON 101 or 102 3 credits
  c) PGOV Core or Designated 15 credits
No more than 6 credits of designated courses may be from a single department. None of the designated courses may be in the student's declared major or honours subject.

Pair
  a) PGOV 101 3 credits
  b) PGOV 201 or 202 3 credits
  c) PGOV Core or Designated 6 credits

101 Modern Challenges for Public Policy & Governance
This course introduces students to the field of public policy and governance by immersion in a key set of contemporary challenges for Canada and the world. It is available to all students but is also intended as the gateway course for those planning to take more PGOV courses. Students will be taught foundational concepts and explore key current issues. Three credits.

201 Public Policy
The course consists of an overview of public policy: what it is and how it is studied. Students will examine the social forces and ideas behind public policy debates as well as the nature of policy outcomes through history, in Canadian and global settings. A further understanding of policy process and outcomes is achieved by undertaking case studies of a range of policy fields such as economics, health, aboriginal studies and issues, and environmental studies and issues. Credit will be granted for one of PGOV 201 or PSCI 342. Prerequisite: PGOV 101 plus 24 credits, or permission of the instructor. Three credits.

202 Governance
This course will introduce the concept of governance and ask students to address questions that often arise from the process of governance such as: What constitutes good governance? How do we keep governing bodies accountable? Who are the stakeholders? How does corporate governance differ in the public, voluntary, and private sectors? How does Indigenous Governance work? What are the risks and benefits of privatization or public-private partnerships? Prerequisite: PGOV 101 plus 24 credits, or permission of the instructor. Three credits.

301 Comparative Public Policy
The course provides an intermediate examination of the ways in which public policy is formulated and implemented Canada and other democratic systems. Policies and governance across different levels and forms of government will be covered in order to give students a detailed account of the evolution and diversity of policy formation and implementation. Credit will be granted for one of PGOV 301 or PSCI 342. Prerequisite: 6 credits PGOV. Three credits.

302 Public Management
This course provides an intermediate examination of the structure and practice of government and governance, whether it be local, indigenous, provincial, national or international entities. It seeks to answer how political communities organize themselves for governing, how governing organizations are best managed, how leaders deal with such persistent issues as political power and bureaucracy, accountability, participation, and citizen rights, and financial and other resources. Credit will be granted for only one of PGOV 302 or PSCI 341. Prerequisite: 6 credits PGOV. Three credits.

303 Research Principles and Practices
A foundational course in the theory and practice of policy research. The course covers the history and development of policy research methods and introduces quantitative and qualitative methods applied to policy design, implementation and evaluation. Students will apply concepts and methods to research projects on contemporary problems in Canada and in the global community in such fields as economic, health, aboriginal, environment and international security. Cross-listed as PSCI 399. Prerequisites: 6 credits PGOV. Three credits.

399 Selected Topics
The topic for 2019-2020 is Think Tanks and Public Interest. This course explores the role think tanks, interest groups and other non-governmental organizations in Canada and the United States play in the policy-making process. In doing so, it highlights how these organizations engage various stakeholders (policy-makers, the media, donors) in an attempt to shape public opinion and public policy. The course involves lectures, discussions, student presentations and a term paper focusing on a case study of a think tank involved in a selected policy field. Prerequisites: PGOV 101 or PSCI 101 or 102, and PGOV 201 or 202 recommended. Three credits.

401 Strategic Governance
Visiting leaders and scholars as well as program faculty will engage with students on topics pertaining to governance and policy, with an emphasis on leadership, problem-solving and long-term thinking with real-world examples. Students will make the link between academic learning and experiential learning by engaging with professionals working in policy and governance fields. Course methods will include lectures, guest speakers, cases, presentation, and simulations. Prerequisites: 12 credits at the 300 level in PGOV core or designated courses. Three credits.

402 Senior Seminar
This course is a required senior seminar for honours with subsidiary students and recommended for majors in PGOV who wish to engage with the academic literature on major contemporary public policy and governance issues. Students will review and debate recently published literature in the field and complete several assignments, both oral and written, in relation to these readings. Credit will be granted for one of PGOV 402 or PSCI 422. Prerequisite: 12 credits at the 300 level in PGOV core or designated courses. Three credits.

451 Internship
This course provides students with the opportunity to practice the concepts and ideas expanded upon in the classroom in a real-world setting. Students will spend the equivalent of one term, usually the summer between the junior and senior year, gaining hands-on experience in a work or volunteer setting. Students will be required to reflect and report on their internship experience and its relevance to the evolving knowledge of a policy sector or governance setting, as well as to learn from fellow students in post-internship seminars. Restricted to PGOV students. Prerequisites: PGOV 301, 302, 303. Three credits.
### 490 Honours Thesis

Under the supervision of a professor each student completes a research project, from conception to completion, over the course of the year. Students are responsible for choosing a topic, the use of resources, the methodological soundness, and literary quality of the final product. Restricted to honours students. Six credits.

### PUBLIC POLICY AND GOVERNANCE DESIGNATED COURSES

Department prerequisites will apply.

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Religious studies teaches the cultural literacy that is critical in a globalized world. Students are introduced to historic and contemporary expressions of world culture through the study of our world’s religions, the historic basis of human society. Religious studies examines relationships between religion, the individual, and society. The department offers a broad spectrum of courses relating to all major religious traditions. Contemporary life issues are also examined as they relate to world religions. Students can take religious studies courses as electives or pairs, or to complete a minor, major, joint major, or honours program. The courses are intended, however, for a broad range of undergraduate students who wish to examine the religious answers to the major questions about human existence. See chapter 4 for regulations.

The following streams are available in the department of Religious studies:

**Mindful Living**
- 294 Selected Topics: Mindfulness: How to Cope with Hard Things
- 315 Authentic Power and Gender
- 328 Mind, Self and Society
- 394 Selected Topics: Authentic Relationship
- 395 Selfless Leadership: Be the Change I
- 397 Selfless Leadership: Be the Change II

**Buddhist Studies**
- 111 World Religions I: Compassionate Global Citizenship
- 235 Hinduism and Buddhism
- 294 Selected Topics: Mindfulness: How to Cope with Hard Things
- 310 Religion in Modern India
- 315 Authentic Power and Gender
- 327 Buddhist Thought: The Way of the Bodhisattva
- 328 Mind, Self and Society
- 414 Ancient Indian Myth and Ritual

**Celtic Religions**
- 111 World Religions I: Compassionate Global Citizenship
- 219 Celtic Paganism
- 222 Fantastic Beasts and Where to Find Them in World Religions
- 229 Celtic Christianity

**Christian Studies**
- 112 World Religions II: Compassionate Global Citizenship
- 117 Ethical Principles for Health Care Providers
- 200 Introduction to Religious Ethics
- 210 The Bible and Film
- 212 Christianity
- 221 Religion and the Environmental Crisis
- 222 Fantastic Beasts and Where to Find Them in World Religions
- 225 Cults and Alternative Religions
- 229 Celtic Christianity
- 246 Philosophy of Religion
- 311 New Testament
- 312 Old Testament/Hebrew Bible
- 317 Paul and His Interpreters
- 325 Early Christian Women
- 331 Social Activists Inspired by the Bible
- 333 Religion, Violence and Peace
- 334 Black/African Diaspora: Culture, Religion and Society
- 342 Prophets and Prophecy
- 353 Iconography of Christian Art: The Life of Christ
- 354 Iconography of Christian Art: The Saints
- 363 Christianity in the Roman World
- 365 Spirituality in Medieval Christianity
- 404 The Dead Sea Scrolls
- 426 The Jewish World of Jesus
- 427 Jesus the Christ
- 428 Mind, Self and Society
- 315 Authentic Power and Gender
- 316 Women in Early Judaism
- 333 Religion, Violence and Peace
- 342 Prophets and Prophecy
- 352 History of Early Judah
- 404 The Dead Sea Scrolls
- 416 History of Archaeology of Ancient Israel
- 426 Jewish World of Jesus

**Hindu Studies**
- 111 World Religions I: Compassionate Global Citizenship
- 221 Religion and the Environmental Crisis
- 222 Fantastic Beasts and Where to Find Them in World Religions
- 235 Hinduism and Buddhism
- 236 Hindu Deities
- 314 Ancient Indian Myth and Ritual

**Islamic Studies**
- 112 World Religions II: Compassionate Global Citizenship
- 209 Beginning Arabic
- 254 Islam
- 261 Islam and Film
- 295 Religion and Politics
- 333 Religion, Violence and Peace
- 374 Modern and Contemporary Islam
- 375 Islam in Canada

**Jewish Studies**
- 112 World Religions II: Compassionate Global Citizenship
- 210 The Bible and Film
- 214 Judaism
- 222 Fantastic Beasts and Where to Find Them in World Religions
- 246 Philosophy of Religion
- 295 Religion and Politics
- 312 Old Testament/Hebrew Bible
- 316 Women in Early Judaism
- 333 Religion, Violence and Peace
- 342 Prophets and Prophecy
- 352 History of Early Judah
- 404 The Dead Sea Scrolls
- 416 History of Archaeology of Ancient Israel
- 426 Jewish World of Jesus

**Ethical Principles for Health Care Providers**
- This course is designed to provide the foundations for promoting moral development and ethical competence among health care professionals as informed by diverse religious and cultural traditions. Students will be introduced to the moral and ethical principles underlying debates concerning advancements in medical technologies. Special emphasis will be placed on the moral behaviours and skills demonstrated by exemplary health care providers in health care settings. Three credits. Offered 2019-2020.

**Religion, Spirituality, and Health**
- This introductory course which provides a thematic focus on spirituality, healing and well-being in selected Eastern and Western religious traditions. Each unit of study will include an introduction to the tradition; explore spiritual paths pursued by its practitioners; examine characteristics of illness, healing and well-being in the tradition; and explore one or more specific contemporary health concerns and healing practices which arise from within each religious tradition. Credit will be granted for only one of RELS 120, RELS 100 or RELS 110(111/112). Six credits.
198 Selected Topics
The topic for 2019-2020 is World Religions: What You Need to Know. This course teaches what you need to know to be successful by developing four competencies of a global citizen: what you need to know to interact with a client/customer/patient/neighbor who is of a different religion; what you need to know when travelling; what you need to know to do graduate studies; and what followers of this religion need to know. We study Indigenous religions, Hinduism; Buddhism, Taoism, Confucianism, Judaism, Christianity, Islam, Sikhism, and New Religious Movements. Credit will be granted for only one of RELS 198, RELS 111 or RELS 112. Three credits.

209 Beginning Arabic
Arabic is written and understood as an official language in more than 35 countries, including at least 400 million people living in majority Arabic-speaking countries. This course introduces students to formal written Arabic and the spoken dialects of Syria and Egypt. Students will become proficient at reading, writing, and understanding basic Arabic and will be able to carry on simple conversations. In addition to language, the course includes expressions of culture, both religious and non-religious. Credit will be granted for only one of RELS 209 and RELS 291(2018-19) or RELS 298(2017-18). Three credits.

210 The Bible and Film
This course examines the impact of the Bible on film, and introduces major biblical themes in films with, and films without, explicit religious content. Students will learn how biblical knowledge can enrich our understanding of modern culture and important human issues, such as creation, redemption, election, messiah-ship, charisma, and tradition. Three credits. Offered 2019-2020.

212 Christianity
This course is a comprehensive investigation of the history, teachings, and cultural influence of Christianity from its beginnings as an attempted renewal of Judaism in the first century of the common era to its current role as an international influence on world affairs. We will examine representative texts and thinkers, comparing the differences among the various denominations of Christianity (Eastern Orthodox, Roman Catholic, Protestant). Students will also learn about the past and contemporary relationships between Christianity and other religions, especially Judaism and Islam. Credit will be granted for only one of RELS 212 and RELS 100. Three credits. Offered 2019-2020.

214 Judaism
This course introduces the historical development of Judaism from its origin to the 21st century. Special attention is given to factors that shaped this development: geographical, political, economic, social, and theological. Three credits. Offered 2019-2020.

215 Sociology of Religion
An introduction to the sociological study of religion. Topics include social factors that influence religion at individual and communal levels; religion as agent of social cohesion and social conflict; religion and power structures; the impact of pluralism and globalization on religion today. Cross-listed as SOCI 227. Three credits. Offered 2019-2020.

219 Celtic Paganism
This course examines the religious practices and beliefs of the ancient Celtic peoples that we can glean from archaeology, reports of Greek and Roman commentators, place-name evidence, and the mythology in medieval Irish and Welsh narrative tradition. Other topics include syncretism, the adaptation of pagan festivals into Christian holidays, the persistence of elements of paganism into the Christian era, witchcraft in Scotland and Ireland in the context of the European phenomenon and the modern use of the term “Celtic Christianity”. Cross-listed as CELT 235. Three credits. Offered 2019-2020.

221 Religion and the Environmental Crisis
Perhaps the greatest challenge of our time is the ecological crisis. This threat has provoked widespread reflection upon humanity’s relationship to its environment. Such reflection however is not new. This relationship was already being explored millennia ago, in humanity’s most ancient religious texts. This course investigates the historical interaction of religion and ecology, and considers how religion might yet constitute either a hindrance or aid in navigating the present ecological crisis. Credit will be granted for only one of RELS 221 and RELS 356. Three credits. Not offered 2019-2020.

222 Fantastic Beasts and Where to Find Them in World Religions
Much contemporary fantasy draws upon ancient and medieval myths about beasts and monsters of various sorts. In this course, we will consider the religious origins of the fantastic, and how it continues to resonate in our contemporary world. Credit will be granted for only one of RELS 222, RELS 292(2018-19) and RELS 298(2017-18). Three credits.

225 Cults and Alternative Religions
A study of cults in the context of 20th-century North American society, beginning with defining cults in relation to sects and churches. Topics include neo-paganism; Hare Krishna; the theosophical tradition; the Unification Church; tragic endings to cults such as the Branch Davidians and Heaven’s Gate; why people join cults; and the religio-cultural significance of cults today. Three credits. Offered 2019-2020.

229 Celtic Christianity
This course is an exploration of the development of Christianity among the Celtic peoples. A major facet will be the medieval hagiographic tradition and saints’ cults from the fourth to the twelfth centuries. Other topics include monasticism, peregrini, the Hiberno-Scottish mission to the continent, conflict with Roman Catholicism, material culture, the modern use of the term ‘Celtic Christianity’. Cross-listed as CELT 235. Three credits. Offered 2019-2020.

235 Hinduism and Buddhism
This course introduces the paths to enlightenment identified by members of the Hindu and Buddhist traditions of India and Tibet. We will introduce the philosophy, mythologies, and ritual traditions of both Hinduism and Buddhism. Three credits. Not offered 2019-2020.

246 Philosophy of Religion
Explores the philosophy of religion, including different concepts of God with emphasis on the Judeo-Christian tradition; arguments for the existence of God; classical and modern challenges to belief in God. Issues such as ‘life after death’, miracles, religious experience, and the concept of prayer may also be discussed. Credit will be granted for only one of RELS 246 or PHIL 240. Cross-listed as PHIL 245. Three credits.

254 Islam
This course introduces students to the emergence of the Islamic tradition with the aim of understanding a) its place in the Near Eastern religious and geo-political context; b) its reception by contemporaries, especially Christians of the 7th-9th centuries; and c) the teachings of its seminal texts, especially the Qur’an. Particular attention is given to those sections of the Qur’an that reflect the Jewish and Christian theological environment within which the text emerged. Credit will be granted for only one of RELS 254 or RELS 370. Three credits. Offered 2019-2020.

261 Islam and Film
Students will gain a critical understanding of film as an artifact of culture and a powerful medium of religious and cultural expression in Muslim contexts. Students encounter themes such as religion and politics, marriage and family, youth, society, sexuality, ritual and devotion, Islamic law, community, and ethics, and engage critically in their cinematic representations. The course is based primarily on foreign films with English subtitles and provides a foundation for further study of Islamic traditions. Three credits. Not offered 2019-2020.

289 Selected Topics
The topic for 2019-2020 is Food and Religion. Feasting, fasting, ritual, customs, taboos, ethics and more. Food is ubiquitous in world religions. This course takes an innovative and appetizing approach to learning about the place of food in religious practices. How do food practices express a religious worldview? How do they define boundaries between insiders and outsiders? How do they try to build bridges? A study of food and religion reveals far more than the permissions and prohibitions commonly associated with religious foodways. Three credits.

294 Selected Topics
The topic for 2019-2020 is The Mindfulness: How to Cope with Hard Things. This course teaches how to have a thought, how to have an emotion and how to cope with hard things. It introduces and offers experiential knowledge of several popular “Mindfulness” practices. It also asks: how can we be mindful if we don’t understand the nature of mind? It introduces traditional contexts of Buddhist psychology, philosophy and ethics to promote reflection and increase the skillfulness with which we relate to the minds of ourselves and others. Three credits.

297 Selected Topics
The topic for 2019-2020 is The Body: An Owner’s Manual. The course teaches how to have a body? We will support each other in finding “what is the right answer for you?” We will examine varied perceptions of the body in the history, cosmology, ethics, philosophy, sociology and art of Hinduism, Buddhism, first nation’s traditions, and Chinese traditions. With the help of guests, we will create our personal “owner’s manual” for the body and examine such questions as sexual safety, nutrition and financial health. Three credits.

310 Religion in Modern India
This course will explore continuity and change in modern Indian religion. After an introduction to contemporary Indian secular democracy, we will explore traditional Indian religion as a living phenomenon and review basic elements of traditional Hinduism. As well, examine the contribution of various change-makers to the
evolution of Indian religious tradition and traditional Indian responses to the challenges created by Buddhism, Islam, British colonization, the partition of India, and Indian secular democracy itself. Prerequisite: any 100-level RELS course or permission of the instructor. Six credits. Not offered 2019-2020.

311 New Testament
This course provides an introduction to the academic study of the history and literature of the early Christian movement. The aim of this course is to provide a solid understanding of the New Testament through close study of texts, historical analysis, and evaluation of evidence and arguments. We will explore several early Christian groups, their multiple disputes, arguments, positions, theologies, and understandings, through close reading of texts and appreciation of historical contexts. Credit will be granted for only one of RELS 311, RELS 255 and RELS 265. Three credits. Offered 2019-2020.

312 Old Testament/Hebrew Bible
This course examines the foundational texts of both Judaism and Christianity, notably the prophetic, historical, and wisdom literature included in the Old Testament. Each biblical book will be placed in its historical, theological, and literary context, by situating it in the relevant archeological data, historical background, and contemporary scholarship. Credit will be granted for only one of RELS 312 and RELS 253. Three credits. Offered 2019-2020.

315 Authentic Power and Gender
This course presents “authentic power” as understood in Hindu and Buddhist traditions. Here, “authentic power” is that which creates, supports, maintains and sustains life. It is understood as an expression of inter-dependent masculine and feminine “principles” both within and outside the individual self. That which seeks to manipulate, control, dominate, oppress or defend territory is here understood to be based in fear: it is an expression of cowardice and, as such, merits our compassion. Cross-listed as WMGS 397. Three credits. Offered 2019-2020.

316 Women in Early Judaism
This course investigates the depiction and experience of women from the earliest biblical narratives to the separation of Christianity from Judaism. Students analyze responses to women and ideas about women in Biblical and other early Jewish writings, in comparison to women in the rest of the Ancient Near East, in conversation with feminist interpreters of the Bible and early Judaism. We will note the relevance of this material for contemporary gender issues. Cross-listed as WMGS 316. Three credits. Not offered 2019-2020.

317 Paul and His Interpreters
This course provides an introduction to the academic study of the history and literature of the early Christian movement. The aim of this course is to provide a solid understanding of the New Testament through close study of texts, historical analysis, and evaluation of evidence and arguments. We will explore several early Christian groups, their multiple disputes, arguments, positions, theologies, and understandings, through close reading of texts and appreciation of historical contexts. Credit will be granted for only one of RELS 317 and RELS 275. Three credits. Not offered 2019-2020.

325 Early Christian Women
This course investigates women’s participation in early Christian groups from the time of Jesus’ ministry to the 6th century. Christian women’s lives will be compared to those of women in Jewish and Greco-Roman societies. Students will analyze New Testament and other early Christian writings, read feminist scholarship, and examine such issues as women’s leadership and violence against women. Cross-listed as WMGS 325. Three credits. Offered 2019-2020.

326 Hindu Deities
This course presents the stories of goddesses and gods in the Hindu pantheon. It explores elements of ancient and classical Hindu thought associated with these stories of these deities. It identifies related elements in classical schools of Hindu philosophies such as Sankhya and Vedanta, and gives voice to the poets of the medieval Hindu devotional tradition. Together we will explore concepts of self, other, the world, devotion, the divine and freedom in Hindu religious thought. Three credits. Not offered 2019-2020.

327 Buddhist Thought: the Way of the Bodhisattva
This course presents the Buddhist ideal of the Way of the Bodhisattva, one who vows to continue to re-incarnate, lifetime after lifetime, in order to serve all beings until such time as all beings are freed from suffering. It examines early Buddhist teachings that anticipate the development of this ideal, including the Theravada Buddhist focus on the strength of discipline of the mind and body, before detailing the Mahayana Buddhist development of this ideal and its expansion in the narrative and practice of Vajrayana or Tibetan Buddhist tradition. It will include study of Buddhist philosophy regarding the gradual stages of realisation of enlightenment. Three credits. Not offered 2019-2020.

328 Mind, Self and Society
A “Mindfulness Immersion” experience, this summer course offers three weeks of intensive online learning in preparation for a one-week experience of Buddhist monastic practice to take place at Gampo Abbey in Cape Breton, Nova Scotia. Study will include the historical development of Buddhism, and in particular of Tibetan Buddhism, along with the examination of ethical and philosophic underpinnings of Buddhist monastic practice. A variety of mindfulness/contemplative techniques will be experienced during our time as part of the Buddhist monastic community. Prerequisite: permission of the instructor; enrolment is limited. The 3-week theory component of the course is offered online only. Three credits. Offered Summer 2019.

331 Social Activists Inspired by the Bible
In this course students trace the biblical origins of ideas that have inspired global leaders to engage issues of social justice in the world. The activists typically include Moses, Coady, Martin Luther King Jr., Mother Teresa, Abraham Joshua Heschel, Oscar Romero, Charlotte Keys, SueZann Bosler, Helen Prejean, Jim Zwerg, John Corbett, John Dear, Shane Claiborne, Daniel Bergman, Robin Harper, William Wilberforce, Desmond Tutu, Jimmy Douglas, Dorothy Day, and Dietrich Bonhoeffer. Three credits. Not offered 2019-2020.

333 Religion, Violence and Peace
Contrary to an old belief, in our time religion is increasingly associated with violence rather than peace. This course explains why this is the case and whether there is an inherently violent element in religion that has passed unnoticed until now. The investigation takes us through Greek, Roman, Jewish, Christian and Islamic religions to find the religious underpinnings to concepts of sacrifice, scapegoating, lynching, and global violence. Credit will be granted for only one of RELS 333 and RELS 335. Three credits. Offered 2019-2020.

334 Black/African Diaspora: Culture, Religion and Society
This course critically examines structural and socio-cultural factors that operate and/or reproduce powerlessness among Black people in the Diaspora. Attention will be given to Black/African culture, experience and contributions, especially in Canada, the United States, and the Caribbean. Attention will also be given to the intersection of religion and cultural expressions in the African Diaspora. The importance of religion in the Black Diaspora’s experience of both oppression and liberation will be a key component of our analytic framework. Credit will be granted for only one of RELS 334 and RELS 398 offered in 2016-2017. Cross-listed as SOCI 337. Three credits. Not offered 2019-2020.

336 Religion and Politics
An examination of the impact of religion on politics and politics on religion. Students will consider the relationship between religion and politics in the Middle East, Northern Ireland, India and Pakistan, Eastern Europe and North America. Case studies will demonstrate interactions between the state and Christianity, Islam, Hinduism, and Judaism, as well as the influence of religion on citizenship, education, the party system, and social issues. Credit will be granted for only one of RELS 336, RELS 295, PSCI 295. Cross-listed as PSCI 336. Three credits.

342 Prophets and Prophecy
This course surveys the role and teaching of the biblical prophets in their ancient setting, and their impact on modern life and thought. Credit will be granted for only one of RELS 342, RELS 253 and RELS 312. Three credits. Offered 2019-2020.

352 History of Early Judah
This course explores the history of ancient Judaism from the Babylonian captivity in 586 BCE to the fall of Jerusalem in 70 CE. Students will examine the geography, culture and historical milieu of the Apocrypha, Dead Sea Scrolls, Jesus and the earliest rabbinic writings, and discuss the major persons and events in ancient Judea. Cross-listed as HIST 357. Three credits. Not offered 2019-2020.

353 Iconography of Christian Art: The Life of Christ
Iconography is the identification and interpretation of images. This course is an introduction to the iconography of Christian art, with an emphasis on images of the Life and Passion of Christ. The course will examine how images develop over history, and how they may be understood in light of historical events, changes in theological thought, and in the artist’s own spirituality. Cross-listed as ART 356. Three credits.

354 Iconography of Christian Art: The Saints
This course is an introduction to the iconography of Christian art, with an emphasis on images of Mary and the saints. The course will examine how images develop over history, and how they may be understood in light of historical events, changes in theological thought, and in the artist’s own spirituality. Discussion will include how such images were used as objects of personal devotion but also for the conveying of important theological and social values. Cross-listed as ART 357. Three credits.
363 Roman Christianity
Examines the development of Christianity from its beginnings in the 1st century to its acceptance as the official religion of the Roman Empire in the 4th century. Students will learn about early Christian beliefs and practices, and explore the challenges faced by the first Christians. Topics include community organization, persecution, martyrdom, Gnosticism, and women in the church. Three credits. Offered 2019-2020.

365 Spirituality in Medieval Christianity
This course will focus on the spirituality of the formative years in the development of Christian thought, beginning with the legalization of Christianity in 313 CE and ending with the Reformation. Students will see how some of the most searching and intelligent men and women in both the Western and Eastern churches have wrestled with the question of how it is possible to know God. Three credits. Offered 2019-2020.

374 Modern and Contemporary Islam
This course examines issues and debates in modern and contemporary Islamic discourse from a broad spectrum of perspectives. The course introduces students to a plurality of voices, both Sunni and Shi’ite, on many controversial issues facing Muslims today, including, but not limited to, the nature of the Qur’an, methods of interpretation, Muhammad, the role of women, Islam and the West, violence, terrorism, and human rights. The course uses secondary sources and primary sources in translation. Three credits. Not offered 2019-2020.

404 The Dead Sea Scrolls
This course surveys the Dead Sea Scrolls found in the Judean desert. The most important archaeological discovery of the 20th century, these scrolls have generated much controversy. We will examine the major texts from Qumran to assess their impact on our understanding of the Hebrew Bible and the New Testament, and the period of Judaism in which Christianity arose. We will place the scrolls in their various contexts: archaeological, historical, literary, religious, and social. Credit will be granted for only one of RELS 404 and RELS 318. Three credits. Not offered 2019-2020.

414 Ancient Indian Myth and Ritual
Ancient Indian thought assumes that there is a fundamental wholeness to our lives and to our world which only appears at times to be fragmented. The myth, ritual and philosophy of ancient India are, in many respects, a contemplation on this basic wholeness and its composite elements. Exploration of ancient Indian thought with its ideas of humans and demons, ancestors and gods, and our place in the natural world in light of this reflection on “the parts and the whole” will be discussed. Prerequisite: any 100-level RELS course. Three credits. Not offered 2019-2020.

416 History and Archaeology of Ancient Israel
This course explores the history of ancient Israel and Judah from their origin to the fall of Jerusalem in 586 BCE. Students will examine the geography, culture, and historical milieu that gave rise to the Old Testament and Hebrew Scriptures, and discuss the major persons and events in ancient Israel and Judah. Credit will be granted for only one of RELS 416 and RELS 351. Three credits. Not offered 2019-2020.

426 The Jewish World of Jesus
This course examines the history and literature of the Jewish people from the period of the Maccabean Revolt in the 2nd century BCE to the Bar Kokhba Revolt in the 2nd century CE. The literary sources for the study of the Jewish world at the turn of the era include the Dead Sea Scrolls, the Bible, and the Mishnah. This course serves as an introduction to the religious and social environment of the historical Jesus. Credit will be granted for only one RELS 426 or RELS 440. Prerequisite: any 100-level RELS course. Three credits. Offered 2019-2020.

427 Jesus the Christ
Building upon RELS 426, this course begins with an examination of aspects of the life of the historical Jesus, including his teaching, ministry, and the events leading to his crucifixion. The four canonical Gospels and Letters of Paul will be analyzed as students probe the question of why Jesus came to be understood as the Messiah by the first Christians. Credit will be granted for only one RELS 427 or RELS 440. Prerequisite: RELS 426 or permission of the instructor. Three credits. Offered 2019-2020.

490 Honours Thesis
Each student works under the supervision of a chosen professor who guides the selection of a thesis topic, use of resources, methodological component, quality of analysis and execution, and literary calibre of the student’s work. Required for all honours students. Six credits.

499 Directed Study
Under the direction of a faculty member, students may pursue an individual program of study in an area of religious studies not available in the course offerings. For eligibility, see section 3.5. Three or six credits.

9.35 SOCIOLOGY
R. Bantjes, Ph.D.
R. Chiisoholm, Ph.D.
P. Cormack, Ph.D.
L. Harling Stalker, Ph.D.
D. Lynes, Ph.D.
D. MacDonald, MA
P. Mallory, Ph.D.
S. Marmura, Ph.D.
J. Phyne, Ph.D.
D. Smythe, Ph.D.
N. Verberg, Ph.D.
Professor Emeritus
W. Jackson, Ph.D.
D. Maclnnes, Ph.D.

The Department of Sociology offers honours and major programs. Second- and third-year sociology courses require SOCI 101, 102 as prerequisites. 400-level courses require at least twelve credits in sociology below the 400 level as a prerequisite, or the permission of the instructor. SOCI 101, 102 are included these credits.
BA Major in Sociology
Candidates must follow the degree requirements of the Faculty of Arts and complete 36 SOCI credits which include:

a) SOCI 101, 102;
b) SOCI 202 and at least 3 additional credits at the 200 level;
c) SOCI 301 and SOCI 302;
d) at least 12 additional SOCI credits at the 300 or 400 level.

BA Honours in Sociology
Candidates must follow the degree requirements of the Faculty of Arts and complete 60 SOCI credits which include:

a) SOCI 101, 102;
b) SOCI 202 and at least 3 additional credits at the 200 level;
c) SOCI 301 and SOCI 302 and at least 3 credits in methods: SOCI 300 or 307;
d) at least 6 additional SOCI credits at the 300 level;
e) SOCI 400 (thesis), SOCI 491, plus at least 6 credits at the 400 level;
   SOCI 391 is highly recommended.

Honours with a Subsidiary Subject
If sociology is selected as a subsidiary subject by an honour's student in the BA program, 24 SOCI credits are required, with at least 6 of those credits at the 300 level.

101 Introduction to Sociology I
This course introduces students to the origins and development of sociological thinking and research, beginning with the foundations of the discipline in the 19th century. Students are then introduced to the concepts and methods within sociology. The objective is to explore the extent and limits of our capacity to change the social world by reference to sociological research in both a Canadian and global context. Credit will be granted for only one of SOCI 101 and SOCI 100. Three credits.

102 Introduction to Sociology II
This course builds on the foundations of sociological theory, methods and historic considerations established in SOCI 101. Students will explore a range of topics dealing with various aspects of social inequality, culture, integration, and ideological conflict in both a Canadian and global context. Together with SOCI 101, this course provides the prerequisite for all other sociology courses. Credit will be granted for only one of SOCI 102 and SOCI 100. Prerequisite: SOCI 101. Three credits.

202 Research Principles and Practices
This course addresses how various philosophic assumptions shape the aims and practices of research in sociology. It provides students with empirical research design principles and an introduction to methods of collecting and recording data, assessing reliability and validity, and conducting data analysis. Different research strategies are introduced. The ethical implications of research will be discussed. Prerequisites: SOCI 101, 102. Three credits.

203 Gender
This course is about gender differences and gender inequality. The main objective of the course is not only to examine differences in women's and men's social positions, but also to stimulate critical and informed thinking about the sources of gender inequality in our society. More generally, the course aims to explore the many ways in which this society is organized around gender differences and divisions. Credit will be granted for only one of SOCI 203 and SOCI 204 completed between 2012-2014. Prerequisites: SOCI 101, 102. Three credits. Not offered 2019-2020.

207 Health Justice
Students will approach the study of human health from an intersectional, critical sociological perspective that emphasizes the links between social, economic, political, environmental and climate justice. The class will engage in an ongoing analysis examining how equality along the lines of race, class, gender, ability and sexuality are relevant to accomplishing health justice. Beginning with an understanding of the distinction between biomedicine and the social determinants of health, the class will explore some of the dominant sociological debates and approaches to the study of health and illness and how these can best be used as instruments for achieving health justice. Prerequisites: SOCI 101, 102. Three credits.

212 Social Dissent
Social dissent has been a persistent, perhaps necessary, feature of modern (capitalist, bureaucratic, technocratic, patriarchal) societies. Students will explore ways in which dissent has been voiced and alternatives have been envisioned in the 20th century, including new organizational forms and tactics of dissent, and new technologies and international networks. Students may use the course as a basis for advanced social scientific research. Prerequisites: SOCI 101, 102. Three credits.

216 Canadian Society
This course presents an analysis of Canadian Society and its development from a sociological perspective. Particular attention is given to political/economic institutions, ideology, class structure, regionalism, cultural forms and national identities. Prerequisites: SOCI 101, 102. Three credits. Not offered 2019-2020.

217 Race and Identities
This course discusses the interconnected realities of race, class, gender and sex from various sociological perspectives. Substantive topics will include the socially constructed nature of these concepts in places like media, and the experiences of classism, sexism and racism in the workplace, schools, and everyday life. Credit will be granted for only one of SOCI 217 or SOCI 215. Cross-listed as WMGS 217. Prerequisites: SOCI 101, 102. Three credits.

221 Marriage and Family Life
This course analyzes the marriage and family life from a sociological perspective. It provides an overview of social changes over the last century, such as the falling birth rate, the rise in cohabitation and the legalization of same-sex marriage. Topics include marriage and fertility trends, the rise of intensive parenting and the dual earner family, the normalization of separation and divorce, the social cost of family violence, and how technology is influencing parenting. Credit will be granted for only one of SOCI 221, SOCI 210, or WMGS 210. Cross-listed as WMGS 221. Prerequisites: SOCI 101, 102. Three credits.

227 Sociology of Religion
An introduction to the sociological study of religion. Topics include social factors that influence religion at individual and communal levels; religion as agent of social cohesion and social conflict; religion and power structures; the impact of pluralism and globalization on religion today. Cross-listed as RELS 215. Prerequisites: SOCI 101, 102. Three credits.

242 Technology and Society
This course is designed to introduce students to core sociological issues and debates pertaining to technology. Topics covered include the nature of technological artifacts and systems, technology and social change, the relationship between technological innovation and scientific knowledge, technology and inequality, the social shaping of technology, and the role of digital media in relation to new forms of cultural identity and social control. Credit will be granted for only one of SOCI 242 or SOCI 495 completed between 2012-2014. Prerequisites: SOCI 101, 102. Three credits.

243 Consumer Society
This course explores classical to contemporary theories of consumer society beginning with Marx's conception of the commodity as fetish. Themes discussed include conspicuous consumption, gender and consumption, social class, environment, identity, advertising and marketing. Prerequisites: SOCI 101, 102. Three credits. Not offered 2019-2020.

244 Cultures and Societies
This course will focus on exploring how society shapes culture and culture shapes society. Drawing on local, national and global practices of culture and cultural objects, students will learn how meaning-making is critical to understanding everyday life. Credit will be granted for only one of SOCI 244 or SOCI 298 offered in 2015-2016. Prerequisites: SOCI 101, 102. Three credits.

247 Environmental Social Science I: Problems and Paradigms
This course introduces students to the major environmental challenges of the 21st century from a science social perspective. Modern societies that have sought to conquer natural limits have now conjured up unanticipated "environmental" consequences. Students will explore how human understandings of environmental "problems" as well as action towards environmental solutions are shaped by ways of thinking, social contexts and institutional power relations. Prerequisites: SOCI 101, 102. Three credits. Not offered 2019-2020.

248 Environmental Social Science II: Power and Change
A continuation of SOCI 247, this course addresses the same conceptual problems but focuses more on understanding the societal and political response to environmental issues. Students will critically examine both proposed ecological futures, as well as means of environmental problem solving and societal change: state policy, intergovernmental treaties, environmental movements, and market solutions. Prerequisite: SOCI 247. Three credits. Not offered 2019-2020.

251 Theories of Deviance and Social Control
This course offers students a theoretical foundation for understanding social processes of deviance and social control. Using various theoretical devices, students will critically examine the social category of deviance and its use in social institutions and daily social practices. Topics could include mental illness, drug and alcohol use, alternative sexualities, social violence and disability. Credit will be granted for only one of SOCI 251, SOCI 250 or SOCI 298 completed in 2016-2017. Prerequisites: SOCI 101, 102. Three credits.
252 Topics in Deviance and Social Control
This course draws upon the theoretical preparation provided in Sociology 251 to critically assess various topics in deviance and social control, and their power relations. Students will for instance, consider the complex relations of power and control associated with sex and sexuality, contemporary notions of fitness and health, white versus blue collar crime, as well as ‘natural’ disasters. Credit will be granted for only one of SOCI 252 or SOCI 250. Prerequisite: SOCI 251. Three credits.

254 Experiencing Social Class
This course explores social class as a lived experience - one in which everyday life both reveals and denies the structural advantages and disadvantages that perpetuate class differences. By way of ethnographic and theoretical literatures, students will study how stages of life and encounters with institutions (school, state, family, etc.) shape social class experiences. Prerequisites: SOCI 101, 102. Three credits.

297 Selected Topics
The topic for 2019-2020 is Social Policy. This course provides an overview of social policy in Canada. Students will examine the relationship between policy and practice, exploring both the impact of policies on social supports and services, and the influence of service delivery on how policies are implemented. Topics covered include: what social policy is, who makes policy, how political behaviour is shaped by policy environments, what policy instruments are, and what is involved in policy implementation and evaluation. Students will learn theories of public policy, policy-making models, the policy-making and practice process, and the role of citizen participation. Prerequisites: SOCI 101, 102. Three credits.

Note: 300-level courses require prerequisites SOCI 101 and 102 or the permission of the instructor.

301 Classical Social Theory
Explores the development and diversity of sociology’s foundational perspectives through the study of selected original works by such authors as Karl Marx, Emile Durkheim and Max Weber. Restricted to major, advanced major and honours students. Prerequisites: SOCI 101, 102. Three credits.

302 Topics in Contemporary Theory
This seminar course on contemporary theory varies from year to year. While a survey approach to contemporary theory may be part of the course, it is probable that the professor will choose specific interests for in-depth analysis. Potential perspectives include feminist theory, anti-racist theory, postmodernism, and neo-Marxist theory. Restricted to major, advanced major and honours students. Prerequisites: SOCI 101, 102. Three credits.

303 Social and Political Thought
This course introduces you to early modern approaches to thinking about the social world, including social contract theory, liberalism, political economy, scientific rationality, progressive history, colonialism, and human rights. We will consider how sociology and the social sciences either developed out of these early modern ideas or, in some cases, reacted against them. The course provides students with the intellectual foundations to engage more fully with contemporary debates in social and political thought. Prerequisites: SOCI 101, 102. Three credits.

304 Feminist Theory
This course examines various directions feminists have taken in studying women's experiences and the construction of gender. Students will learn how these theoretical approaches have influenced feminist research and critical practice. The course will include early feminist thought as well as contemporary feminist theory. Cross-listed as WMGS 303. Prerequisite: WMGS 100. Three credits.

307 Qualitative Research Methods
The course introduces students to the qualitative research methods used by sociologists. The course introduces the philosophical, theoretical, and ethical aspects of qualitative research as well as qualitative approaches to data collection, data analysis, presentation of results, and methods of evaluating qualitative research. The various aspects of qualitative research are illustrated with classical and contemporary studies. Prerequisite: SOCI 202. Three credits.

311 Men and Masculinities
A critical review of the science of masculinity and recent theoretical developments on the social construction of men's lives and masculinities. Topics include male gender role socialization; the role social institutions play in shaping masculinities; masculinity politics, men's movement, and social change. Cross-listed as WMGS 311. Prerequisites: SOCI 101, 102. Three credits. Not offered 2019-2020.

312 Social Movements
This course provides students with the tools for analyzing popular movements for social change. Students will survey the best examples of social movement analysis in the neo-Marxist, new social movement, social constructionism, and resource mobilization traditions. Movements covered may include: labour, environmental, student, peace, anti-racist, women's. Prerequisite: SOCI 212. Three credits.

313 Conceptions of Disability
An introduction to the field of disability studies, this course examines the ways in which disabled people and disability issues are defined and treated in contemporary society. Social and political conceptions of disability are contrasted with medical and individualistic definitions of disability with the aim of developing a critique of taken-for-granted conceptions of normal bodies, minds, and senses. Community-based contributions and responses to disability knowledge are emphasized and common ideas and assumptions about disability are situated historically to illustrate changing relations to disability over time, and to the role of disability knowledge in social change. The experience of disability will be stressed. Prerequisites: SOCI 101, 102. Three credits. Not offered 2019-2020.

314 Disability and Culture
Beginning with the understanding that disability is a social phenomenon, this course provides students with the tools to analyze such cultural conceptions as normality-abnormality, ability-inability, independence-dependence. Students will examine cultural representations of disability that marginalize and oppress disabled people, and explore the ways in which cultural representations of disability differ from experiential accounts. These representations are analyzed from an international perspective, with a focus on how disability has been represented in Canadian social policy, the media, helping professions, and the education system. Prerequisites: SOCI 101, 102. Three credits.

322 The Antigonish Movement as Change and Development
Explores both social and economic development through the history, philosophy, and practice of the Antigonish Movement as experienced at home and abroad. This movement will be used to examine policy systems, labour relations, class conflict, education, co-operative strategies, religion, and ethnicity in the context of social transformation. Cross-listed as DEVS 322. Prerequisites: SOCI 101, 102. Three credits. Not offered 2019-2020.

327 Canadian Families and Parenting
This course explores the impact of social, political, economic and cultural changes on families and parents. Topics include the diversity of family relations, work-life balance, family time, the ‘parenting expert industry’, ‘intensive parenting’, the ‘boomerang generations’ and ‘grand’ relations. Across this range of topics, we consider how gender, race, sexuality, social class, and health influence families and parents. Cross-listed as WMGS 328. Prerequisites: SOCI 101, 102. Three credits. Not offered 2019-2020.

328 Social Inequality
Students will explore the distribution of social, political and economic resources in Canadian society, and the unequal access to these resources based on social class, race, ethnicity, gender, age and region. Using a central theme based upon concepts of class and power, the course examines specific issues such as the socio-economic bases of social inequality, ascription and the consequences of poverty. Prerequisites: SOCI 101, 102. Three credits.

331 Media Effects
This course considers a broad array of issues and controversies pertaining to the study of media effects. Topics covered include the development of propaganda theory, the social significance of advertising, and debates concerning the influence of media content on behavior and popular understandings of social reality. Attention is given to both traditional and holistic approaches to media effects in terms of the strengths and limitations of each. Credit will be granted for only one of SOCI 331 or SOCI 352. Prerequisites: SOCI 101, 102. Three credits.

332 Media Forms
“...the medium is the message.” – Marshall McLuhan. This course introduces students to various media technologies as shaping societies across time, with a focus on media forms rather than content. The course will discuss oral aboriginal culture (and western literate contact), the phonetic alphabet, monuments, papyrus, print, photography, film, TV, and digital media. Credit will be granted for only one of SOCI 332 or SOCI 325. Prerequisites: SOCI 101, 102. Three credits. Not offered 2019-2020.

334 Sociology of Anne of Green Gables
Using the iconic Canadian classic Anne of Green Gables this course sets out to explore the variety of theoretical perspectives used by those in the cultural Sociology. Through the use of the books in the Anne series, films, television, and the author's journals, students will learn how to think about and apply theorists such as Bourdieu, the Frankfurt School, and Barthes. Prerequisites: SOCI 101, 102. Three credits. Not offered 2019-2020.

335 Sociology of Canada's Indigenous Peoples
This course examines how the contemporary situation of First Nations, Métis and Inuit Peoples of Canada is related to historical interactions among Aboriginal
and non-Aboriginal societies and indigenous cultural traditions. This will include consideration of how concerns of cultural identity, class, and gender are complicated by Canada’s colonial legacy as developed with the aid of recent post-colonial/sociological theory. Credit will be granted for only one of SOCI 335, SOCI 317, SOCI 330 or SOCI 397 offered in 2015-2016 and 2016-2017. Prerequisites: SOCI 101, 102. Three credits. Not offered 2019-2020.

337 Black/African Diaspora: Culture, Religion and Society
This course critically examines structural and sociocultural factors that operate and/or reproduce powerlessness among Black people in the Diaspora. Attention will be given to Black/African culture, experience and contributions, especially in Canada, the United States, and the Caribbean. Attention will also be given to the intersection of religion and cultural expressions in the African Diaspora. The importance of religion in the Black Diaspora’s experience of both oppression and liberation will be a key component of our analytic framework. Credit will be granted for only one of SOCI 337 and SOCI 395 offered in 2016-2017. Cross-listed as RELS 334. Prerequisites: SOCI 101, 102. Three credits.

341 Global Agriculture
This course begins with an interdisciplinary survey of the scientific, philosophical, political, social and cultural aspects of global agriculture and food production. Topics examined include the green revolution, the relations between agricultural, and social sustainability, local food versus export economies, food security, food sovereignty and justice, as well as biotechnology, soil science and climate framing. At least one farm visit is included. Credit will be granted for only one of SOCI 341 and SOCI 398 offered from 2016-2018. Prerequisites: SOCI 101, 102. Three credits.

356 Power, Culture and Identity
This course explores the rapidly shifting contexts within which individuals and groups from diverse cultural backgrounds interact, often forming new social and political identities in the process. Questions of identity are considered at the levels of individual subjectivity, localized community, national identity, and de-localized networks. Contemporary aspects of intercultural relations are viewed considering enduring political processes and related social upheavals rooted in colonialism, nationalism and the global spread of capitalist markets. Prerequisites: SOCI 101, 102. Three credits.

364 Food and Society
This course emphasizes linkages between food production and consumption in the changing global political economy. The social organisation of food production and consumption will be assessed from the standpoint of comparative research on global food chains and recent insights surrounding the social construction of food and risks and benefits. Case studies will change on an annual basis but will always involve some consideration of the interrelations between countries from the ‘North’ and the ‘South’. Prerequisites: SOCI 101, 102. Three credits.

366 Coastal Communities
This course introduces students to social research on coastal communities. Emphasis is given to the social transformation of common property fisheries, the rise of industrial aquaculture, demographic transitions in coastal communities and recent moves towards integrated coastal resource management. Comparative case materials from North Atlantic coastal communities in Atlantic Canada, Britain, Ireland, and the Nordic Countries will be used in this course. Prerequisites: SOCI 101, 102. Three credits. Not offered 2019-2020.

373 Irish Politics and Society
This course emphasizes the major factors that contributed to the making of modern Ireland. The topics to be covered include: the role of the Great Famine in altering both the social structure of Ireland and claims to Irish identity, the Irish diaspora and Irish emigrants to Atlantic Canada, social and political changes in the Republic of Ireland from independence to the “Celtic Tiger” phenomenon and continuity and change in the conflict in Northern Ireland. Cross-listed as PSCI 373. Prerequisites: SOCI 101, 102. Three credits.

374 Islam in Canada
Focusing primarily on the Canadian context, this course explores the variety of Muslim identities in North American society. After a brief historical survey of Islam and Muslims in North America, including immigrant and African-American-Islam, the course examines the diverse perspectives of North American Muslim and non-Muslim scholars on questions and debates around integration, identity, authority, youth, education, gender, shariah in Canada (Muslim religious arbitration in civil law), media representation, discrimination, and surveillance post-9/11. Cross-listed as RELS 375. Prerequisites: SOCI 101, 102. Three credits.

380 Urban Sociology
This course covers the major themes and empirical research issues in urban sociology in the 20th- and 21st-century. This includes the rise of the ‘urban’ as a social science phenomenon, the Canadian city in comparative and historical perspective, major theoretical debates in urban social science, the intersection of class, gender and racial forms of inequality in cities, the shifting nature of social and spatial relations, and urban planning, sustainability and globalization. Credit will be granted for only one of SOCI 380 or SOCI 398 completed from 2014-2016. Prerequisites: SOCI 101, 102. Three credits.

387 Hockey and Canadian Culture
This course sets out to explore the intersection between ice hockey and Canada’s socio-cultural identity. The course will have students immerse themselves in contemporary literature to understand the social, cultural, political and economic nuances of hockey in the Canadian context. Prerequisites: SOCI 101, 102. Three credits.

391 Junior Seminar
This seminar will assist honours students in their third-year and their thesis planning and provide an environment in which to learn with senior students working on their thesis. Students will choose an advisor with whom they will develop a proposal, collect materials, and consider methodological and ethical issues relevant to their research. Students are expected to attend colloquia, guest lectures and public talks relevant to the discipline. Highly recommended for and restricted to honours students. Three credits.

394 Selected Topics
The topic for 2019-2020 is Canadian Criminal Justice. This course examines the origins and functioning of the Canadian criminal justice system and how it differs from other justice systems around the world. Topics include the structure and role of the police, the operation of the court system, and the processes of institutional and community-based corrections. More generally the issues to be examined include, the role of the system as a mean of social control, who in society the system benefits the most, and how it comes to be experienced as a form of social oppression by so many of those it claims to serve. Three credits.

395 Selected Topics
The topic for 2019-2020 is Family Policy in Canada. Students gain knowledge about federal and provincial social policies that influence family formation (e.g., pre- and perinatal health care, fertility assistance, adoption), care of infants, children and family members (family leave, child care, domestic worker programs, elder care), family dissolution (separation, divorce), and family trauma (violence prevention). Students learn to critically appraise policy, while examining how social policy interacts with cultural and structural aspects of gender, sexuality, Indigenous status, race and ethnicity, and socio-economic status. Prerequisites: SOCI 101, 102. Three credits.

397 Selected Topics
The topic for 2019-2020 is Climate Justice. This course focuses on some of the interconnections among the social, ecological, political and economic components of climate change, as framed by the concept of justice. Students are introduced to basic conceptions and practices of justice in the context of the latest findings on climate change from multiple institutional and disciplinary contexts. Using this lens, the course seeks to promote fluency in the structural dimensions of climate change and specifically, how inequality and climate change are fundamentally linked and perpetuated through both the ‘detractive and extractive’ economic, political and social institutions of our time. Prerequisites: SOCI 101, 102. Three credits.

400 Honours Thesis Research
A required course for all senior honours students. Six credits.

417 Social Difference: Race, Ethnicity, Gender, Class, Sex, and Disability
Explores current theories of social difference and the personal, social, economic, and political effects of these differences in Canadian, western, and international contexts. Topics include oppression, resistance, identity politics, and discourse theory. Starting with the question, “What differences do some differences make?” Students will examine how issues of difference become relations of dominance. Prerequisite: SOCI 215. Cross-listed as WMGS 417. Prerequisite: 12 credits of SOCI. Three credits.

421 Ancestry, Society, and Personal Identity
This course attempts to locate personal biography in the context of social history. Students’ genealogies provide the starting point for explorations of family, social history, and personal identity. Students will apply sociological ideas to the historical periods that helped shape their personal and family histories. Prerequisite: 12 credits of SOCI. Three credits.

427 Friendship and Personal Life
Is friendship only personal and private, or does it have broader public, social, and political significance? This seminar addresses contemporary scholarship on the sociology of friendship as well as classic accounts of friendship by philosophers...
and social theorists. Through studying beliefs and practices of friendship we will address themes such as the self and personhood, gifts and exchange, trust and intimacy, sexuality and gender, social capital and networks, and the relation of friends to strangers and enemies. Prerequisite: 12 credits of SOCI. Three credits.

451 Topics in Social and Criminal Justice
This course examines current theoretical and research issues in crime and social justice. Using qualitative, quantitative, and historical methodologies, students will explore topics such as gender, class, minorities, and criminal justice; police-community relations; carceral and non-carceral forms of punishment; criminal and regulatory legal procedures. Prerequisite: 12 credits of SOCI. Three credits.

491 Senior Seminar
A forum in which students gain scholarly experience by presenting and discussing their research; and taking part in colloquia, guest lectures, and public talks relevant to sociology. Required for honors students in their senior year. No credit.

498 Selected Topics
The topic for 2019-2020 is Thinking with Thinkers. This seminar allows students to delve into the works of one of Sociologists' great thinkers. This year's seminar offers an in-depth look at the work of Erving Goffman (1922-1982), who remains one of the most cited and discussed sociologists in the world. Goffman's unique approach focused on everyday face-to-face interaction as foundational to understanding social life. This course will demonstrate the continued relevance of Goffman to contemporary life. Three credits.

499 Directed Study
Under the direction of a professor, students will work in an area of sociology not available in other course offerings. Students must consult with the faculty member by March 31 of the academic year in which they wish to take the course. See section 3.5. Three or six credits.

SPANISH see 9.26 Modern Languages
SPORT MANAGEMENT see 9.6 Business Administration and 9.22 Human Kinetics
STATISTICS see 9.25 Mathematics/Statistics

9.36 WOMEN'S AND GENDER STUDIES
N. Forrestell, Ph.D., Co-ordinator
Advising Faculty
R. Chisholm, Ph.D. Sociology
R. Hurst, Ph.D. Women's and Gender Studies
K. MacLean Ph.D. Psychology
P. Mallory, Ph.D. Sociology
Z. Ozkok, Ph.D. Economics
C. Weaving, Ph.D. Human Kinetics

The academic field of women's and gender studies provides an interdisciplinary, multicultural and feminist analysis of women's lives and history. It re-examines traditional ideas about women and their place in society and introduces theoretical frameworks for understanding questions about the roles, problems and accomplishments of women.

Through a combination of core courses and cross-listed courses offered by various university departments, students will critically examine topics such as women and politics; women in sport; the psychology of gender; women's history; the relationship of gender, class and race; women's literature; feminist theory; women and religion; women and medicine; women in management; and women and work. Service-learning projects may be incorporated into some women's studies courses. See chapter 4 for information on the degree patterns, declarations of major, advanced major and honours, advancement and graduation requirements.

Program Requirements
Students may choose a BA with Major or a BA with Joint Major in women's and gender studies and a Faculty of Arts subject. See chapter 4. Arts and science students may fulfill requirements for a pair in women's studies and gender. Students interested in women's and gender studies should consult with the co-ordinator as early as possible.

Major in Women's and Gender Studies
a) 12 credits of WMGS 100, 205 and 303; and,
b) 24 credits WMGS including cross-listed courses.
No more than 12 credits of cross-listed courses may be from a single department. None of the cross-listed courses may be in the student's declared minor subject.

Joint Major in Women's and Gender Studies and a Faculty of Arts Discipline
a) 36 credits in WMGS (subject A) and 36 credits in another Faculty of Arts department (subject B). The program or department requirements for majors are applicable in both subjects. Students must complete the following:
   i) 12 credits of WMGS 100, 205 and 303; and,
   ii) 24 credits WMGS including cross-listed courses.
No more than 12 credits of cross-listed courses may be from a single department. None of the cross-listed courses may be in the student's declared subject B.
   b) Course Pattern: see section 4.1.3

Honours in Women's and Gender Studies with a Subsidiary
See section 4.1 for general regulations on degree requirements.

a) 48 credits in WMGS (subject A) and 24 credits subsidiary subject. For the 48 credits in WMGS students must complete the following:
   i) 15 credits of WMGS 100, 205, 303, 346, 391 junior seminar (non-credit),
   6 additional WMGS core credits
   ii) WMGS 493 (thesis)
   iii) ANTH 304 – designated methods course
   iv) 18 credits from WMGS cross-listed courses
No more than 12 credits of WMGS cross-listed courses may be in a single subject. Also, none of the WMGS cross-listed courses may be in the student's subsidiary subject.

Subsidiary in Women's and Gender Studies
a) 24 credits in WMGS and 48-60 credits in the honours subject. Students are encouraged to include an additional six credits of WMGS cross-listed courses. No more than 6 credits of WMGS cross-listed courses may be from a single department. None of the cross-listed courses may be in the student's declared honours subject.
   i) 12 credits of WMGS 100, 205 and 303
   ii) 12 credits WMGS including cross-listed courses.

Minor in Women's and Gender Studies
a) WMGS 100; and,
b) 18 credits in women's and gender studies core or cross-listed courses. No more than six credits of cross-listed courses may be from a single department. None of the cross-listed courses may be in the student's declared major subject.

Pair
a) WMGS 100 (6 credits); and
b) 6 credits in women's and gender studies, which may include WMGS 205 and/or 303 or cross-listed course(s).

Social Justice Colloquium
The Social Justice Colloquium is a first-year option for Bachelor of Arts students. Participants are enrolled in dedicated sections of anthropology, global history and women's and gender studies. See section 4.5 for further information.

100 Introduction to Women's and Gender Studies
This course will offer an overview of women's and gender studies from an interdisciplinary perspective. Students will study the development of feminist movements and will examine how concepts of race, class, sexuality and ability intersect in shaping colonialism, sexual and reproductive health, violence, family relations, paid and unpaid labour, political systems and poverty. The course will consider the relationship between the local and the global through discussion of such topics as popular culture, consumerism and environmentalism. Credit will be granted for only one of WMGS 100 or WMNS 200. Six credits.

203 Gender
This course is about gender differences and gender inequality. The main objective of the course is not only to examine differences in women's and men's social positions, but also to stimulate critical and informed thinking about the sources of gender inequality in our society. More generally, the course aims to explore the many ways in which this society is organized around gender differences and divisions. Credit will be granted for only one of WMGS 203 and SOCI/WMGS 310. Cross-listed as SOCI 203. Prerequisite: SOCI 101, 102. Three credits.

205 Gender, Sexuality and the Body
This course focuses on the ways that all bodies are sexualized and gendered in Western philosophical thought, biomedicine and science. Topics include Western binaries (man/woman, form/matter, mind/body), the sociocultural processes through which bodies are sexualized, the biological/medical sciences and objectivity, a critique of the dual sex model from the perspective of transfeminist theory and bodily transformations and normalizations (including cosmetic surgery, monstrosity
and disability, and the feminist debate about female genital surgeries). Prerequisite: WMGS 100 or third- or fourth-year status with permission of instructor. Three credits.

217 Race and Identities
This course discusses the interconnected realities of race, class, gender and sex from various sociological perspectives. Substantive topics will include the socially constructed nature of these concepts in places like media, and the experiences of classism, sexism and racism in the workplace, schools, and everyday life. Credit will be granted for only one of WMGS 217 or WMGS 215. Cross-listed as SOCI 217. Three credits.

221 Sociology of Marriage and Family Life
This course analyzes the marriage and family life from a sociological perspective. It provides an overview of social changes over the past century, such as the falling birth rate, the rise in cohabitation and the legalization of same-sex marriage. Topics include marriage and fertility trends, the rise of intensive parenting and the dual earner family, the normalization of separation and divorce, the social cost of family violence, and how technology is influencing parenting. Credit will be granted for only one of WMGS 221 or WMGS 210. Cross-listed as SOCI 221. Three credits.

232 Gender and Popular Culture
This course will introduce a range of topics within the broad field of gender and popular culture as well as how to study and critique genres of popular culture. Beginning with the questions, "What is cultural studies?" and "Why is it important to study popular culture?" we move on to study a range of pop culture media, including music, television, film, video games and graphic novels/memoirs through this methodological and theoretical lens. Prerequisite: WMGS 100 or third- or fourth-year status with permission of instructor. Three credits.

254 Topics in 18th-Century Literature
The Whore' Story. This course explores the changing literary, social and cultural significance of the figure of the whore in a variety of 18th century works. Poetry, pornography, and pamphlets, as well as Hogarth's engravings A Harlot's Progress, Behn's play, The Rover, and Cland's novel, Memoirs of a Woman of Pleasure (a.k.a. Fanny Hill) will be studied among other works. Graphic language and content may offend some students. Cross-listed as ENGL 254. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits.

299 Selected Topics in Women's and Gender Studies I
Three credits.

303 Feminist Theory
This course examines various directions feminists have taken in studying women's experiences and the construction of gender. Students will learn how these theoretical approaches have influenced feminist research and critical practice. The course will include early feminist thought as well as contemporary feminist theory. Cross-listed as SOCI 304. Prerequisite: WMGS 100. Three credits.

311 Men and Masculinities
A critical review of the science of masculinity and recent theoretical developments on the social construction of men's lives and masculinities. Topics include male gender role socialization; the role social institutions play in shaping masculinities; masculinity politics, men's movement, and social change. Cross-listed as SOCI 311. Three credits.

312 Women and Popular Music
A critical examination of the roles of the singing performer from the later 19th century to present through the development and changes of different musical styles and cultural context. Singing/audience relationships are explored as well as vocal lineage and the musical contributions of key artists. The course also surveys key singers over the last 100 years, through examining ideas fame, artistry, cultural/political significance race, and gender. Cross-listed as MUSI 312. Three credits.

315 Women in Early Judaism
The course investigates the depiction and experience of women from the earliest biblical narratives to the separation of Christianity from Judaism. Students analyze responses to women and ideas about women in Biblical and other early Jewish writings, in comparison to women in the rest of the Ancient Near East, in conversation with feminist interpreters of the Bible and early Judaism, we will note the relevance of this material for contemporary gender issues. Cross-listed as RELS 315. Three credits. Not offered 2019-2020.

317 Canadian Women's and Gender History: From Colony to Nation
This course introduces students to major themes in the field of Canadian women's and gender history. Covering the period from the late 16th century to the late 19th century, the course examines the historical development of women's roles, experiences, identities and gender relations. Particular attention is given in this course to the impact of colonialism, and the intersection of gender, race, economic/social status, and Indigenous/non-Indigenous status in shaping women's work, family roles, sexuality, political engagement and activism. Credit will be granted for only one of WMGS 317 or WMGS 308. Cross-listed as HIST 317. Three credits.

318 Canadian Women's and Gender History: Modernity
This course introduces students to major themes in the field of Canadian women's and gender history. Covering the period from the late 19th century to the late 20th century, the course examines the historical development of women's roles, experiences, identities and gender relations. Particular attention is given to the intersection of gender, race, economic/social status, and Indigenous/non-Indigenous status in shaping women's work, family roles, sexuality, political engagement and activism. Credit will be granted for only one of WMGS 318 or WMGS 308. Cross-listed as HIST 318. Three credits.

325 Early Christian Women
This course investigates women's participation in early Christian groups from the time of Jesus' ministry to the 6th century. Christian women's lives will be compared to those of women in Jewish and Greco-Roman societies. Students will analyze New Testament and other early Christian writings, read feminist scholarship, and examine such issues as women's leadership and violence against women. Cross-listed as RELS 325. Three credits. Offered 2019-2020.

326 Issues in the Anthropology of Kinship
This course explores current themes and debates about the institution of families cross-culturally. It will examine topics such as: cultural understandings of kinship; historical transformations of kinship systems; current reconfigurations of marriage; partnering strategies; new reproductive technologies; transnational adoption; intra-familial conflict; the role of kinship for individuals and in societies; and the influence of the state on kin patterns. Course material will include ethnographic examples from around the world. Cross-listed as ANTH 326. Prerequisite: ANTH 110 or ANTH 111/112, or WMGS 100 or 200 or permission of the instructor. Three credits. Not offered 2019-2020.

327 Feminist Anthropology
This course examines how past and present feminist anthropologists have used and problematized categories of difference and identity, such as, gender, class, sexuality, race, ethnicity, ability, religion and nationality as they pursue anthropological research. Focusing primarily on socio-cultural anthropological research, but also addressing work by linguistic and biological (physical) anthropologists and archaeologists, the course will highlight the theoretical, methodological, and empirical contributions of feminist anthropologists to anthropology and to women and gender studies. Credit will be granted for only one of ANTH 323 and ANTH 324 and WMGS 324. Cross-listed as ANTH 323. Prerequisite: ANTH 110 or ANTH 111/112 or WMGS 100 or WMGS 200 or permission of the instructor. Three credits.

328 Canadian Families and Parenting
This course explores the impact of social, political, economic and cultural changes on families and parents. Topics include the diversity of family relations, work-life balance, family time, the ‘parenting expert industry’, ‘intensive parenting,’ the ‘boomerang generations’ and ‘grand’ relations. Across this range of topics, we consider how gender, race, sexuality, social class, and health influence families and parents. Cross-listed as SOCI 327. Three credits.

329 Studies in Women Writers: Feminisms and Their Literature
An introduction to feminist theories within historical, cultural, and philosophical contexts, this course explores the relationship between feminist theories and literary texts that exemplify or extend them. Cross-listed as ENGL 329. Three credits.

330 Studies in Women Writers: Genres, Cultures, and Contexts
This course explores modern and contemporary poetry written by women in English. Cross-listed as ENGL 330. Prerequisite: 9 credits ENGL. Three credits. Not offered 2019-2020.

332 Gender in Sport and Physical Activity
Explores the role of women and men in sport/physical activity/recreation from a historical, philosophical, and sociocultural perspective. This course covers embodiment, objectification, equity, racism, homophobia, politics of difference and identity. Cross-listed as HKIN 332. Three credits.

333 The Medieval Body
This class explores late medieval conceptions of the physical body, which were always essential to identity in the Middle Ages. Medieval discussions of the practice of reading, clothing and fashion and even spiritual union with God, often involved debates and metaphors based upon the physical body. Through an exploration of primary and secondary texts along with seminar discussions, the class will explore the interconnectedness of late medieval ideas of corporeality, identity, spirituality and sexuality. Cross-listed as HIST 332. Three credits.
343 Psychology of Gender
This course will review theories and research regarding gender in psychological development, social roles, and personality. Topics to be covered will include the history of research in gender; issues to consider in conducting gender research; gender role development and the socialization of gender; gender as a social variable in education and the workplace. Credit will be granted for only one of WMGS 343 or WMGS 360. Cross-listed as PSYC 364. Prerequisite: 6 credits of PSYC at the 200 level. Three credits.

344 Developmental Social Psychology of Gender
This course will review theories and research that integrate developmental and social perspectives on gender. Topics will focus on gender as a social construct and include gender role development, gender role socialization in the family and gender development in cross-cultural perspective. Credit will be granted for only one of WMGS 344 or WMGS 360. Cross-listed as PSYC 365. Prerequisite: 6 credits of PSYC at the 200 level. Three credits.

345 Women and Politics
An introduction to the study of women and politics, this course has three parts: feminist political thought and the women’s movement; political participation and representation; and public policy. Topics include feminist political thought in the Western political tradition; the evolution and politics of the women’s movement; political parties and legislatures; women and work; women and the welfare state. Cross-listed as PSCI 345. Prerequisite: PSCI 101/102 (100) or WMGS 100; 6 credits at the 200-level (211, 212 recommended). Three credits.

346 Critical Race & Sexuality Studies in Canada
This seminar course offers students a survey of feminist approaches to contemporary critical race theory and sexuality studies in Canada, with a particular focus on the values of ‘multiculturalism’ and ‘tolerance.’ The course will consider the intersections of gender with such topics as colonialism, racism and immigration, whiteness, as well as homophobia and homonationalism. Credit will be granted for only one of WMGS 346 or WMGS 399, ST: Critical Race & Sexuality. Prerequisite: WMGS 100. Three credits.

364 Social Justice and Health
Examines the relationship between injustice and health outcomes nationally and globally. Core social justice ideas are analyzed, including the cycle of oppression, distinctions between equality and equity, and achievement of human rights as an ethical imperative. Modern and historical contexts are explored in key justice related areas: corporatization of health care; policy-created poverty; worldwide water crisis; links between planetary health and human health; and global conflict as a key driver of injustice. Learning includes analysis of selected award-winning films. Cross-listed as NURS 364. Three credits.

365 Gender and Health
This course examines theoretical concepts relevant to gender and health. The broad determinants of health, sexuality, reproductive health and fertility, common diseases, substance abuse, violence and culture are examined from a gender perspective. Strategies for promoting holistic health and preventing disease will be examined. Cross-listed as NURS 365. Three credits.

367 Gender and Management
Reviews the recent growth of women managers in today’s organizational world. Students examine gender roles in organizations and identify some of the barriers women experience in reaching the top. The course explores the systemic discrimination facing women, and presents potential management models for women and men. Cross-listed as BSAD 367. Prerequisite: BSAD 261. Three credits.

370 Gender & Sexuality in Modern European Empires
This course examines major issues in the history of gender and sexuality in the new imperialism. Themes to be covered include imperial families, race, gender and professionalism, gender, sexuality and citizenship, and women in imperialism and global movements. Cross-listed as HIST 360. Three credits.

378 Human Sexuality
This course provides a broad introduction to research and theory in human sexuality. It includes examination of fundamental topics such as the nature of human sexuality and contemporary issues. Specific topics include historical perspective, theories of sexuality, sex research, sexual anatomy, sexual variation, sexual response, gender, sexual dysfunction and sex therapy. Cross-listed as PSYC 378. Prerequisites: 6 credits of PSYC at the 200 level. Three credits.

391 Junior Seminar
This is a non-credit, required course for third year students enrolled in the BA Honours with Subsidiary option in the WMGS Program. The seminar will give students an opportunity to engage with the research of faculty who teach core and cross-listed courses in the program, as well as the intellectual life of the program, in preparation to select a supervisor for the honours thesis they will write in their fourth year. No credit.

395 Selected Topics in Women's and Gender Studies I
Course content changes from year to year and may reflect faculty involvement in a specific area of research. Three credits.

397 Authentic Power and Gender
This course presents “authentic power” as understood in Hindu and Buddhist traditions. Here, “authentic power” is that which creates, supports, maintains and sustains life. It is understood as an expression of inter-dependent masculine and feminine “principles” both within and outside the individual self. That which seeks to manipulate, control, dominate, oppress or defend territory is here understood to be based in fear: it is an expression of cowardice and, as such, merits our compassion. Cross-listed as RELS 315. Three credits. Offered 2019-2020.

398 Themes in the History of Sexuality
A comparative study of the history of sexuality during the modern period from the eighteenth through the twentieth centuries. Following a broadly chronological and thematic approach to a diverse history of sexualities, the course will explore in particular the changing meanings of and interconnections between sexuality, race, class and gender. Topics will include: indigenous sexual cultures; sexuality and colonialism; inter-racial sexual relationships; the ‘invention of heterosexuality’; moral panics, prostitution, the regulation of sexual desire; and sexual subcultures. Cross-listed as HIST 398. Three credits.

399 Selected Topics in Women's and Gender Studies II
Prerequisite: WMGS 100. Three credits.

411 Religious Approaches to Sexuality
Human sexuality is explored from two main perspectives: first, the teachings and practices of various religious traditions; and second, contemporary developments in sexual and reproductive health and rights. Among the issues to be considered are sexuality and gender roles, contraception and abortion, marriage and family. Cross-listed as RELS 401. Prerequisite: any 100-level RELS or WMGS course. Three credits. Not offered 2019-2020.

412 Religious Approaches to Sexual Diversity
This course will focus on religious teachings and traditions on sexual diversity within the broader context of human rights associated with sexual orientation and sexual differences. In particular, we will look at the experiences of gay, lesbian, bisexual, intersexual and transgendered persons within religious communities. Cross-listed as RELS 402. Prerequisite: any 100-level RELS or WMGS course. Three credits. Not offered 2019-2020.

415 Advanced Field Seminar and Practicum
This course focuses on understanding inequality from an academic perspective, and seeks to do so through understanding grass-roots activism and movements for social change. This course is designed to combine feminist theories with feminist activist work; allowing students to learn from how feminism looks as gender challenges are enacted in homes, workplaces and political spaces. The main purpose of this course is for students to gain field-based knowledge through placement with an organization, community group or service. Credit will be granted for only one of WMGS 415 and WMGS 400. Three credits.

425 Power and Change
Power and change can be volatile processes. This course allows students to explore them from an anthropological point of view. In 2018-19, the focus will be on food and power. It will address questions such as: How do gender, class, race, culture or other categories of difference affect who cooks and who eats, as well as what they eat? How has food become central to “gastro-diplomacy”? What are the politics of different kinds of food, locally produced food, food aid? How is food managed and power. It will address questions such as: How do gender, class, race, culture or other categories of difference affect who cooks and who eats, as well as what they eat? How has food become central to “gastro-diplomacy”? What are the politics of different kinds of food, locally produced food, food aid? How is food managed and power. It will address questions such as: How do gender, class, race, culture or other categories of difference affect who cooks and who eats, as well as what they eat? How has food become central to “gastro-diplomacy”? What are the politics of different kinds of food, locally produced food, food aid? How is food managed and power. It will address questions such as: How do gender, class, race, culture or other categories of difference affect who cooks and who eats, as well as what they eat? How has food become central to “gastro-diplomacy”? What are the politics of different kinds of food, locally produced food, food aid? How is food managed and power. It will address questions such as: How do gender, class, race, culture or other categories of difference affect who cooks and who eats, as well as what they eat? How has food become central to “gastro-diplomacy”? What are the politics of different kinds of food, locally produced food, food aid? How is food managed and power. It will address questions such as: How do gender, class, race, culture or other categories of difference affect who cooks and who eats, as well as what they eat? How has food become central to “gastro-diplomacy”? What are the politics of different kinds of food, locally produced food, food aid? How is food managed and power. It will address questions such as: How do gender, class, race, culture or other categories of difference affect who cooks and who eats, as well as what they eat? How has food become central to “gastro-diplomacy”? What are the politics of different kinds of food, locally produced food, food aid? How is food managed and power. It will address questions such as: How do gender, class, race, culture or other categories of difference affect who cooks and who eats, as well as what they eat? How has food become central to “gastro-diplomacy”? What are the politics of different kinds of food, locally produced food, food aid? How is food managed and power. It will address questions such as: How do gender, class, race, culture or other categories of difference affect who cooks and who eats, as well as what they eat? How has food become central to “gastro-diplomacy”? What are the politics of different kinds of food, locally produced food, food aid? How is food managed and power. It will address questions such as: How do gender, class, race, culture or other categories of difference affect who cooks and who eats, as well as what they eat? How has food become central to “gastro-diplomacy”? What are the politics of different kinds of food, locally produced food, food aid? How is food managed and power. It will address questions such as: How do gender, class, race, culture or other categories of difference affect who cooks and who eats, as well as what they eat? How has food become central to “gastro-diplomacy”? What are the politics of different kinds of food, locally produced food, food aid? How is food managed and power. It will address questions such as: How do gender, class, race, culture or other categories of difference affect who cooks and who eats, as well as what they eat? How has food become central to “gastro-diplomacy”? What are the politics of different kinds of food, locally produced food, food aid? How is food managed and
UNIVERSITY PERSONNEL

As of March, 2019

University Professors
Abelson, D., Ph.D.(Queen’s)
Adams, C., Ph.D.(Toronto)
Anderson, A., Ph.D.(Queen’s)
Aqapoo, J., Ph.D. (Montana)
Aquino, M.A.S., Ph.D.(Carleton)
Baldner, S., Ph.D.(Toronto)
Bartjes, R., Ph.D. (Lancaster, UK)
Beltrami, H., Ph.D.(UQAM)
Bickerton, J., Ph.D.(Carleton)
Boyle, T., Ph.D.(Carleton)
Brenner, K., Ph.D.(Carleton)
Callaghan, T., Ph.D.(Brown)
Cormack, P., Ph.D.(York)
DeBell, K., Ph.D.(London, UK)
English, L., Ed.D.(Columbia)
Finbow, S., Ph.D.(Victoria)
Forestell, N.M., Ph.D.(OISE)
Garbary, D., Ph.D.(Liverpool)
Grenier, Y., Ph.D.(Laval)
Groarke, L., Ph.D.(Waterloo)
Halperin, D., Ph.D.(Calgary), RN Nursing
Hynes, T.W., Ph.D.(Calgary)
Kocay, V., Ph.D.(Toronto)
Kellman, L., I., Ph.D.(UQAM)
Kocay, V., Ph.D.(Toronto)
Kolen, A., Ph.D.(Saskatchewan)
Langille, E.M., Ph.D.(L.(Sorbonne)
Leaist, D.G., Ph.D.(Yale)
Lent, M.C., Ph.D.(Durham)
Lin, M., Ph.D.(Linkoping)
MacAloney, K., Ph.D.(Queen’s)
MacDonald, K., Ph.D.(Pennsylvania)
MacDonald, L., Ph.D.(Alberta)
Mackenzie, S., Ph.D.(Saskatchewan)
Madden, R.F., MBA(Queen’s), FCPA, FCA(ICANS)
Mahaffey, T., Ph.D.(Queen’s)
Marangoni, D.G., Ph.D.(Dalhousie)
Marquis, P.A., Ph.D.(Queen’s)
Marzin, K.P., Ph.D.(Konstanz, Germany)
McGibbon, E., Ph.D.(Toronto), RN
Mc Gillivray, M.B., Ph.D.(Queen’s)
Melchin, M.J., Ph.D.(UWO)
Moyagh, M.A., Ph.D.(Texas-Austin)
Murphy, J.B., Ph.D.(McGill)
Murray-Orr, A., Ph.D.(Albera)
Orr, J., Ph.D.(Alberta)
Palansamy, R., Ph.D.(IT, New Delhi)
Payne, J., Ph.D.(McMaster)
Poole, P., Ph.D.(Boston)
Rasmussen, R., Ph.D.(Dalhousie)
Scorpati, R., Ph.D(UBC)
Smith, D., Ph.D.(Manitoba)
Stan, L., Ph.D.(Toronto)
Stanley-Blackwell, L., Ph.D.(Queen’s)
Sweet, W., Ph.D.(Ottawa), DEA(Sorbonne), D.Ph.(Saint Paul), FRSC
Tkacz, G., Ph.D.(McGill)
Tomkins, J., Ed.D.(OSIE)
Tymian, P., M.M.(North Texas)
van Bommel, M., Ph.D.(Waterloo)
van den Hoogen, R., Ph.D.(Dalhousie)
Vincent, S., Ph.D.(Toronto)
Wamsley, K.B., Ph.D.(Alberta)
Wang, P., Ph.D.(Regina)
Watt, M., Ph.D.(Dalhousie)
Weaving, C., Ph.D(UOW)
Wilpulle, E., Ph.D.(Toronto)
Wright, E., Ph.D.(Alberta)
Yang, L.T., Ph.D.(Victoria)
Zhou, P., Ph.D.(Witwatersrand)

Associate Professors
Alex, M., M.Sc.N.(Dalhousie), RN Nursing
Al-Mani, D., Ph.D.(Calgary)
Anthony, D., Ph.D.(Liverpool) Marketing & Enterprise Systems
Austen, E., Ph.D.(UBC)
Bilington, R., M.Mus.(W. Michigan) Music
Bishop, C., Ph.D.(Simon Fraser) Biology
Boucher, J.L., Ph.D.(Université de Montréal) Human Kinetics
Brown, D., Ph.D.(Melbourne) Political Science
Brunkhorst, K.M(University of North Texas) Music
Byrne, C., Ph.D.(Toronto)
Coady, M., Ph.D.(Nottingham, UK)
Casey, A., Ph.D.(Calgary)
Chishom, R., Ph.D.(York)
Cho, Y., Ph.D.(Queen’s) Political Science
Comeau, F., Ph.D.(Dalhousie), P.Eng. Engineering
Cormier, J., Ph.D.(McGill)
D’Arcy, M., Ph.D.(Cornell)
Dorligh, L., Ph.D.(Concordia)
McVees, Ph.D.(Trinity College) Celtic Studies
Dorado, S., Ph.D.(Toronto) Economics
Estill, L., Ph.D.(Wayne State) Canada Research Chair, English
Fawcett, C., Ph.D.(McGill)
Foran, A., Ph.D.(Alberta) Education
Foshay, N., Ph.D.(Bradford, UK)
Fox, A., Ph.D.(Toronto) Human Nutrition
Frazer, C., Ph.D.(Brown University) History
Fuller, M., Ph.D.(York) Management
Galway, M., Ph.D.(Australian NU) Biology
Gillham, C., Ph.D.(Calgary)
Gondra, I., Ph.D.(Okahoma State) Computer Science
Graham, D., Ed.D.(Nottingham) Education
Graham, L., Ph.D.(Calgary)
Gregory, S., Ph.D.(University of London) Anthropology
Hallier, M., Ph.D.(Philadelphia)
Hansen-Ketchum, P., Ph.D.(Alberta) Nursing
Harling-Stalker, L., Ph.D.(Carleton) Sociology
Hawley, M.P., Ph.D.(Alberta)
Hurst, R., Ph.D.(York)
Insor, R., Ph.D.(Sussex, UK)
Jameson, J., Ph.D.(McGill)
Kane, D., Ph.D.(East Carolina)
Kears, L., Ph.D.(Toronto)
Kennedy, R., Ph.D.(Notre Dame) Anthropology
Knouy, J., Ph.D.(Carleton)
Koch, E., Ph.D.(Florida) Psychology
Lalande, G., Ph.D.(McGill)
Langdon, J., Ph.D.(McGill)
Lange, E., Ph.D.(Alberta)
LeBlanc, R., Ph.D.(Laval)
LeBeis, K., Ph.D.(École Polytechnique de Montréal) Physics
Leo, T.W., Ph.D.(Toronto)
Linkletter, M., Ph.D.(Harvard) Sociology
Litz, S.A., Ph.D.(Konstanz, Germany) Management
Lomone, C., Ph.D.(Waterloo) Psychology
Long, B., Ph.D.(Saint Mary’s) Management
Lukeman, R., Ph.D.(British Columbia) Mathematics and Statistics
Lunney Borden, L.A., Ph.D.(UNB) Economics
Lynes, D.A., Ph.D.(York) Sociology
MacDonald, C., Ph.D.(Dalhousie), RN Nursing
MacLean, K., Ph.D.(Simon Fraser) Psychology
MacLeod, K., Ph.D.(Toronto) Education
Mallory, P., Ph.D.(York) Sociology
Malbey, N., Ph.D.(Strathclyde) Management
Marmura, S., Ph.D.(Queen’s) Sociology
Mazier, P., Ph.D.(UBC) Human Nutrition
McCormick, P., Ph.D.(Waterloo)
McInnis, P., Ph.D.(Queen’s) Psychology
McKenna, J., Ph.D.(McGill)
McMillan, L.J., Ph.D.(UBC)
Mitton-Kukner, J., Ph.D.(Alberta)
Morrison, B., Ph.D.(Strathclyde) Education
Mukerji, B., Ph.D.(Carleton)
Nigges, M., Ph.D.(Illinois) English
Oguejiofor, E., Ph.D.(Saskatchewan), P.Eng. Engineering
Orova, D., Ph.D.(Boston) Chemistry
Owen, M., Ph.D.(Alberta), CFA(AIMR) Accounting & Finance
<table>
<thead>
<tr>
<th>Faculty Name</th>
<th>Degree Location</th>
<th>Major</th>
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<tbody>
<tr>
<td>Wright, K., Ph.D.</td>
<td>(Toronto)</td>
<td>English</td>
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<tr>
<td>Withey, P., Ph.D.</td>
<td>(Victoria)</td>
<td>Economics</td>
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<tr>
<td>Whitty-Rogers, J., Ph.D.</td>
<td>(Alberta), RN</td>
<td>Nursing</td>
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<td>White, R., Ph.D.</td>
<td>(OISE)</td>
<td>Education</td>
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<tr>
<td>Vossen, D., Ph.D.</td>
<td>(UWO)</td>
<td>Human Kinetics</td>
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<td>Weaver, A., Ph.D.</td>
<td>(UNB)</td>
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<td>Whitty-Rogers, J.</td>
<td>Ph.D. (Alberta), RN</td>
<td>Accounting &amp; Finance</td>
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<tr>
<td>Wething, P.</td>
<td>Ph.D. (Victoria)</td>
<td>Biology</td>
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<td>Wright, K.</td>
<td>Ph.D. (Toronto)</td>
<td>History</td>
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<td>Wether, R.</td>
<td>Ph.D. (Washington)</td>
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<td>Young, D.C.</td>
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<td>Zecker, R.</td>
<td>Ph.D. (Pennsylvania)</td>
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<td><strong>Assistant Professors</strong></td>
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<td>Alessandria, D., Ph.D.</td>
<td>(Guelph)</td>
<td>Economics</td>
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<td>Amott, M., MN (South Queenslands)</td>
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<td>Aubrecht, K., Ph.D.</td>
<td>(Toronto)</td>
<td>Canadian Research Chair</td>
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<td>Bergin, L., Ph.D. (Carleton)</td>
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<td>Blair, K., Ph.D. (Queen's)</td>
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<td>Broid, J., Ph.D. (Dalhousie)</td>
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<td>Charles, R., Ph.D. (Toronto)</td>
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<td>Corriere, M., MBA (Dalhousie)</td>
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<td>English, M.B.Sc. (Dalhousie)</td>
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<td>Ghornua, H., Ph.D. (Montreal)</td>
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<td>Hallet-Tapley, G., Ph.D. (Dalhousie)</td>
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<td>Hanlon, J., MMUS (North Texas)</td>
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<td>Hughes, J., M.Sc. (Brook)</td>
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<td>Irving Shipbuilding Research Chair</td>
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<td>Karunakaran, V., Ph.D. (Strathclyde)</td>
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<td>Public Policy &amp; Governance</td>
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<td>Kikkert, P., Ph.D. (UWO)</td>
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<td><strong>Adjunct Professors</strong></td>
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<tr>
<td>Adesola, J., Ph.D.</td>
<td>(Rhodes U, South Africa)</td>
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<td>Barre, E., Ph.D. (Guelph)</td>
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<td>Beaton, E., Ph.D. (Manitoba)</td>
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<td>Cooper, M., Ph.D. (Toronto)</td>
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<td>Doyle, A., Ph.D. (Poland)</td>
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<td>Drijlen, M., Ph.D. (UWO)</td>
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<td>Greg, J., Ph.D. (Ireland)</td>
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<td>Gregg, M., Ph.D. (Toronto)</td>
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<td>Haup, P., Ph.D. (Frankfurt)</td>
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<td>Lackenbauer, W., Ph.D. (Calgary)</td>
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<td>Public Policy &amp; Governance</td>
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<td><strong>Retired Faculty</strong></td>
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<td>Aboud, S., H.T., Ph.D. (Cornell)</td>
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<td>Science</td>
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<td>Amoako Tuffour, J., Ph.D. (Alberta)</td>
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<td>Arpin, M., Ph.D. (Laval)</td>
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<td>Asadulla, S., Ph.D. (Florida)</td>
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<td>Modern Languages</td>
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<tr>
<td>Beck, J.F., Ph.D. (UBC)</td>
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<td>Beckwith, C., Artist in Residence</td>
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<td>Bernard, I., Ph.D. (Pennsylvania)</td>
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<td>Bilek, L., Pea.D. (Prague)</td>
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<td>Bourbeau-Walker, M., Ph.D. (UBC)</td>
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<tr>
<td><strong>Lecturers</strong></td>
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<tr>
<td>Alex, J., CA (ASCAC)</td>
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<td>Accounting &amp; Finance</td>
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<tr>
<td>Mattie, D., BIS (SF)</td>
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<td>Marketing &amp; Enterprise Systems</td>
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<tr>
<td>Melong, J., MBA (Laurentian)</td>
<td></td>
<td>Accounting &amp; Finance</td>
</tr>
</tbody>
</table>
Rennie, C., M.Sc.(Queen's) Earth Sciences
Rogers, L., B.A.Sc.(S.F.X.) Biology
Schuegraf, M., M.Sc.(York) Biology
Schumacher, M. M.Sc.(Waterloo) Earth Sciences
Spencer, G., M.Sc.(Windsor) Human Kinetics
Thompson, K. M.Ed.(S.F.X.) Human Kinetics
Trimboli, M.G., M.Sc.(Lethbridge) Physics
Vossen, J., M.Sc.(UWO) Human Kinetics

Student Success Centre
LeBlanc, J. EA & Manager of Operations
Landry, J., MA(UBC) Program Teaching Staff
Kraglund-Gauthier, W. Ph.D. (South Australia) Manager, Networks and Communications
Hawkes, S. Communications Coordinator
Ghore, Y., MPA(Columbia) Marketing Manager
Hawkes, S. Manager, Networks and Ongoing Learning
Landry, J., M.A(UBC) Program Teaching Staff
Lazzari, B., BA(UMW) Program Teaching Staff
LeBlanc, J. EA & Manager of Operations

Professor Emeritus/a
Aalto, S., Ph.D.(Oregon State) Mathematics and Statistics
Brooks, G.P., Ph.D.(Queen’s, Belfast) Psychology
den Heyer, K.C., Ph.D.(Manitoba) Nursing
Gillis, A., Ph.D.(Texas)RN
Hunter, D., Ph.D.(King’s, London) Sociology and Anthropology
Jackson, W., Ph.D.(Washington) Psychology
Jan, N., Ph.D.(Cambridge) Psychology
Johnson, R.W., Ph.D.(Manitoba) Psychology / Academic Vice-President & Provost 1999-2005
Kraglund-Gauthier, W. Ph.D. (South Australia) Manager, Networks and Communications
Hawkes, S. Communications Coordinator
Ghore, Y., MPA(Columbia) Marketing Manager
Hawkes, S. Manager, Networks and Ongoing Learning
Landry, J., M.A(UBC) Program Teaching Staff
Lazzari, B., BA(UMW) Program Teaching Staff
LeBlanc, J. EA & Manager of Operations

Senior Research Professors
Bigelow, A., Ph.D.(Simon Fraser) Psychology
Buckland-Nicks, J., Ph.D.(Alberta) Biology
Clancy, P., Ph.D.(Queen’s) Political Science
El-Shelik, S., Ph.D.(Queen’s) Economics
Holloway, S., Ph.D.(Ohio State) Political Science
Marshall, W.S., Ph.D.(UBC) Biology
MacCaull, W., Ph.D.(McGill) Mathematics, Statistics & Computer Science
Meyer, M., Ph.D.(McGill) Education
Phillips, P., Ph.D.(Toronto) History
Pink, D., Ph.D.(UBC) Physics
Smith Palmer, T., Ph.D.(Auckland) Chemistry
Wadsworth, L., Ph.D.(Saskatchewan) Human Nutrition
Williams, P.J., Ph.D.(Memorial) Biology

Chaplains
MacPherson, Fr. Gary, M.Div.(AST), MPT(Thapant) University Chaplain
MacPherson, Sr. Joivita, DipTh, MA(Boston) Associate Chaplain
Clubeine, Rev. Jerry Full Gospel Assembly
Smith, Rev. Peter United
Channer, Rev. Susan, M.Div. Anglican

Library
Delorey, C., MLIS Librarian
Cameron, S., MLIS(UWO) Librarian
Landry, M., MLIS(McGill) Librarian
MacKenzie, K., MA(Saint Mary’s) Archivist
Matheson, L., MLS(McGill) Librarian

Coady International Institute
Alma, E., MA(Royal Roads) Director, Women and Indigenous Programming/
Baden-Clay, A., BA(UNS) Adult Education
Berger, B Manager, Youth Programs
Case, A. Student Services
Cash, C., Ph.D.(Waterloo) Program Teaching Staff
Chowdhury, N., M.Sc.(Jahangimag) Program Teaching Staff
Corkum, L. Financial Officer
Cunningham, G., MA(Guelph) Executive Director and Director Program Development
Ghore, Y., MPA(Columbia) Program Teaching Staff
Hawkes, S. Communications Coordinator
Irving, C., MA(Memorial) Manager, Networks and Ongoing Learning
Kraglund-Gauthier, W. Ph.D.(South Australia) Program Teaching Staff
Landry, J., M.A(UBC) Program Teaching Staff
Lazzari, B., BA(UMW) Program Teaching Staff
LeBlanc, J. Marketing Manager

Strength & Conditioning Coach Josh Crouse, B.Sc.Kin.
Coach, Men’s Football Gary Waterman, B.Sc.P.E.
Coach, Women’s Hockey Ben Berthiaume, M.Ed.
Coach, Men’s and Women’s Soccer Graham Kennedy, M.Ed.
Coach, Men’s Basketball Stephen Konchalski, LLB
Coach, Cross Country, Track and Field Stephen Konchalski, LLB
Coach, Men’s Basketball Graham Kennedy, M.Ed.
Coach, Men’s and Women’s Soccer Brad Peddle, B.Sc.P.E.
Coach, Women’s Basketball Lee Anna Osei, MA
Coach, Women’s Rugby Ben Berthiaume, M.Ed.
Coach, Men’s Football Gary Waterman, B.Sc.P.E.
Strength & Conditioning Coach Josh Crouse, B.Sc.Kin.

Rennie, J. Manager, Recruitment and Admissions
McDonald, J. Marketing Coordinator
Neustaeter, R., Ph.D.(Manitoba) Program Teaching Staff
Paul, K., BA(FNUC) Program Teaching Staff
Peters, B., MA(Carleton) Program Teaching Staff
Scoggins, A., MA(Cambridge) Director, Education Programs and Project Development
Sears, C., BSc. Manager, Monitoring and Evaluation
Smith, E., B. Hums, MA Education Program Coordinator
Thomson, K., BSc Acting Manager, Recruitment and Admissions

Extension Department
Bear, A Navigator of New Initiatives
Brophy, P., BIS(S.F.X) Innovation and Enterprise Centre Coordinator
Cook, Jody Centre for Employment Innovation Financial and Administrative Coordinator
MacInnes, J., M.Sc.(Carleton) Extension Program Staff
Popp, J., M.Sc. (Saskatchewan) Centre for Employment Innovation Coordinator of Stakeholder Engagement,
Romanow, P., Ph.D.(Carleton) Centre for Employment Innovation Coordinator
Stewart, J., B.Des.(SCAD) Director, Social Innovation

Diploma in Adult Education
Goggin, William, M.A.Ed.(S.F.X) Director

Research Services Group
Richard Ionor, D. Phil. Associate Vice President, Research & Graduate Studies
Bruce, D., MA Director, Research Grants
Andrew J.D. Kendrick, B.Sc. Manager, Industry Liaison & Knowledge Transfer
Dianne Edmond, BA Manager, Research Financial Operations
Dame Edmond, BA Research Operations Officer

Administrative Departments
Administrative Services
Director of Finance Andrew Beckett, CPA, CA
Director, Human Resources Jennifer Sinnewar-Murray, B.Comm.
Director, Ancillary Services Bob Hale, M.Ed.
Director, Risk Management Randy Peters, MBA, CPA, CMA
University Advancement
University Advancement Murray Kyte, B.BA, M.Ed., LL.B.
Director, Alumni Affairs Shanna Hopkins, BA HKIN
Director, Development Wendy Langley, MHH
Director, Marketing & Communications Kyle Bell, B.Comm.

Athletics and Recreation
Arlea Zerina, BAHKIN
Coach, Women’s Rugby
Coach, Men’s Basketball
Coach, Men’s and Women’s Soccer
Coach, Men’s Hockey
Coach, Women’s Basketball
Coach, Women’s Rugby
Coach, Men’s Basketball
Coach, Men’s and Women’s Soccer
Coach, Men’s Hockey
Coach, Women’s Basketball
Coach, Women’s Hockey
Coach, Men’s Football
Strength & Conditioning Coach

Co-operative Education Program
Manager Jane MacDonald, MLIS, M.A.Ed., M.Ed.,
Glossary

Academic Calendar (also known as the Calendar)
The university's official publication which outlines admission requirements, fees, grading systems, academic regulations, course offerings, and other information. Students admitted in a particular year are bound by the regulations described in the Academic Calendar for that year.

Academic Year
The regular academic year at StFX runs from September to April. The first term lasts from early September to mid-December and the second term, from early January to late April. See also spring and summer sessions.

Advanced Standing
Students may enter a higher level of courses in a subject when they have mastered the lower, usually introductory, level. This is normally permitted after completion of international baccalaureate (IB) or advanced placement (AP) courses. See section 1.3 h. Advanced standing does not reduce the number of credits required for a degree.

Audit
To take a course without receiving academic credit. A student may audit any course with the permission of the professor who teaches it. A student may attend and participate in the course and may, in agreement with the instructor, choose to receive feedback from submitted course work and/or exams, but will not receive a grade and will not be given credit for the course. The fee for a course taken for audit is normally one-half of the normal course fee. See 3.1.

Bachelor's or Baccalaureate Degree
The degree usually awarded after three or four years of study and successful completion of course and program requirements. A bachelor's degree may be awarded in arts (BA), science (B.Sc.), business administration (BBA), or education (B.Ed.); some may be earned with honours, with advanced major, or with major. See page 3 for more information on bachelor’s degrees at StFX.

Bursary
A monetary award based on financial need and reasonable academic standing.

Chair
The head of an academic department, for example, the chair of the Department of Celtic Studies.

Convocation
The graduation ceremony held every spring and fall at which degrees and diplomas are awarded.

Credit
The value assigned to a course. A course with three or more contact hours per week for the academic year has a value of six credits and is called a full course. A course taught for three hours a week for one term has a value of three credits. When students successfully complete a course, they are said to have credit for the course.

Dean
At StFX, there are four deans: The Dean of Arts, the Dean of Business, the Dean of Education and the Dean of Science.

Dean's List
An academic honour granted to students who achieve high grades while enrolled in at least 24 credits. See 3.19.

Decile
The student decile ranking in a course (10 high, 1 low) recorded for courses with the permission of the professor who teaches it. A student may attend and participate in the course and may, in agreement with the instructor, choose to receive feedback from submitted course work and/or exams, but will not receive a grade and will not be given credit for the course. The fee for a course taken for audit is normally one-half of the normal course fee. See 3.1.

Elective
A course which is not specified in a degree program. Electives may be open, that is, chosen by the student, or approved. Approved electives require permission from either the chair of the department of the student’s major, or the chair of the department in which the student wishes to take a course. Arts/science electives do not include professional program courses such as aquatic resources, business administration, education, engineering, human kinetics, human nutrition or nursing.
Faculty
A grouping of departments which give academic instruction in related subjects. At StFX, there are four faculties: the Faculty of Arts, the Faculty of Business, the Faculty of Education and the Faculty of Science. The Faculty of Arts is comprised of subjects in the humanities and social sciences. The Faculty of Business includes courses in business administration. The Faculty of Education includes education courses at the undergraduate, graduate and doctoral level. The Faculty of Science contains the life, earth and physical sciences, as well as computer science, engineering, human kinetics, human nutrition, nursing and mathematics/statistics. The combined Faculties of Arts and Science offer climate and environment and health programs. The term faculty is also used to describe members of the teaching staff of the university.

Full Time/Part Time
There are several definitions of full time/part time. Normally a student carries 30 credits for an academic year. Only students carrying at least 24 credits are considered for in-course scholarships. For the purpose of billing students, the business office considers a student carrying 24 or more credits to be full time. For the purpose of student loans 18 to 24 credits, or 60 percent to 80 percent of the normal load, may be considered full time by agencies which administer loan programs. For purposes of reporting to Statistics Canada full time is defined as 18 credits or more.

Grade Appeal
The process by which a student appeals his or her final grade for a course. See 3.13.

Graduate Degree
Master's or doctoral (Ph.D.) degrees require completion of an undergraduate degree first.

Honours
A degree which requires not only depth and breadth of subject study, but also superior academic achievement.

Humanities
The study of human thought including art, Catholic studies, Celtic studies, classical studies, English, French, German, history, Mi'kmaq, music, philosophy, religious studies, Spanish.

Invigilator
A person who, in the absence of the professor, administers and oversees examinations.

Junior
A third-year student.

Letter of Permission
A student may request a letter of permission to complete courses at another university. The credits will be used to fulfill StFX degree program requirements.

Levels
Course Level
Courses are numbered and referred to according to the normal year of study in which a student would complete them, as in 100-level (first year), 200-level (second year), 300-level (third year) and 400-level (fourth year) courses.

Student Level
A student’s level corresponds to the level of his/her degree program. The most common student levels at StFX are UG (Undergraduate), ED (Bachelor of Education) and GR (Graduate).

Year of Study
Most four-year degree programs require the completion of 120 credits, normally at 30 credits per year for four years. Students’ year of study is based on the number of credits they have earned towards their current degree. Students are “promoted” to the next year of study when they are within six of the required number of credits for that year. For example, a student who has earned 54 credits is considered to be a third year (junior) student.

Major
A student’s primary subject. StFX also offers joint majors, studying a combination of two subjects. While StFX does not have programs with double majors, there are opportunities for students to have the equivalent of double majors.

Mature Student
A candidate who has not fulfilled the normal admission requirements and has been out of school for at least three years.

Minor
The secondary subject or area of study, normally at least 24 credits in one subject.

Non-Degree Student
A student who is not registered in a degree program but is enrolled in courses either part time or full time.

Orientation
A program for new students providing an academic and social introduction to university life prior to the beginning of classes in September.

Pair
Twelve credits in one subject, with at least six credits at the 200-level or higher. As exceptions, language pairs in French, Celtic Studies and Classics may be composed of 12 credits at the 100-level. A student may complete only one pair from a department, and may not complete a pair in the major or minor subject. A pair may not be completed in any of the professional or applied program disciplines: AQUA, BSAD, ENGR, HKIN, HINU or NURS.

Passing Grade
The passing grade for all undergraduate courses is 50. Some programs have specific passing grade requirements. See chapter 3. For education, see chapter 4. For graduate studies, see chapter 8.

Pattern
The recommended or suggested series of courses a student takes in order to fulfill degree requirements.

Placement Test
Incoming students who wish to study modern languages must take placement tests to determine their eligibility for, and appropriate level of, study. See department guidelines, chapter 9.

Plagiarism
A form of cheating in which a student attempts to pass off as his or her work the words or ideas of another person or another writer. See 3.8.

Prerequisite
A course which must be completed before taking another course.

Program
An approved set of courses, requirements and study pattern, leading to a degree, diploma or certificate.

Rank
The student’s rank in his/her group and year of study. Ranking is not recorded for students enrolled in less than 24 credits or for those who withdraw during an academic year.

Registrar
The university officer responsible for managing academic information and processes and enforcing the regulations contained in the Academic Calendar as they pertain to students’ academic performance.

Registration
The process of formally enrolling in courses.

Repeated Course
When a student repeats a course, the original grade remains on the transcript and in the student’s average. The original grade has “R” specified indicating the course has been repeated and original credits removed.

Scholarship
A monetary award based on academic merit or excellence.

Senior
A fourth-year student.

Service Learning
Service learning is an innovative way to integrate experiential learning, academic study and community service. It is an opportunity for students to apply what they are learning in the classroom in a community setting. The goal is to blend service and learning so that the service reinforces, improves and strengthens learning. Service learning is possible in many academic disciplines and through a broad range of courses and service experience.
Social Sciences
The systematic study of human behaviour, including anthropology, development studies, economics, political science, psychology, public policy and governance, sociology and women’s and gender studies.

Sophomore
A second-year student.

Spring Session
An eight-week term from early May to late-June.

Student Loan
A sum of money which must be repaid. Loans to university students are obtained through the Canada Student Loan Program.

Study Abroad
The opportunity for a student enrolled in a four-year program to study at another accredited university as part of a degree from StFX. See 3.16.

Subject Abbreviations
The abbreviations below are used throughout the Calendar and on transcripts:
- ADED: Adult Education
- ANTH: Anthropology
- AQUA: Aquatic Resources
- ART: Art
- BIOL: Biology
- BSAD: Business Administration
- CATH: Catholic Studies
- CELT: Celtic Studies
- CHEM: Chemistry
- CLAS: Classical Studies
- CLEN: Climate & Environment
- COOP: Co-operative Education
- CSCI: Computer Science
- DEVS: Development Studies
- ECON: Economics
- EDUC: Education
- ENGL: English
- ENGR: Engineering
- ESCI: Earth Sciences
- FREN: French
- GERM: German
- HIIT: History
- HKIN: Human Kinetics
- HLTH: Health
- HNU: Human Nutrition
- IDS: Interdisciplinary Studies
- MATH: Mathematics
- MIKM: Mi’kmaq
- MNST: Ministry
- MUSI: Music
- NURS: Nursing
- PGOV: Public Policy and Governance
- PHIL: Philosophy
- PHYS: Physics
- PSCI: Political Science
- PSYC: Psychology
- RELS: Religious Studies
- SOCI: Sociology
- SMGT: Sport Management
- SPAN: Spanish
- STAT: Statistics
- WMGS: Women’s and Gender Studies

Subsidiary Subject
When the study of two subjects is combined such that one is subordinate to the other, the second is considered a subsidiary to the first. Within the BA Honours with Subsidiary program, the subjects in which an honours is possible are those in which one may complete a single honours, with the added exceptions of development studies and women’s and gender studies. A subsidiary is possible in those fields in which one may complete at least a major in the Bachelor of Arts, with the added exception of art history.

Summer Session
A six-week term scheduled from early July to mid-August.

Thesis
The lengthy paper required for an honours or graduate degree.

Transcript
The record of a student’s program of study, courses taken, and grades achieved. See section 3.15 for information on academic records.

Transfer Credit
Courses taken at another university or college are given equivalent StFX course numbers and credit value for transfer credit. These courses may be used to meet StFX degree program requirements.

Undergraduate Degree
A first degree completed at a university or college. At StFX, the first degree is the baccalaureate degree which takes four years of full-time study to complete.
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