

Undergraduate Academic Calendar of Saint Mary's University 2009-2010

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(902) 496-8280 Recruitment
(902) 496-8100 Admissions
(902) 420-5103 Continuing Education
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Information about Saint Mary's, including this *Academic Calendar* is available on the World Wide Web. Saint Mary's University Home Page is found at <http://www.smu.ca>; the Registrar's Home Page at <http://www.smu.ca/registrar>.

A Brief Guide to Using this *Academic Calendar*

Saint Mary's University publishes a separate *Graduate Academic Calendar*.

Some of the courses described in this *Calendar* may not be offered in 2009-2010. Students are therefore advised to consult the academic timetable for those courses which will be taught in the 2009-2010 academic year and the time(s) when they will be offered. The timetable can be found at <http://selfservice.smu.ca>

Frequently in this *Calendar*, the masculine includes the feminine and the plural includes the singular, and vice versa, as the context may require. This matter is subject to ongoing revision.

Inquiries regarding academic matters should be directed to the Registrar.

Although the University's *Calendar* is used by numerous people for many different purposes, one of its chief functions is to provide information for students interested in studying at the university level. The following was prepared to assist in finding relevant material in this *Calendar*.

Section 3 of this book sets forth the requirements for the many degree, diploma, and certificate programs offered at Saint Mary's University.

These programs include:

Bachelor of Arts
 Bachelor of Commerce
 Bachelor of Science
 Diploma in Engineering
 Diploma in Forensic Sciences
 Certificates of Honours Equivalency
 Certificate in Atlantic Canada Studies
 Certificate in Chinese Studies
 Certificate in Financial Instrument Analysis
 Certificate of Proficiency in French
 Certificate in German Studies
 Certificate in Human Resource Management
 Certificate in Linguistic Studies
 Certificate in Mathematical Sciences for Education
 Certificate in Japanese Studies
 Certificate in Hispanic Studies
 Co-operative Education Certificate

The following graduate programs can be found in the *Graduate Academic Calendar*:

Master of Arts (in Atlantic Canada Studies, Criminology, History, International Development Studies, Philosophy, Theology and Religious Studies, Women and Gender Studies)
 Master of Business Administration
 Master of Business Administration - CMA
 Master of Finance
 Master of Management - Cooperatives and Credit Unions
 Executive Master of Business Administration
 Master of Science (in Applied Psychology, Applied Sciences, Astronomy)

Graduate Diploma in International Development Studies
 Doctor of Philosophy in Business Administration (Management)
 Doctor of Philosophy in Astronomy
 Doctor of Philosophy in Industrial/Organizational Psychology

After deciding on the academic program in which they are interested and studying the requirements of that program, students should consult Section 4 which contains descriptions of all the courses offered by the University's academic units. The timetable for the current academic year shows which courses will be available, when they will be taught, and by which instructors. Keeping within the requirements of the particular program chosen, students may then select the courses with the greatest interest and appeal to them. Frequently a course will have several sections often taught at different times. This is arranged in order to keep classes to a reasonable size and to provide time options for students in the preparation of their timetables.

The next step is to apply for admission. Complete information on how to proceed is set forth in the latter part of Section 2. This section also contains the academic regulations and provides academic information. Details on fees and financial information are found in Section 5, which also contains facts about academic awards and scholarships as well as bursaries and student loans.

Inquiries related to specific areas should be directed to the officers indicated below:

Recruitment

Telephone: 902-496-8280
 Fax: 902-420-5073
 Web Address: www.smu.ca/prospectivestudents/welcome.html

Academic Policies and Records

Registrar: 902-420-5582
 Fax: 902-420-5151
 Web Address: www.smu.ca/registrar

Admission of Students

Telephone: 902-420-5415
 Local Fax: 902-496-8100
 International Fax: 902-496-8160
 Web Address: www.smu.ca/prospectivestudents

Continuing Education:

Telephone: 902-420-5492
 Fax: 902-420-5103
 Web Address: www.smu.ca/conted

Alumni Affairs

Telephone: 902-420-5420
 Fax: 902-420-5140
 Web Address: www.smu.ca/alumni

Bookstore

Telephone: 902-420-5562
 Fax: 902-420-5006

Web Address:
www.smu.ca/administration/bookstore

Fee Information

Telephone: 902-420-5464
Fax: 902-496-8184

Web Address:
www.smu.ca/administration/financial_services

Library

Circulation 902-420-5547
Fax: 902-420-5561

Web Address:
www.smu.ca/administration/library

Residence Accommodations

single housing: 902-420-5598
family housing, graduate housing: 902-420-5589
Fax: 902-496-8107

Web Address:
www.smu.ca/administration/resoffic

Scholarships and Student Loans

Telephone: 902-420-55761
Fax: 902-420-5125

Web Address:
www.smu.ca/administration/student_services/aid

Student Affairs

Telephone: 902-420-5615
Fax: 902-420-5125

Web Address:
www.smu.ca/administration/student_services

Employment and Job Placement

Telephone: 902-420-5499
Fax: 902-420-5125

Web Address:
www.smu.ca/administration/student_services/employment

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A MESSAGE FROM THE PRESIDENT ...

*On behalf of my colleagues, I wish to thank prospective and new students for considering Saint Mary's University in your academic career plans. For returning students, welcome back and thank you for the confidence you expressed in choosing Saint Mary's as **your** University. Our vision is for our students to become citizens of the world as education is a critical investment for you and the future of our increasingly global society. We take our role seriously in providing you with the highest return on your investment.*

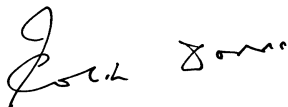
As this Academic Calendar will demonstrate, we offer a broad range of academic programs, and are extending the number of graduate programs to add to those currently available. In addition, we offer many interdisciplinary programs and we encourage students to study for minors in other faculties to equip them with a broad range of knowledge and skills. Innovation has always been a hallmark at Saint Mary's and we are continuously upgrading our curricula.

Saint Mary's welcomes students from over 80 countries – a veritable United Nations. This is a tremendous resource for the internationalization of our campus. For our Canadian students, we have opportunities to study/work abroad through a number of exchange agreements and internships. For example, we have exchange agreements for study in France, Germany, Mexico, the U.K. and Australia and we are increasing our funding support for these programs. For those who have graduated, our International Activities office manages a range of internships and Saint Mary's grads have worked in over 36 countries.

At Saint Mary's University students are our primary responsibility and we want to help you achieve your full potential. We established a Centre for New Students to assist in the early days of transition to university. Give the Centre staff a call at (902) 491-8691 if you feel they could help you. We also have a full range of Student Services on campus, including counseling, peer support, the Atlantic Centre for Support of Students with Disabilities and a Medical Centre. There are a number of student societies to join too. The Tower, arena and stadium provide opportunities for involvement in intramurals and varsity athletics as well as staying in shape! We are committed to campus renewal and you will see evidence of this now and in the future.

You will find academic excellence in our programs and instructors and you will find a dedicated and committed staff to support our academic mission. There is vibrancy, a sense of community and commitment on our campus. I encourage you to read our Academic Calendar and visit our website (www.smu.ca) to learn more about us.

Saint Mary's is a university very much on the move and thank you again for investing in your studies with us.



J. Colin Dodds, Ph.D.
President
(colin.dodds@smu.ca)

General Information

**History
Calendar of Events
Board of Governors and Senate**

Section

1

General Information

More Than Two Hundred Years of History

Since its founding in 1802, Saint Mary's University has developed into a modern, urban university with more than 8,500 full and part-time students. It is the oldest English-speaking, Roman Catholic initiated university in Canada. With meagre resources, the Reverend Edmund Burke founded the institution and, on being named Bishop of Nova Scotia, insisted that support for the college be continued as essential in fostering the Catholic community.

In 1841 the Nova Scotian House of Assembly gave formal recognition of the college's academic role and, eleven years later, granted it legal status. The next few years saw a great deal of uncertainty about the survival of the college. However, in 1913 the Christian Brothers of Ireland were asked by the Archdiocese of Halifax to direct the college and its academic programs. Its reputation as a liberal arts institution thrived in these years. Undergraduate programs were widely respected and new instructional programs were initiated, the most notable being the Faculty of Commerce which, when established in 1934, was among the first of its kind in Canada. In 1940 the Upper Province of the Society of Jesus (the Jesuits) was invited to succeed the Christian Brothers as administrators and teachers.

In 1952, the "College" became a "University". For more than thirty years, until the new Act of Incorporation in 1970, the college remained under Jesuit supervision. It established itself in teacher education; initiated the first courses in continuing education in Halifax/Dartmouth; purchased the first computer in Atlantic Canada; and became coeducational. Also, the long-standing emphasis on liberal arts and commerce was complemented by new programs in engineering and science.

The Act of 1970 gave legal status to the Board of Governors and Senate. Subject to the powers of the Board, the Senate is responsible for the educational policy of the University. In 1974, faculty members (full-time) formed the Faculty Union which has become an influential voice in the affairs of the University. Part-time faculty members became a separate bargaining unit in 1996.

Statement of Objectives

The objectives of the University, as defined in the Saint Mary's University Act, 1970, are to:

- a. promote and disseminate learning and knowledge;
- b. give special emphasis to the Christian tradition and values in higher education;
- c. provide an atmosphere of freedom, responsibility, and mutual respect in the University community;
- d. aid in the improvement of society in all ways consistent with these objects.

From the Jesuits and their predecessors, Saint Mary's has inherited a strong commitment to meeting community needs and an equally strong tradition of emphasizing excellence in

teaching and excellence in research. During the past three decades Saint Mary's has evolved into a more complex urban university, with a full range of undergraduate programs in arts, business, education and science. Master's programs are offered in all Faculties in such specific subject areas as Atlantic Canada Studies, Criminology, History, International Development, Women and Gender Studies, Astronomy, Applied Psychology, Business Administration and Finance. In November 1999 a doctoral program in Business Administration (Management) was officially launched, followed in 2003 with a doctoral program in Astronomy and a year later with a Ph.D. in Organizational Psychology.

Now a publicly accessible, coeducational institution, functioning with a sense of its tradition, the University also offers pre-professional programs in law, medicine, engineering, theology, dentistry, and architecture. Through the co-operative efforts of the Division of Continuing Education, part-time students study in these programs and in a variety of non-credit executive and professional programs all of which have been rapidly expanding both in numbers and geographic locations.

Over the last several decades this commitment to academic and research excellence has seen the number of full-time faculty with doctoral degrees rise to over 90 percent. Part-time faculty members are recruited on the strength of academic qualifications in addition to the expertise and experience they can bring to the classroom.

More dramatic evidence of faculty enrichment is demonstrated by their research activities. In the last decade, sponsored contract and academic research has increased many fold. This significant increase reflects the University's firm belief that excellence in both teaching and research is essential for professors and that research is an integral part of the contributions that universities must make to society.

The quality of instruction to students has been a focal point of Saint Mary's University since its founding. This long standing tradition of commitment to excellence in teaching has seen the introduction of new initiatives. The Quality of Teaching Committee and the Centre for Academic and Instructional Development have assisted faculty members by offering workshops on instructional techniques and innovations in teaching methodology. Awards for Teaching and Research Excellence are presented annually to members of faculty.

Students attend day and evening classes both on the 30 acre campus in the south end of Halifax and at off campus locations including the World Trade Centre in downtown Halifax; in Dartmouth; as well as in several other communities. Saint Mary's boasts residence facilities for single and married students, a Students Centre, Science Building, the Patrick Power Library, which is linked via computer to Nova Scotia universities and colleges, and "The Tower", a modern recreation and fitness complex. The Sobeys Building, officially opened in November 1998. It provided much needed additional classrooms with the very

latest in technology and is home to the Sobey School of Business. In 2008 a \$25 million expansion and renovation project was completed on the Science Building. Scheduled for completion in 2009, the newest structure on campus will be the Atrium and the Global Learning Commons, a \$17.5 million project under construction. The building features a main floor Global Learning Commons - a wireless, student-centered, barrier-free communal learning space that encourages interaction between faculty and staff, and provides more opportunity for community engagement. The second and third floors house teaching and study space, along with space for offices and computational sciences research.

The traditions formed by its founder and early teachers, built upon by the sound educational values of the Christian Brothers, and strengthened by the imaginative leadership of the Jesuits, provide a stable base for future development. Saint Mary's has been innovative in seeking co-operative ventures with other Maritime universities. The results have included the Atlantic Metropolis Centre as well as the Gorsebrook Research Institute which contributes to the understanding of our regional culture within a national context. Our 'internationalization' has seen formal teaching and research agreements signed with universities around the world including China and Japan as well as Mexico and The Republic of The Gambia. The Atlantic Centre of Support for Students with a Disability has grown remarkably over the last several years and provides a variety of support to an increasingly important sector of our student population. It also provides assistance to disabled students studying at other Maritime post secondary institutions.

Saint Mary's University concentrates on its mission of providing excellence in its service to students and the larger community around the campus. Its reputation is one of quality education on a campus environment where individual development is paramount. Saint Mary's student population is drawn largely from Halifax and Dartmouth with over half of its students from this area. There is also a distinct international aspect to the University with students from many countries including China, Japan, Bermuda, the United States, and Mexico. We are ambitiously pursuing a goal shared by many. It is a vision centered around continued academic excellence in teaching and research, accessibility for all Nova Scotians, strong community outreach, and facilities and instruction for the physically challenged.

In December 2007, the Senate approved a revised Academic Plan. Entitled *Engaging the Vision: Academic Plan, 2008-2011*, the revised plan was based on campus-wide consultations held in the course of 2007. Key priorities identified in the plan include:

- civic engagement
- student success
- program development
- quality teaching and learning
- internationalization
- scholarship and graduate studies

"The plan is in large measure an attempt to articulate and realize Saint Mary's vision of being "the University of choice for aspiring citizens of the world," says Dr. Terry

Murphy, Saint Mary's Vice President, Academic and Research, who led the process of developing the Academic Plan. "Working with a clearly articulated sense of academic priorities was crucial to the development of the Academic Plan," he says. "We want to ensure that academic concerns would drive, rather than be driven by, the process." Dr. Colin Dodds, President of Saint Mary's says, "Academics are at the core of what we do, research, teaching, service and everything else has to support that."

The revised plan builds on the five-year Academic Plan that was adopted by Senate in 2002.

Memberships

Saint Mary's University is a member of a number of organizations including Association of Universities and Colleges of Canada, Association of Atlantic Universities, and Association of Commonwealth Universities.

Affiliations

Saint Mary's University has been associated with Dalhousie University (formerly DalTech and prior to that the Technical University of Nova Scotia) since 1916, providing the first two years of study leading to the degree of Bachelor of Engineering in civil, electrical, mechanical, mining, metallurgical, chemical, and industrial engineering. At the beginning of the 21st century, Saint Mary's University and the Atlantic School of Theology entered into a formal Memorandum of Agreement concerning future co-operation and new initiatives, most notably a new MA in Theology and Religious Studies. This promises many exciting new developments, including a Centre for Ethics as well as co-operative ventures with faculty and students.

University Crest and Motto

The University crest was designed in the 1940s by the Reverend Daniel Fogarty, S.J., the then Dean of Education. Each symbol in the crest has a significance relevant to the various phases and history of the University. On the outer portion of the crest the name and location of the University are inscribed in Latin, and in Roman numerals (1841), the date the University received its charter authorizing it to grant degrees. The book shown above the shield represents learning and knowledge. The inscription on the page of the book is in Latin - "Age Quod Agis". This is the motto of the University which exhorts all those connected with the University to strive to do their best in everything that they do. This quotation is from the Irish Christian Brothers and symbolizes their contribution to the development of the institution. The centre portion of the crest is a shield. The upper part of this has the official seal of the Jesuits with I.H.S. being the Greek initials for Christ's name. Below these initials are the three nails which represent the Crucifixion and surrounding these is the Crown of Thorns.

The two crowns in the lower part of the shield represent a dual loyalty - to the then Dominion of Canada and to the British Commonwealth. Below these crowns is the thistle, emblematic of Nova Scotia's Scottish heritage.

10 General Information

University Colors and Mascot

The official colors of the University are maroon and white.

In 1960 Saint Mary's University chose Huskies as the name for their sports teams. The Siberian Husky became the official mascot for qualities which paralleled the teams' motto, In Pursuit of Excellence. Pound for pound, the Siberian Husky is the strongest draft dog in existence. A versatile and gentle dog, the Husky is the perfect example of tenacity, drive, and loyalty. Like their namesake, the Saint Mary's Huskies strive for gold. They are willing to work hard and are always attempting to achieve their fullest potential.

The University Mace

The ceremonial mace, which is carried by the Marshal of Convocation at the head of the academic procession, was presented to Saint Mary's in April 1980 and used for the first time at the 1980 Convocation. It symbolizes the University's authority to grant degrees. It was made and presented to the University by Maritime Command in recognition of Saint Mary's alumni killed in both world wars and also serving members of the Canadian Armed Forces who have been students at the University. The mace is made of oak with a cast brass crown and brass plates carrying traditional ceremonial engravings. The plates represent the contribution to Saint Mary's by the Jesuit Fathers, the Christian Brothers of Ireland, the Archdiocese of Halifax, the LaSalle Christian Brothers, the Lay Teachers, and the Armed Forces.

The Presidential Medallion of Office

On 22 October 2000, a Medallion of Office was officially presented to the University and used for the first time at the Installation of Dr. J. Colin Dodds as President. Designed and crafted by James Bradshaw and Bruce Babcock of James Bradshaw Jewelry Design Studios, Inc., Halifax, its centre is a University Gold Medal, traditionally awarded to the top graduating students. It symbolizes the University's deep commitment to academic excellence. It is surrounded by contrasting sterling silver, representing the diversity of the institution's students and of its academic programs. It was generously presented by Mary Eileen Donahoe and her family as a memorial to the late Senator Richard A. Donahoe, Q.C., K.S.G., LL.D.(Hon.), a member of one of the earliest Boards of Governors, in recognition of his career of public service and his love of Saint Mary's.

ACADEMIC CALENDAR OF EVENTS

2009-2010

2009

July

2 (Wednesday) Deadline for filing an Application for Graduation for Fall Convocation, 2009.

Registration

Details on registration for the 2009-2010 academic year will be published on the Registrar's webpage www.smu.ca/registrar in March 2009.

September

9 (Wednesday) **CLASSES BEGIN.**

18 (Friday) (a) Last day for registering and changing six (6) credit hour courses (i.e., designated .0) and three (3) credit hour courses (i.e., designated .1)
 (b) Last day for filing Applications for Graduation for degrees, diplomas and certificates to be awarded in January 2010 or at Spring Convocations, 2010
 (c) Last day for final payment of first semester tuition fees.

October

12 (Monday) Thanksgiving Day. University closed. No classes.

18 (Sunday) Fall Convocation, 2009.

November

11 (Wednesday) Remembrance Day – University closed. No classes.

13 (Friday) Last day for withdrawing, without academic penalty, from three (3) credit hour courses (i.e., designated .1) and from six (6) credit hour course (i.e., designated .0) taught only in the first semester (Reference: Academic Regulation 16).

December

2 (Wednesday) Last day of classes in first semester.

3 (Thursday) Study Day. No classes

4 (Friday) Start of formal final examinations in three (3) credit hour courses (i.e., designated .1) and formal mid-year examinations in six (6) credit hour courses (i.e., designated .0).

8 (Tuesday) Patronal Feast of the University. No examinations are scheduled on this day.

19 (Saturday) End of final exams and end of first semester. **Note:** Subject to change should it not be possible to schedule all formal examinations in the designated timeframe.

2010

January

4 (Monday) University reopens

5 (Tuesday) **CLASSES RESUME.**

14 (Thursday) (a) Last day for registering in a three (3) credit hour course (i.e., designated .2)
 (b) Last day for final payment of second semester tuition fees.

15 (Friday) Last day for withdrawing, without academic penalty, from a six (6) semester hour course (i.e., designated .0) taught over both semesters (Reference: Academic Regulation 16).

February

22 (Monday) – Winter Break. No classes.

27 (Saturday)

12 Calendar of Events

March

19 (Friday) Last day for withdrawing, without academic penalty, from three (3) credit hour courses (i.e., designated .2) or six (6) credit hour courses (i.e., designated .0) taught only in the second semester (Reference: Academic Regulation 16).

April

2 (Friday) Good Friday. University closed.

4 (Monday) Classes resume but administrative offices closed.

7 (Wednesday) Last day of classes in second semester.

8 (Thursday) Study Day.

9 (Friday) Start of formal final examinations in three (3) credit hours courses (i.e., designated .2) and in six (6) semester hour courses (i.e., designated .0).

24 (Saturday) End of formal final examinations and end of second semester. **Note:** Subject to change should it not be possible to schedule all formal examinations in the designated timeframe.

May

21 (Friday) Spring Convocations, 2010 at Halifax Metro Centre (tentative).

Board of Governors

Chairperson

Ms. Michele Wood-Tweel

Vice-Chairperson

Mr. John Fitzpatrick

Members Ex-Officio

Chancellor

Dr. David F. Sobey, C.M., O.C.

Visitor

The Most Reverend Anthony Mancini

President and Vice-Chancellor

Dr. J. Colin Dodds

Vice-President, Academic and Research and Board
Secretary

Dr. Terrence Murphy

Vice-President (Administration)

Ms. Gabrielle Morrison

Vice-President, Finance

Mr. Larry Corrigan

Members Appointed by the Roman Catholic Episcopal Corporation

Ms. Louise Abraham-Pace

Mr. John Fitzpatrick

Ms. Karen Oldfield

Members Elected by the Alumni Association

Ms. Adriana Dolnyckyj

Mr. Francis Fares

Mr. Phil Fraser

Mr. Steven Landry

Mr. William MacAvoy

Mr. Paul O'Hearn

Members Elected by the Academic Staff

Dr. Paul Bernard

Dr. Tony Charles

Dr. Shelagh Crooks

Dr. Dawn Jutla

Dr. Robert McCalla

Dr. Keith Vaughan

Members Elected by the Students

Ms. Shane Cunningham

Ms. Erin Garner

Mr. Chris MacDougall

Mr. Matt Risser

Member Appointed by the Upper Canada Province of the Society of Jesus

TBA*

Members Elected by the Board of Governors

Mr. Lawrence Freeman

Dr. Eligio (Lee) Gaudio

Mr. Frank Matheson

Mr. Fred Smithers, O.C.

Mr. Paul Sobey

Ms. Michele Wood-Tweel

TBA*

TBA*

Members Appointed by the Lieutenant-Governor in Council

Mr. R. B. Cameron

Mr. Lawrence Hood

Observer Elected by Support Staff

Ms. Sarah Morris

Academic Senate

Chairperson

Dr. Donald J. Naulls

Vice-Chairperson

Dr. Robert McCalla

Members Ex-Officio

Dr. J. Colin Dodds, President
Dr. Terrence Murphy, Vice-President, Academic and Research
Dr. Esther Enns, Dean of Arts and Acting Dean of Education
Dr. David Wicks, Dean of the Sobey School of Business
Dr. Malcolm Butler, Dean of Science
Dr. Kevin Vessey, Dean of Graduate Studies and Research
Dr. Paul Dixon, Associate Vice President (Enrolment Management) and Registrar
Mr. Keith Hotchkiss, Director of Student Services
Ms. Marie DeYoung, University Librarian
Ms. Betty MacDonald, Director, Division of Continuing Education

Members Elected

To August 2011

Dr. Sophie Beaulé
Dr. Susan Bjornson
Dr. Robert Dawson
Dr. Ron Russell
Dr. Veronica Stinson

To August 2010

Dr. Tony Charles
Dr. Diane Crocker
Dr. Kathryn Kimery
Dr. Robert McCalla
Dr. Shripad Pendse

To August 2009

Dr. Deborah Kennedy
Dr. Donald Naulls
Dr. Georgia Pe-Piper
Dr. Danika van Proosdij
Dr. Thomas Rand

Student Senators

Miss. Shane Cunningham
Mr. Alex Dong
Miss Yasmin Ann Hanna
Mr. Adam Harris
Mr. Chris MacDougall

Senate Office

Barb Bell

**Student Recruitment
And Admissions**

**Academic Integrity and
Student Responsibility**

Academic Regulations

Registration

Section

2

Recruitment & Admission Services

Student Recruitment manages/markets Saint Mary's programs and services specifically related to the recruitment of students. The department is responsible for planning, coordinating and implementing a comprehensive, timely and multi-faceted marketing and information program designed to encourage prospective (domestic and international) students to apply for admission to the University.

Campus tours are normally available

Monday	10:00 a.m.
Tuesday	5:00 p.m.
Wednesday	2:30 p.m.
Thursday	1:00 p.m.
Friday	10:00 a.m. and 1:00 p.m.

Each tour is approximately 90 minutes in length. You will have the opportunity to visit our classrooms, library, bookstore, residences, athletics facilities and dining halls. Two week advance booking is recommended.

To book a tour call 902-420-5682 or email campustours@smu.ca

Visitors to our campus are advised to park on Robie Street and enter through McNally Main Entrance where you will be met by our student ambassadors. Please note that Saturday tours may not be as comprehensive as week day tours as some areas may not be accessible.

Students seeking program information and application forms should contact:

Recruitment Office
Saint Mary's University
Halifax, Nova Scotia B3H 3C3

Telephone: 902-496-8280
Fax: 902-420-5073
e-mail: recruitment@smu.ca or international@smu.ca

The Admission Office is responsible for making undergraduate admissions decisions. In addition, the Admissions Office awards Entrance Scholarships. Students seeking admission to an undergraduate program at Saint Mary's University should apply online at www.smu.ca/web_applications or submit their application to:

Admissions Office
Saint Mary's University
Halifax, Nova Scotia B3H 3C3

Telephone: 902-420-5415
Fax: 902-496-8100
e-mail: admission.status@smu.ca

Helpful Numbers

- (i) To arrange a personal interview with an Admissions Officer: 902-420-5415
- (ii) To inquire about the status of your Application or Entrance Scholarship: 902-420-5415

- (iii) Student Loan Information & Continuing Awards:
email michelle.fougere@smu.ca
telephone: 902-420-5615
- (iv) Residence enquires:
email residence.life@smu.ca or
telephone: 902-420-5598
- (vi) Off campus housing enquires:
email offcampus.housing@smu.ca
telephone: 902-491-8606

Centre for New Students - New School, New People, New Place

As a new student at Saint Mary's, you may have lots of questions you need answered. That's what the Centre for New Students is for - to help you find answers to your questions. Located in the Admissions Office in the McNally Building, the Centre for New Students welcomes new and prospective students. At the Centre, students can be linked with the appropriate academic departments, support services, and learn more about what the Saint Mary's community has to offer.

The Centre for New Students provides:

- Pre-admission counseling for high school students who are interested in full-time or part-time studies.
- A "home base" information area for all new students once they arrive on campus.
- Referrals to the appropriate academic, administrative departments and support services.
- Answers to students' questions and an opportunity to learn more about the University community.
- Assistance students in understanding the course selection process and determining their own academic timetable.

Students are invited to drop by anytime to chat or to take advantage of the many brochures, pamphlets and other publications designed to help with the transition to university life at Saint Mary's University.

If you would like to schedule a session please call 902-491-8691 or e-mail us at cns@smu.ca

1. Procedures for Admission to Undergraduate Programs

- a. **Admission Timelines:** There are four admission terms: September, January, May and July. Although early application is highly recommended, applicants will be considered for admission up to the start of each term. However, "International" students should apply early enough to obtain their study permit and "Transfer" students must ensure that official transcript(s) arrive in the Admissions Office at least 4 weeks prior to the beginning of the term start date.

Completed applications are considered on an ongoing basis and students can expect to receive a reply within one to two weeks of receipt of the application and all supporting documents.

Enclose provincial certificates or other accredited school certificates giving final grades or marks, and a processing fee of \$40.00 (Canadian) with the application form.

- b. Applicants who have completed courses at another post-secondary educational institution must request an official transcript be sent to Saint Mary's University. Failure to report all institutions attended will result in dismissal from the University.
- c. (i) Former Saint Mary's University students who were not in attendance during the preceding academic year or during a period of up to four years, who were not required to withdraw from the University and who wish to resume studies in the same academic program in which they were formerly registered, must notify the Director of Admissions in writing of their intent to return to the University before registering for any course, and must fill in an "Application Form B" available at www.smu.ca/web_applications or the Admissions Office. The deadlines for filing this form are the same as those found in 1a.
 - (ii) Former Saint Mary's University students seeking to enroll in a different academic program, or who have not been registered during the preceding four years, who have been required to withdraw, or who attended another post-secondary institution since last attending Saint Mary's, must apply for re-admission to the Director of Admissions (see Academic Regulations). The deadlines are found in 1a above.
- d. Students who were registered in an academic program during the entire preceding academic year are not required to reapply for admission to the University. Such students will automatically be sent information with respect to registration for the coming year. This mail-out is sent to the students' home addresses unless an alternate address has been filed officially with the Registrar by the stipulated deadlines.
- e. Once admitted to the University, the student agrees to abide by any and all rules and regulations affecting students officially passed and duly promulgated. The student agrees that failure to abide by such regulations and rules may result in expulsion from the University without refund of tuition or any other fees paid by the student to the University.
- f. All applicants will automatically be issued their own unique PIN under the following terms of personal responsibility:
 - (i) understanding the requirements for the privacy and confidentiality of the PIN and account;
 - (ii) being familiar with the limitations and timelines of the information accessed from this source (and any revisions thereto); and
 - (iii) the right and responsibility of the University:
 - (a) to revise this information and its own regulations and guidelines; and
 - (b) to withdraw students' right to access their account for due cause.

2. Requirements for Admission to Undergraduate Programs

a. General Considerations

The following requirements have been established as a guide to applicants. Possession of these minimum requirements does not establish the right of an applicant to be admitted or readmitted to the University. The University reserves the right to accept or reject any applicant.

Definitions:

- (a) "Satisfactory grades" means an average in five subjects of 65% and no mark below 60%.
- (b) "Academically recognized subjects" means subjects offered in the university preparatory program of an approved school system.

Early Admission and Early Scholarship Offers

Students who have achieved an overall average of 80% or above in grade 11 and are registered in grade 12 courses that satisfy the program requirements will be eligible for early admission and scholarship.

Students who have achieved an overall average of 70% or above in grade 11 who have achieved an overall average of 70% or above in mid first semester grade 12 courses that satisfy the program requirements will be eligible for early admission.

Early Admission and Early Scholarship Offers for the International Baccalaureate (IB) Diploma

Students who have achieved an "anticipated" or "predicted" point total of 28 or above and are registered in grade 12 courses that satisfy the program requirements will be eligible for early admission and scholarship.

Note:

The "Early Admission and Early Scholarship Offer" deadline is February 15.

Applicants who are not admitted under the provisions of early admission but whose final first semester grade 12 results are acceptable will be offered regular admission. Admission would be conditional upon maintaining "satisfactory" final grade 12 results in June.

b. Nova Scotia

Students applying from Nova Scotia Grade 12 with satisfactory grades in English and four other academically recognized subjects, as coded below, may be admitted.

Requirements are as follows:

- (i) Bachelor of Arts: English 12 academic plus four additional Grade 12 academic courses, one of which may be an approved open course;
- (ii) Bachelor of Science: English 12 academic, Pre-Calculus Mathematics, two Grade 12 academic science courses, plus one additional Grade 12 academic course or approved open course;
- (iii) Diploma in Engineering: English 12 academic, Pre-Calculus Mathematics, Physics 12 academic; Chemistry 12 academic, plus one additional Grade 12 academic course or an approved open course;

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- (iv) Bachelor of Commerce: English 12 academic, Pre-Calculus Mathematics or Academic Mathematics 11 and 12 or Advanced Mathematics 11 and 12, plus three other Grade 12 academic courses, one of which may be an approved open course.

Students applying from Nova Scotia who are completing the International Baccalaureate (IB) Diploma must:

- (i) Successfully complete the Diploma Program.
- (ii) Have minimum “anticipated” or “predictor” or “final” point total of 24 with grades of 3 or above in courses required for admission.
- (iii) Complete the appropriate courses for the program of interest

c. Quebec

In order to be considered for admission, students must complete one year of CEGEP and satisfy the specific subject requirements as noted above in 2b. Credits for students with two years of CEGEP will be assessed separately.

d. Ontario

In order to be considered for admission, students must complete the following specific subject requirements:

Bachelor of Arts: English 4U plus 4 additional 4U courses (one 4M course may be substituted).

Bachelor of Science: English 4U plus Geometry & Discrete Mathematics - MGA4U or Calculus - MCB4U plus two 4U science courses plus one additional 4U course (one 4M course may be substituted).

Diploma in Engineering: English 4U plus Geometry & Discrete Mathematics - MGA4U or Calculus - MCB4U plus Chemistry and Physics 4U plus one additional 4U course (one 4M course may be substituted).

Bachelor of Commerce: English 4U plus Mathematics & Data Management - MDM4U or Geometry & Discrete Mathematics - MGA4U or Calculus - MCB4U plus three additional 4U courses (one 4M course may be substituted).

Note: If a high school does not offer a sufficient number of 4U courses, then additional 4M courses may be substituted.

e. Other Provinces

New Brunswick, Prince Edward Island, Newfoundland, Manitoba, Saskatchewan, Alberta and British Columbia:

In order to be considered for admission, students applying from these provinces must complete Grade 12 and satisfy the specific subject requirements as noted above in 2b.

f. American School System

- (i) In order to be considered for admission, students must complete Grade 12 with 16 points. Students seeking admission to Arts must have 4 points in English and 12 points in other academic subjects. Students seeking admission to Engineering and Science must have 3 points in mathematics and at least 3 points in science

subjects. Students seeking admission to Commerce must have 3 points in mathematics.

- (ii) Students must arrange to provide the Admissions Office with a high school transcript, and SAT score results.

g. British Patterned System of Education

For students studying a British patterned curriculum (i.e. CXC: CAPE: AICE: GCE: GCSE: IGCSE or WASSCE) must meet the following requirements:

Students must pass at least five subjects, two of which must be at the Advanced Level, and satisfy the specific subject requirements. Students who achieve above average results in a minimum of five subjects will be considered for admission.

h. International Baccalaureate (I.B.), Advanced Placement (A.P.), British GCE A Levels, and Caribbean Advanced Placement Examinations (CAPE)

Students will be considered for admission providing they have successfully completed the requirements for one of these diploma programs and satisfy the specific subject requirements as noted above in 2b.

Students with grades of 5, 6, or 7 on higher level I.B. certificates are eligible to receive a maximum of eighteen (18) credit hours of advanced standing toward their undergraduate degree program.

Students who have successfully completed the IB Diploma with a score of 30 or above will be granted 30 credit hours of advanced standing. 18 credit hours will be based upon the equivalency between IB courses completed at the higher level and the Saint Mary's University courses.

Students with grades of 4 or 5 on A.P. courses are eligible to receive a maximum of eighteen (18) credit hours of advanced standing toward their undergraduate degree program.

Students who receive a final grade of A, B or C in approved GCE A Level examined subjects will be eligible for advanced standing credit, to a maximum of 18 credit hours. The official examination certificate from one of the examination boards ((AQA, OCR, Edexcel, WJEC and CCEA) must be sent to the Admissions Office.

Students are eligible to receive 6 credit hours of advanced standing for each approved CAPE course, if they achieve grades of I, II, or III.

Charts of Saint Mary's University courses equivalent to specific A.P., I.B., A Level and CAPE courses are available on the web at <http://www.smu.ca/prospectivestudents/international-apply-require.html>

i. Language Requirement

Students whose first language is not English, and who have not attended an English language secondary school, are required to take one of the standardized English language

proficiency tests. These tests are administered by the University of Michigan, the College Entrance Examination Board, the University of Cambridge, and Saint Mary's University. The standards for admission to the University are as follows:

- (i) a minimum score of 550 on the Test of English as a Foreign Language (TOEFL) (minimum computerized TOEFL score 213) or a minimum iBT score of 80 overall with at least 20 in each of the four sub-tests: Reading, Writing, Listening and Speaking; or
- (ii) an aggregate grade of C or higher on the Cambridge First Certificate in English; or
- (iii) a minimum score of 80 on the Michigan examination (MELAB); or
- (iv) an average of 4.5 on the CanTEST administered by Saint Mary's University; or
- (v) a minimum score of 6.5 on the International English Language Testing System (IELTS).
- (vi) Successful completion of English for Academic Purposes, Level Six, in the Intensive English Program, administered by Saint Mary's University.
- (vii) A minimum score of 60 on the Canadian English Language Assessment (CAEL).

One of the above examinations may be taken in almost any country of the world at almost any time of the year. Applicants should apply directly to one of the following testing centers:

- (i) Educational Testing Service (TOEFL)
Box 899
Princeton, New Jersey 08514 U.S.A.
- (ii) Cambridge Examinations in English
Local Examinations Syndicate
Syndicate Buildings
Cambridge, England
- (iii) University of Michigan English Proficiency Test
Language Institute of Ann Arbor
Ann Arbor, Michigan 48104 U.S.A.
- (iv) For the CanTEST or CAEL:
TESL Centre
Saint Mary's University
Halifax, Nova Scotia B3H 3C3 Canada
Phone: 902-420-5691
Fax: 902-420-5122
E-mail: tesl@smu.ca
- (v) For the IELTS:
IELTS Scheme Officer
University of Cambridge Local Examinations
Syndicate
1 Hills Road
Cambridge UK
CB1 2EU

Students whose first language is not English should note Academic Regulation 23.

Notes:

Students from countries not mentioned in this section are required to have university-preparatory senior secondary or

high school credentials. For complete details, please contact the Admissions Office.

International students on visas, student authorization, student permits, or minister's letter permits are advised that they are responsible for complying with the Immigration Laws of Canada. Students are responsible for keeping informed of revisions and addenda to these Laws.

3. Mature Admission

a. To qualify for admission as a mature student, the applicant must be at least twenty-two years of age and must show, through educational upgrading, work experience or community volunteer work, ability to benefit from university level education. Normally, mature applicants must have been out of school for at least five years.

The Division of Continuing Education holds regular information sessions to advise mature students on application procedures and required documentation. To attend please call 902-420-5492.

b. The application procedure for admission as a mature student is as follows:

- (i) Application forms may be obtained at www.smu.ca/web_applications or:
Admissions Office
Room 101, McNally Building
Saint Mary's University
Halifax, Nova Scotia, B3H 3C3
Telephone: (902) 420-5415
Fax: (902) 496-8100
E-mail: admissions@smu.ca
- (ii) Send the completed application form with an application fee of \$40.00; a letter of intent which states personal and career goals, reasons for applying to the university and preparations for academic study; a resume detailing work experience and community volunteer work; and, if possible, a copy of high school marks.
- (iii) Applicants who have registered for credit courses at another university or recognized post-secondary educational institution must request that institution to send official transcripts of their academic record directly to the Admissions Office.
- (iv) All documentation must be received before the application will be considered.

4. Procedures for Other Admission Categories

a. Admission as an Open Studies Student

- (i) Individuals interested in taking one or more courses at the University without being registered in an academic program can seek admission as an open studies student. Such students must meet the stated prerequisites for the course(s) for which they register. Students may take no more than thirty (30) credit hours as open studies students. If open studies students wish to continue to study at Saint Mary's beyond thirty (30) credit hours, they must formally be admitted to an academic program. Students who are subsequently admitted to academic programs from a open studies status may count the university credit hours that they have earned

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as open studies students. All courses attempted at the University will remain a part of the students' permanent records.

- (ii) Under special circumstances and with the permission of the appropriate Dean, high school students may be admitted to enroll as open studies students in Saint Mary's courses for which they have the necessary prerequisites.
- (iii) Open Studies students must apply through the Admissions Office. A separate application is required for each academic year or summer session(s) in which the student is enrolled with this admission basis.

b. Admission as a Transfer Student

Students who have been enrolled in an academic program at another university or college should follow the regular procedure for admission to Saint Mary's through the Admissions Office. In order to be considered admissible, transfer students are normally required to have achieved a minimum average of C. If admitted, transfer students may receive advanced standing credit hour recognition in conformity with the principles and procedures stated in Academic Regulation 20. For all courses from non-Canadian post-secondary institutions, detailed course descriptions must be submitted before any advanced standing will be evaluated. Failure to report all institutions previously attended will result in dismissal from the University.

c. Admission as an Upgrading Student

Students who already hold a degree or professional certificate may enroll in a course(s) to upgrade their qualifications. 'Application Form B' is available at www.smu.ca/web_applications or the Admissions Office and must be filed by the deadlines found above in 1a. Students are required to follow normal registration procedures. Such students must meet the stated prerequisites for the course(s) for which they register. For this admission category, a separate application is required for each academic year or summer session. The maximum number of courses in which a student is permitted to register under this admission category is thirty (30) credit hours. The Dean of the Faculty in which a course(s) is offered may authorize an additional course(s) over this limit.

d. Admission as a Student Auditor

Students who are interested in auditing a course (see Academic Regulation 2 below) are required to complete 'Application Form B' which is available at www.smu.ca/apply or the Admissions Office and must be filed by the deadlines found above in 1a. Students are required to follow normal registration procedures and pay regular tuition fees. These students must meet any stated prerequisites for the course(s) for which they register.

e. Admission as a Visiting Student on a Letter of Permission

Students currently enrolled at another institution, who have letters of permission to take courses at Saint Mary's University for transfer of credit hours to their home institution, must complete 'Application Form B' which is available at www.smu.ca/apply or the Admissions Office and must be filed by the deadlines found above in 1a. Students are required to follow normal registration

procedures. In addition, these students must file a Letter of Permission with the Admissions Office at Saint Mary's. Grades for all courses for which students register will be forwarded to the students' home universities. It is the visiting student's responsibility to provide Saint Mary's Admissions Office with the complete mailing address of his/her home institution. If this is not done, final grades cannot be sent. Saint Mary's shall not be held responsible for meeting the deadlines for submission of grades of other universities.

5. Graduate Admission

Admission to a graduate program at the University is covered in the *Graduate Academic Calendar*.

6. Entrance Scholarship / Bursary Program:

Please refer to the Student Awards and Financial Aid Section for information on our Scholarship and Bursary programs.

Presidential and Santamarian Scholarships are awarded on the basis of:

- A **very high aggregate score** (as calculated by the Admissions Office). Successful candidates typically have a Scholarship average of 95% or above. Recipients of these awards will be determined by their overall placement in relation to other candidates.
- A **résumé**, which should comment on such things as involvement in community service, participation in student government, athletic achievement, extra curricular activities and volunteer and /or paid work.
- The Presidential/Santamarian Recommendation Form can be downloaded from the Saint Mary's University web site www.smu.ca/canadianscholarships or www.smu.ca/internationalscholarships or obtained by telephoning the Admissions Office at 902-420-5415.
- **Students will be considered for these scholarships when all of the above information has been received on time.**
- **Presidential Scholarships** are valued at \$9,000 (CAD) and renewable for up to four years for a total of \$36,000 (CAD). Number of awards limited
- **Santamarian Scholarships** are valued at \$5,000 and renewable for up to four years for a total of \$20,000 (CAD). Number of awards is limited

International Baccalaureate Scholarships: Saint Mary's has shown its commitment to the International Baccalaureate Diploma program by developing scholarships specifically for IB Diploma candidates.

An **International Baccalaureate Recommendation Form** is to be completed by the IB Coordinator after final first semester (mid-year) grade twelve results are available. Diploma candidates will be considered for this scholarship once this form has been submitted to the Admissions Office, Saint Mary's University. Please fax no later than **March 15**. Fax: 902-496-8100

- Award available to both domestic and international IB Diploma candidates.
- Award valued at \$8,000 (CAD) per annum which is renewable for up to four years for a total of \$32,000 (CAD). Number of awards limited
- Awarded on the basis of overall IB marks ranging from 38-45; a résumé, which should include information on such things as involvement in community service, participation in student government and athletic achievement. In addition, the completed International Baccalaureate Recommendation Form must be submitted under separate cover, by the high school IB Coordinator.
- Recipients of this award will be determined by their overall placement in relation to other Diploma candidates. A candidate's overall ranking will be determined by the Admissions Office.
- A minimum grade point average of 3.8 is required for renewal of this scholarship.

The deadline for all Scholarship consideration is **March 15** (Only applications accompanied by supporting documentation are considered). Scholarships are announced no later than **May 15**

Renewable Entrance Scholarship Program: Saint Mary's University guarantees a minimum total scholarship offer to any high school graduate with a Scholarship Average of 80% and higher. Apply by March 15 to be automatically considered. Students with an 80% average and above who apply by March 15 are also guaranteed a space in residence!

\$14,000 total value/ \$3,500 per year - Scholarship Average 95%+. The award will be continued during the recipient's undergraduate program provided the student maintains a minimum 3.67 grade point average (GPA) each year in a minimum of 30 credit hours.

\$8,000 total value/ \$2,000 per year- Scholarship Average 90-94.99%. The award will be continued during the recipient's undergraduate program provided the student maintains a minimum 3.67 grade point average each year in a minimum of 30 credit hours. Should the recipient achieve a GPA of 4.00 or above in any academic year, the value of their award will be increased for that year.

\$4,000 total value /\$1,000 - Scholarship Average 85-89.99%. The award is valued will be continued during the recipient's undergraduate program provided the student maintains a minimum 3.67 grade point average each year in a minimum of 30 credit hours. Should the recipient achieve a GPA of 3.80 or above in any academic year, the value of their award will be increased for that year.

\$3,500 total value/\$500- Scholarship Average 80-84.99%. This scholarship is valued at **\$500 (CAD)** for the first year and \$1,000 per year for three additional years, should the recipient achieve a GPA of 3.67 or above in any academic year, in a minimum of 30 credit hours.

Entrance Scholarships (non- renewable) are also awarded to high school students who begin their studies in January.

To calculate a Scholarship Average, Saint Mary's uses the Admission Average plus bonus points for enriched courses. Averages are calculated to two decimal points and are not rounded.

The deadline for **Renewable Entrance Scholarship** consideration is **March 15**. Students who apply after March 15 will be considered for Entrance Scholarships as resources permit.

Named Entrance Scholarship/ Bursary Awards

Saint Mary's University has a limited number of Named Entrance Scholarship/ Bursary awards. These awards are open to potential high school graduates. Students must apply for these awards. One application form is sufficient for all awards. The Entrance Scholarship/Bursary Application form is available online at

www.smu.ca/canadianscholarships or
www.smu.ca/internationalscholarships

Named Entrance Scholarship/ Bursary Awards

Brother Stirling Scholarship
 Captain Albert Eisnor Memorial
 Chester Scholarship
 Duncan W Lynch Memorial Scholarship
 Elaine Leventhal Memorial Scholarship - Leadership Entrance Scholarship
 Heather Ferguson Entrance Scholarship
 Laurie W Smith Memorial Scholarship
 Leo R MacDonald Memorial Scholarship
 Lions Club of Prince Edward Island
 Maxwell A. Martin Memorial Award
 Nicola Schwind Memorial Scholarship
 Nova Scotia Power Entrance Scholarship
 The Bob Kelly Bursary in Commerce
 The Coy Family Scholarship
 The Goman Memorial Equestrian Scholarship
 The Jack and Yvonne Keith Entrance Award
 The Jim Pineo Scholarship Endowment
 The Kevin Cleary Memorial Scholarship
 The Margo Marshall Bursary
 Rose Marie (Belliveau) Abraham Scholarship
 The Larry Uteck Scholarship
 New England Alumni Football Athletic Fund
 The Sobey's Leadership Award
 The Sobey's Scholar Award

The deadline for **Named Entrance Scholarship/ Bursary** consideration is **March 15**. For information on scholarships and admission status, please contact admission.status@smu.ca.

Please refer to the Student Awards & Financial Aid Programs for additional information on Scholarships and Bursaries in Section 5 (**Student Awards and Financial Aid Programs**) of this *Academic Calendar*.

Academic Integrity and Student Responsibility

The objectives of the University as defined in the Saint Mary's University Act, 1970, include:

1. to promote and disseminate learning and knowledge.
2. to provide an atmosphere of freedom, responsibility and mutual respect in the University community, and,
3. to aid in the improvement of society in all ways consistent with these objects.

More recently, the University has defined among its Vision, Mission and Core Values as:

Vision

Saint Mary's, building on its strong tradition of accessibility and community engagement, will be the University of choice for aspiring citizens of the world.

Mission

The mission of Saint Mary's University is to offer undergraduate, graduate, and continuing education programs; to engage in research and disseminate its results; and to serve the community from the local to the international level.

Core Values

Saint Mary's University addresses its vision and mission in the context of all of its values:

- In achieving its mission, the Saint Mary's community is guided by core values of academic integrity, the pursuit of knowledge, responsiveness to community needs, openness to change, concerns for a just and civil society, and fiscal responsibility.
- The University is committed to accessibility, diversity and the provision of a positive and supportive learning environment through the effective integration of teaching and research.
- Through promoting the importance of critical enquiry, leadership, teamwork and global awareness, we aim to prepare students for responsible and rewarding lives and to remain engaged with our alumni worldwide.
- We recognize the importance of the contribution and growth of each individual in the University's success.
- Saint Mary's welcomes mutually beneficial partnerships and strategic alliances with all levels of government, with other educational institutions, non-government institutions and the private sector.

The above guide the University in how it conducts its affairs. Two key policies of the University are Academic Regulation 19, governing Academic Integrity, and the Student Code of Conduct governing non-academic standards of behaviour.

Academic Integrity (Academic Regulation 19)

An academic community flourishes when its members are committed to these fundamental values:

1. **HONESTY:** An academic community of integrity advances the quest for truth and knowledge by requiring intellectual and personal honesty in learning, teaching, research and service.
2. **TRUST:** An academic community of integrity fosters a climate of mutual trust, encourages the free exchange of ideas, and enables all to reach their highest potential.
3. **FAIRNESS:** An academic community of integrity establishes clear standards, practices, and procedures and expects fairness in the interactions of students, faculty, and administrators.
4. **RESPECT:** An academic community of integrity recognizes the participatory nature of the learning process and honours and respects a wide range of opinions and ideas.
5. **RESPONSIBILITY:** An academic community of integrity upholds personal accountability and depends upon action in the face of wrongdoing¹.

¹ The Fundamental Values of Academic Integrity, Center for Academic Integrity, Duke University (www.academicintegrity.org)

University students are expected to have a reasonable measure of self-discipline and maturity. While the University's teaching resources are available for help and guidance, and instructors and staff will make reasonable efforts to assist students with academic or other problems, the final responsibility for success or failure in academic studies rests with the students.

At times there may be considerable pressure to achieve high grades. Some students may be tempted to obtain grades by dishonest means. The integrity of the University and of the degrees it awards are compromised by practices such as cheating and plagiarism. The University does not condone such acts under any circumstances and will take appropriate disciplinary action.

Examples of Academic Offences

In April of 2005, the Quality of Teaching Committee Sub-Committee on Academic Integrity released a comprehensive report on academic integrity at Saint Mary's. The following examples of academic offences, while not exhaustive, were compiled from information contained in this report.

Plagiarism – "The presentation of words, ideas or techniques of another as one's own. Plagiarism is not restricted to literary works and applies to all forms of information or ideas that belong to another (e.g., computer

programs, mathematical solutions, scientific experiments, graphical images, or data)".

Examples of plagiarism include:

- quoting, paraphrasing, or summarizing text without proper acknowledgment;
- paraphrasing too closely (e.g., changing only a few words or simply rearranging the text);
- downloading all or part of a paper, journal article, or book from the Internet or a library database and presenting it as one's own work;
- purchasing documentation and presenting it as one's own work;
- sharing papers including the selling of essays, tests, or other assignments.

Cheating – "The attempt to secure a grade by unethical means. Knowingly assisting someone to cheat is itself cheating".

Examples of cheating include:

- impersonating someone during a test or exam;
- copying or sharing information during a test or exam;
- using or possessing unauthorized materials (e.g., notes, books, calculators) during a test or exam;
- obtaining or looking at a copy of a test or exam before it is administered;
- improper use of technology (e.g., Personal Digital Assistants to store and retrieve information during an exam);
- unauthorized use of communication technology (eg: cell phones, pagers, Blackberries, etc);
- unauthorized collaboration between students when individual work is required.
- submitting the same work for credit in more than one course without the permission of the instructors involved;

Falsification – "It is an offence to falsify any academic record or to use a falsified record".

Examples of falsification include:

- submitting a false excuse for missing a class, exam, etc. (e.g., forging a medical or death certificate);
- falsifying course work (e.g., altering or making up data, using fake citations in a bibliography);
- changing the answers on a returned assignment and resubmitting it to be reevaluated;
- submitting false information on a university admission form or other documentation;
- misrepresentation of knowledge of a language by providing inaccurate or incomplete information about one's linguistic educational history;
- non-disclosure of previous post-secondary enrolment;
- presentation of another's credentials as one's own.

Tampering – "It is an offence to tamper with University library materials or computer system resources in any way which would deprive others of their use".

Examples of tampering include:

- destroying, hiding, or stealing library materials;
- altering or destroying university computer programs or files without authorization;
- accessing and altering official records without authorization.

Assisting someone in the commission of dishonest behavior is an offence subject to penalty.

General Procedures

When a member of the University community (faculty, staff, or student) believes that an academic offence has been committed, s/he shall make a written submission to the department chairperson, Dean and Registrar. The Registrar will advise the instructor whether this is the first instance of academic dishonesty.

Informal Resolution

In the case of a first instance of dishonesty that would normally carry a penalty of zero in the piece of work triggering discipline, the instructor may choose to informally resolve the complaint with the student. If the student and instructor mutually agree to a penalty of a reduction in grade (e.g., a grade of zero on the assignment) or resubmission of the assignment, then this decision is to be communicated in writing to the student, chairperson, Dean and Registrar. The incident and action are to be documented using the Incident Report Form available from the Registrar's Office. The Form requires the signatures of the instructor and student.

All cases that cannot be resolved by the above informal process shall be resolved by the Senate Academic Discipline Committee in accordance with the procedures for resolution of formal complaints (see below).

Appeals of decisions of the Senate Academic Discipline Committee may be made to the Senate Academic Discipline Appeals Board on specific grounds (see below). Students may not appeal decisions that were agreed to through the informal process.

Documentation of all incidents resolved through the informal process and those of the Senate Academic Discipline Committee not overturned on appeal shall be kept in the student's official file. This file is maintained in accordance with the applicable privacy legislation. Documentation on allegations that are not supported by the evidence as determined by the Academic Discipline Appeal Board, shall be destroyed.

Senate Academic Discipline Committee

Composition

The Committee is comprised of six (6) representatives of the Faculty and two (2) representatives of the student body. The Faculty representatives are elected by Senate for a three (3) year term. There shall be two (2) Faculty representatives from each of the Faculties of Arts, Commerce and Science, with no two (2) Faculty representatives from the same Department. The student representatives shall be appointed by the Students Association. The Chair of the Committee shall be a Faculty representative chosen by a vote of the majority of the Committee. The Committee members shall participate in adjudication training annually.

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Formal Resolution of Academic Discipline Complaints

In cases that cannot be resolved informally, the Senate Academic Discipline Committee shall:

- Consider all complaints or allegations in relation to offences or irregularities of an academic nature at both the undergraduate and graduate levels, including but not limited to, those relating to admissions procedures, evaluation procedures, second offences of plagiarism, cheating and other academic dishonesty. The Committee may impose penalties in cases where the Committee finds an offence or irregularity has occurred;
- Have the power to discipline a student who, before or during the disciplinary process involving him or her, but prior to a Hearing or adjudication, has:
 - been compelled to withdraw academically;
 - chosen to withdraw from the University prior to being disciplined; or
 - chosen not to register at the University.
- Assume jurisdiction when a complaint or allegation in relation to offences or irregularities of an academic nature is brought to its attention by the Registrar. Complaints or allegations may be made by Faculty or other evaluators of academic work done by students.

The Hearing Panel

Upon notification by the Registrar of an allegation or complaint the Chair of the Committee shall appoint a Hearing Panel from the members of the Committee to hear the allegation or complaint. A Hearing Panel is comprised of two (2) Faculty members and one (1) student. One of the Faculty members shall be from the Faculty in which the offence occurred but not the same department and shall serve as Chair.

Procedures for Formal Complaints

1. The Complainant shall make a complaint in writing to the Registrar.
2. The Registrar shall transmit the Complaint to:
 - (a) the Chair of the Senate Academic Discipline Committee (or the Chair's designate);
 - (b) the Department Chairperson and Dean of the Faculty from which the Complaint emanates;
 - (c) the Dean of the Faculty in which the student is enrolled; and
 - (d) the student.
3. The Chair of the Senate Academic Discipline Committee shall appoint the members of the Hearing Panel to hear and determine the complaint.
4. The Chair of the Hearing Panel shall:
 - (a) request the parties to provide the Hearing Panel with written submissions as set out in paragraph 5. below; and
 - (b) inquire of both parties whether they want a Hearing in person;

The parties shall provide the information requested by the Chair.

5. The written submissions of the parties shall contain:
 - (a) copies of all documents relevant to the Hearing; and
 - (b) a written statement of the Complainant's position.
6. The Complainant shall submit his or her written submission within five (5) working days of being requested to do so by the Chair.
7. The Respondent shall make a written submission within five (5) working days of receiving the Complainant's submission.
8. The Chair shall supply copies of all submissions received to both parties to the Complaint.
9. Where a Hearing in person is requested by either party, the Chair shall set a date for a Hearing within thirty (30) calendar days of the filing of the Complaint and shall notify both parties of the date.
10. If a party intends to be represented or assisted by a lawyer or other person, he/she must inform the Chair at least two working days prior to the Hearing and the Chair will inform the opposing party and allow them time to arrange representation if desired.
11. Where a Hearing in person is held, normally the Complainant and Respondent will be present in person. If reasonable attempts to locate a party have been unsuccessful, the Hearing may take place in his/her absence.
12. Where a Hearing in person is held, the Hearing Panel shall regulate as it considers appropriate in order to achieve an orderly, fair and expeditious resolution of the complaint, with each party to the complaint being given an opportunity to present all relevant evidence and submissions that it wishes to bring forward, an opportunity to comment on the presentations of the other party, and an opportunity to put questions to the other party, directly, or through the Panel.
13. Whether or not a Hearing in person is held, it is the responsibility of the parties to present to the Panel all relevant evidence and submissions that it wishes to bring forward. In addition to considering all such evidence and submissions, the Hearing Panel may consider relevant evidence and submissions from other sources and, on its own initiative, solicit additional information and act upon it, provided that the parties are apprised of the additional evidence, submissions, and information, with an opportunity to respond.
14. The Hearing Panel may specify any remedy that it considers appropriate and that would be within the power of Senate to grant.
15. Decisions of the Hearing Panel shall be made by majority vote. In weighing evidence, the Committee

shall base its decisions on “the balance of probabilities”.

16. The Chair of the Hearing Panel shall forward the decision of the Hearing Panel to the Registrar. The Registrar shall then notify the parties to the Hearing of the decision and will also inform the individuals identified in paragraph 2.
17. If any party to a Complaint fails to comply with these procedures or with any request for information after having been given a reasonable opportunity to do so, the Hearing Panel may, in its discretion, deal with the Complaint in a manner adverse to the interests of the party who has failed to comply.

Penalties

The Hearing Panel may impose the following penalties of an academic nature and, without restricting the generality of the foregoing, may include any one or more of:

- notation of the fact of discipline on the offender’s transcript for a period of one (1) or more years;
- repeat of the assignment that triggered the discipline;
- a failing grade or mark or assessment in the piece of work triggering the discipline;
- failure of the class or course;
- required withdrawal for an academic term or year (to a maximum required withdrawal of three (3) academic years);
- expulsion from the University;
- loss of a current or continuing scholarship, or both, or loss of eligibility to receive or maintain scholarships, prizes or bursaries;
- removal from the Dean’s list;
- reduction in grade; and
- revocation of degree, certificate or diploma.

Appeals

An appeal from the decisions of the Senate Academic Discipline Committee may be made to the Senate Academic Discipline Appeal Board on the following grounds:

- a. A failure to follow the “rules of natural justice”;
- b. A failure to follow University rules, regulations or policies.

The rules of natural justice require that decisions are made by a fair process. The nature and context of the decision being made are important in determining what is a fair process. The rules of natural justice include the right to be heard and the right to an unbiased decision maker.

The processes for filing an appeal are found in the terms of reference of the Senate Academic Discipline Appeal Board.

Senate Academic Discipline Appeal Board

Composition

The Senate Academic Discipline Appeal Board is comprised of 6 representatives of the Faculty and 2 representatives of the student body. The Faculty representatives are elected by Senate for a 3 year term. There shall be 2 Faculty representatives from each of the Faculties of Arts, Commerce and Science, with no 2 Faculty representatives from the same Department. The student representatives shall be appointed by the Students Association. The Chair of the Board shall be a Faculty representative chosen by a vote of the majority of the Board. The Board members shall participate in adjudication training annually.

Function

The Senate Academic Discipline Appeal Board shall:

1. Hear appeals from decisions of the Senate Academic Discipline Committee on the following grounds:
 - (a) a failure to follow the “rules of natural justice”,
 - (b) a failure to follow University rules, regulations or policies.
2. Have the responsibility to ensure the execution of its decisions.

Procedures

Initiation of the Appeal

1. Either party to the original complaint may initiate an appeal under this policy by delivering a Notice of Appeal Form to the Registrar.
2. The Registrar will forward the Notice of Appeal to:
 - a. the Department Chairperson and Dean of the Faculty from which the original complaint emanated;
 - b. the Dean of the Faculty in which the student is enrolled; and
 - c. both parties to the original complaint.

The Notice of Appeal shall be delivered not later than ten (10) working days from the date a final decision being appealed has been communicated in writing to the student. Thereafter no appeal may be brought.

Appointment of an Appeal Board

Upon receipt of a Notice of Appeal, the Registrar shall send a copy of it to the Chairperson of the Senate Academic Discipline Appeal Board. If the Chairperson concludes that the appeal involves the permissible grounds for appeal as set out herein, an Appeal Hearing Panel shall be constituted to hear the appeal. The Chair of the Board shall appoint an Appeal Hearing Panel from the members of the Committee to hear the appeal. An Appeal Hearing Panel is comprised

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of two (2) Faculty members and one (1) student. One (1) of the Faculty members shall be from the Faculty in which the offence occurred but not the same department and shall serve as Chair.

Appeal Hearing Panel Procedure

1. The Appeal Hearing Panel shall be convened to hear the appeal as soon as practical, but not later than fifteen (15) working days after it is constituted or such later date as is acceptable to the Appellant and Respondent.
2. The Appeal Hearing Panel shall determine its procedures subject to the following:
 - a. all parties involved shall be given adequate notice and full opportunity to participate;
 - b. the basis of the appeal shall be presented by the person who made the appeal (the Appellant) or person appointed by such person;
 - c. the Respondent is usually the person who started the initial proceeding;
 - d. the Appellant or Respondent shall be entitled to be represented by one other person, including legal counsel;
 - e. evidence supporting or rebutting the appeal may be given by witnesses;
 - f. witnesses may be questioned by the appellant, the appellant's representative, the Chairperson of the original Academic Discipline Hearing Panel or by the Board;
 - g. the hearing shall be *in camera* unless the student requests that it be open, in which case the number of observers may be limited by the Chairperson. The student is entitled to at most five (5) observers.

Disposition of the Appeal

The Senate Academic Discipline Appeal Board may, by a majority:

- a. deny the appeal;
- b. quash the decision of the Senate Academic Discipline Committee entirely;
- c. quash the decision of the Senate Academic Discipline Committee and recommend a re-hearing on the merits by another panel of the Senate Academic Discipline Committee; or
- d. modify the penalty assessed by the Senate Academic Discipline Committee.

Copy of the Decision

Within five (5) working days from the date the Academic Discipline Appeal Board has rendered its decision, the Registrar shall deliver a copy of the decision to the student who initiated the appeal and to the persons mentioned in item 2 above;

Compliance within Thirty (30) Calendar Days

Where the Academic Discipline Appeal Board has determined that a person or Faculty is to address or act upon a particular matter, the person or Faculty shall within thirty (30) calendar days of the receipt of the decision, advise the Registrar of its compliance, or time table for compliance, with the decision.

No Further Appeal

The findings and ruling of the Academic Discipline Appeal Board shall be binding without further appeal.

Student Code of Conduct

1. Among the objectives of Saint Mary's University are:
 - to promote and disseminate learning and knowledge.
 - to provide an atmosphere of freedom, responsibility and mutual respect in the University community, and,
 - to aid in the improvement of society in all ways consistent with these objects.
2. It is important to recognize that in the fulfillment of these objectives, non-academics standards of behavior on the University Campus are as important as academic standards. The Student Discipline Code is directed towards non-academic standards of behavior and seeks to define the rights and responsibilities of students as members of the University Community.
3. Discipline should encourage students to understand the fundamental values that are essential to the well-being of both the individuals and society, and to accept responsibility for the consequences of their actions.
4. Students will be responsible for their conduct and will accept the consequences for choices made.
5. The Student Discipline Code is adopted by the Board of Governors pursuant to Section 8(1)(g) of the Saint Mary's University Act.
6. **Premises of the Student Discipline Code**
 - a. The Student Discipline Code is committed to fairness in disciplinary and appeal procedures.
 - b. The Student Discipline Code is committed to clarity of form and content, in order to facilitate a fair and timely resolution of problems.
 - c. Notwithstanding the rules and procedures set out in the Student Discipline Code, the President retains his/her authority to exercise general supervision over the students in accordance with the University Act.
 - d. The purpose of this discipline code is instruction. It is a process through which individuals learn to behave in a manner consistent with expectations designed to allow the greatest number of people the opportunity to learn in an appropriate and safe environment.
7. Misconduct for which students of the University will be subject to discipline includes but is not limited to:

- a. conduct which threatens or endangers the health, safety, or well-being of anyone in their capacity as a member of the University community on or off campus,
- b. the use of abusive or offensive language or gestures at University sponsored functions,
- c. theft of, or deliberate or reckless damage to, University property or the property of a member of the University community,
- d. violations of published rules including those governing University residences,
- e. dishonesty, including, but not limited to:
- f. knowingly furnishing false information or failing to verify the accuracy of the information provided, and
- g. fraud, forgery, alterations or misrepresentation of documents, University records or instruments of identification;
- h. use or consumption of intoxicants, including alcoholic beverages, except where specifically authorized under lawful conditions,
- i. unauthorized use of the University's corporate name, crest, or logo,
- j. intentional obstruction or disruption of any University sponsored function, including disciplinary proceedings held in accordance with these regulations,
- k. the entry or attempted entry without lawful authority of any building, facility or dwelling on University property,
- l. failing to comply with the direction of University officials acting in the performance of their authorized duties,
- m. violation of any law of Canada, including but not limited to, acts declared unlawful relating to drugs, alcoholic beverages or gambling or the possession of weapons,
- n. the unauthorized alterations or misuse of any fire fighting equipment, safety equipment or emergency devise,
- o. soliciting or canvassing for commercial purposes without prior written authorization from the University, and
- p. deliberate assault upon a security officer (including without limitation, members of the campus police force, residence assistants, residence security staff or security officers).

Disciplinary Officers and Jurisdiction

- 8. Under the general responsibility and direction of the Director of Student Services, and subject to Senate regulations, the following Administrative Officers at the University (hereinafter called "Disciplinary Officer") shall have jurisdiction in matters of student conduct and discipline in respect of all registered students at the University, both full and part-time, and all student organizations at the University:
 - a. in matters of damage to property or misconduct against the person, occurring within the confines to the residences maintained by the University (the "Residences"), the Director of Residences,
 - b. in matters involving property damage to University property outside the confines of the Residences, the Director of Student Services,

- c. in matters involving misconduct against the person committed on University property, but outside the Residences, and relating to misconduct against the person and/or property outside the University, the Director of Student Services, and
- d. notwithstanding (a), (b), and (c), in respect of all cases of sexual harassment, regardless of location, the Conflict Resolution Officer.

- 9. In the event that the Disciplinary Officer having jurisdiction is unable to act upon any complaint filed with him/her, or must disqualify himself/herself from acting upon any complaint for any reason, that officer shall refer the matter to either of the other Disciplinary Officers who shall, upon referral of any complaint, have jurisdiction to act upon the complaint. Should those other officers also disqualify themselves, the matter may be referred to the Assistant Director of Residences (Residence Life).
- 10. The Disciplinary Officers, when exercising their jurisdiction as set out herein, shall uphold the authority of the Board of Governors, the Senate and the Saint Mary's University Students' Association (the Students' Association).

Sexual Harassment

- 11. Because of the special considerations involved in cases of sexual harassment, the Senate has approved a procedure for dealing with sexual harassment. This Policy contains a complete code with respect to matters of complaints of sexual harassment and shall be used to govern all cases of sexual harassment even where it conflicts with this Policy, except in so far as disciplinary penalties are concerned. The range of disciplinary penalties which can be invoked in cases of sexual harassment are those enumerated in Article 23 of that Policy.

Disciplinary Complaints

- 12. Any member of the University community (i.e., students, faculty, administrators or employees) may lodge a complaint with any of the Disciplinary Officers alleging that a student has engaged in a misconduct. Any such complaint shall set out the facts of the alleged misconduct and shall be made within five days of the complainant having become aware of the misconduct. A Disciplinary Officer shall have the power to extend the time for filing a complaint is he/she deems it appropriate having regard to all the circumstances surrounding the alleged misconduct.

Disciplinary Hearing

- 13. Complaints will be heard by a Board (the Student Disciplinary Board or "SDB") consisting of three persons as follows:
 - a. the Disciplinary Officer having jurisdiction over the complaint (8. (a), (b), c)),
 - b. one member of the administration staff of the University to be appointed by the President, and
 - c. one student chosen by the Director of Student Services through an interview process, in conclusion with the Saint Mary's Students' Association.

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With respect to the administrative and student members, an alternate for each shall be designated as outlined in 13. b) and c).

14. Disciplinary hearings will be chaired by the Disciplinary Officer having jurisdiction.
15. Upon receiving any complaint, the Disciplinary Officer acting in respect of the alleged misconducts shall set a time and place for the hearing of the complaint. Wherever possible, the hearing of the complaint shall be within ten (10) days from the date of the receipt of the complaint by the Disciplinary Officer acting in respect of the alleged offence.
16. The Disciplinary Officer acting in respect of the alleged misconduct shall serve the student respondent with notice of the time and place of the hearing and the nature of the alleged misconduct not later than 48 hours prior to the time set for the hearing. This notice can be waived by a mutual agreement.
17. A student respondent shall have the liberty to admit to the misconduct with explanation and avoid a full disciplinary hearing. Once the Disciplinary Officer has heard the admission with or without "explanation" he/she shall advise the student of his/her decision regarding a disciplinary penalty. The student may accept this decision or may request a full hearing of the Student Disciplinary Board. In the latter case, the Disciplinary Officer will disqualify him/herself from hearing the case and refer the complaint to the second Disciplinary Officer. A student respondent who accepts the decision made by the Disciplinary Officer shall not have the right to an appeal subject to the complainant's right of appeal.

In the event that a student respondent fails or refuses to comply with the disciplinary penalty and/or fine imposed hereunder, the Disciplinary Officer shall recommend to the Appeal Board the suspension and/or expulsion of the person from the University and shall provide notice of his/her recommendation to the person.
18. At the commencement of any hearing, the Chair of the Student Disciplinary Board shall ask the accused person to admit or deny the allegations of misconduct. In the event that the student respondent neither admits or denies the allegations, the Disciplinary Officer shall consider that the student respondent denies the allegations and require the complainant to provide evidence in support of the complaint.
19. The Student Disciplinary Board shall have the power to determine the procedure to be followed at any disciplinary hearing, but in every case shall provide both the complainant and the student respondent the opportunity to testify personally, to call witnesses and to make representations provided, however, that the complainant's case against a student respondent shall be completed prior to the student respondent's testifying or calling witnesses.

20. Both the complainant and the student respondent will normally present their cases without necessity of legal or other representation. In appropriate circumstances, the Student Disciplinary Board may allow parties to be assisted by an advisor, legal or otherwise, but in any case, where a person wishes to have representation, he/she shall so advise the Chair of the Student Disciplinary Board not less than 48 hours prior to the hearing.
21. In the event that a student respondent, having been given notice thereof, shall fail or refuse to attend the disciplinary hearing at the place and time set therefore, the Student Disciplinary Board shall conduct the hearing in the absence of the student respondent.

Decision

22. The Student Disciplinary Board shall, within five (5) days of the conclusion of a hearing, render the Student Disciplinary Board's decision in writing, setting out the reasons therein for the Student Disciplinary Board's decision. The decision of the Student Disciplinary Board shall be the decision of a majority of the Board. The student respondent and the complainant shall be sent a copy of the decision within two (2) days of the rendering of the decision, and a copy of the decision shall be forwarded to the President of the Students' Association, the President of the University and the other Disciplinary Officers.

Disciplinary Penalties

23. The Student Disciplinary Board shall, on completion of the hearing, have the power to dismiss the complaint if the Board concludes that the student respondent did not engage in the alleged misconduct, or to impose any of the following penalties, if the Board concludes that the student respondent did engage in the misconduct:
 - a. to the matter. Ten (10) dollars will be the amount normally levied in respect of administrative costs, but the University reserves the right to levy such amount as is appropriate in the circumstances of each case,
 - b. to levy such fine or penalty as the Student Disciplinary Board deems appropriate, but no monetary penalty in excess of the actual monetary amount of damage caused by the student respondent plus a fine of \$100.00 shall be levied in a case where the student respondent admits to the misconduct.
 - c. to recommend to the Appeal Board the suspension and/or expulsion of the student respondent from the University, and/or
 - d. to impose any other penalty that is deemed appropriate having regard to all the circumstances surrounding the complaint.
24. In the event that a student respondent fails or refuses to comply with the disciplinary penalty and/or fine imposed hereunder, the Disciplinary Officer shall recommend to the Appeal Board the suspensions and/or expulsion of the person from the University and shall provide notice of his/her recommendation to the person.

25. There shall be an Appeal Board consisting of three persons to be appointed as follows:
- one faculty member to be appointed by the Senate,
 - one member of the Administration Staff of the University to be appointed by the President of the University, and
 - one student to be appointed by the Student's Council.

An alternate for each of these persons shall be designated as in 25. (a),(b) and (c).

26. The following people are not eligible to serve on the Appeal Board:
- Student Security,
 - Residence Assistants,
 - Residence Security, and,
 - Disciplinary Officers.

27. The Faculty member shall act as chairperson of the Appeal Board.

Appeals Procedure

28. If either complainant or the student respondent feels aggrieved by the decision or penalty imposed by the student Disciplinary Board, they may file a written notice for consideration of an appeal with the Appeal Board within five (5) days of receiving notice of the decision of the Student Disciplinary Board. A person filing a Notice of Appeal shall, at the time of filing the Notice, pay to the University a deposit of \$25.00. If the appellant is successful in the appeal, the deposit shall normally be refunded to him/her.

29. The grounds for an appeal shall be limited to:
- disclosure of new and relevant evidence not available at the original hearing, and/or
 - severity of the penalty.
- The Chairperson, in consultation with the board members, shall consider the relevance of the student's appeal on these grounds prior to setting an appeal hearing. If the Appeal Board finds that grounds do not exist then the appeal is to be denied and the chairperson shall notify the appellant within 48 hours.

30. Once it has been determined that an appeal is warranted, the Chairperson of the Appeal Board shall set a time and place for the hearing of the appeal. An appeal shall normally be heard within five (5) University business days from the date of the filing of Notice of Appeal. The chairperson shall inform the complainant, the student respondent and the Disciplinary Officer of the time and place for the hearing. He/she shall also make known the grounds for an appeal as outlined in 25. (a) and (b).

31. The Appeal Board shall have the right to determine its own procedure, but in every case shall give both the complainant and the student respondent the right to make representations. Both the complainant and the student respondent will normally present their cases without legal or other representation. In appropriate circumstances, the Appeal Board may allow parties to be assisted by a representative (legal or otherwise), but in any case, where a person wishes to have

representation, he/she shall so advise the Chairperson of the Appeal Board not less than 48 hours prior to the hearing.

32. Upon hearing any Appeal, the Appeal Board may confirm the decision of the Student Disciplinary Board or vary the decision in any manner which it deems appropriate. In any case where the Appeal Board has decided to suspend/expel a person from the University, it shall forward the decision to the President of the University for approval.
33. The decision of the Disciplinary Appeal Board shall be the decision of a majority of the Board, and shall be made known to all interested parties in accordance with the manner set out in paragraph 22 herein.

Fines, Etc.

34. All fines or other money received pursuant to this Student Disciplinary System shall be paid to the general account of the University. The Chairperson of the Appeal Board shall ensure that, where appropriate, any funds so received are credited to the University Department concerned.

Offenses Against Security Officers

35. Where the Student Disciplinary Board has found that a student respondent has committed an assault upon a Security Officer (including, without limitation, members of the Student Security Force, Residence Assistants, Residence Security Officers) the Student Disciplinary Board shall recommend to the Appeal Board the suspension and/or expulsion of the person from the University and shall provide notice of its' recommendation to the person.

General

36. In this Disciplinary System, unless otherwise specified, "days" shall mean University Business days.
37. The Student Disciplinary Board acting in respect of a complaint, or the Appeal Board in the case of an appeal, shall have the power to extend or waive any of the time limits contained herein if it considers that it is necessary in the circumstances and that it would not prejudice any of the parties involved.

University Housing Disciplinary Procedures

38. All students who reside in University housing must abide by the Saint Mary's University Student Discipline Code and by the policies and regulations set out in the Residence Handbook, Residence Agreement, and the University Calendar.
39. Residence Assistants (RA), Residence Coordinators (RC), and Residence Security Officers (RSO) shall be empowered by the Director of University Residences to issue bonding notices for misconduct which would not normally be heard through the Student Discipline Code including:
- non-evacuation during a fire alarm/emergency,
 - excessive noise and/or violation of Quiet Hour Policy,
 - mischievous/disruptive behaviour,
 - violation of Liquor Policy,

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- e. playing hallway games,
 - f. violation of Smoking Policy,
 - g. violation of Guest and/or Visitor Policy.
40. The bonding Notice may be in the form of a warning only or a bond in the amount of \$50.00. The bond becomes payable within two business days of the date of a second bond being issued. One copy of the Bonding Notice goes to the student, a second to the RA, RC or RSO and a third to the Director. Within twenty-four hours of issuing a Bonding Notice, the RA/RC/RSO must complete an incident report copying the student, the RA/RC/RSO and the Director.
41. Appeals of a Bonding Notice will be heard by a Residence Discipline Committee, which shall be scheduled as follows:
- a. the committee will be called together by the Residence Coordinator of the residence in which the bonded student lives,
 - b. the committee shall consist of five residence student members who shall represent a cross-section of all residences. Committee members shall be selected by the Director, University Residences through an interview process (See Article 26 for eligibility requirements).
 - c. three members shall constitute quorum of the committee,
 - d. the Chairperson of the committee shall be chosen by a majority vote of the committee members, and
 - e. the decision of the committee shall be final and shall be communicated to the bonded student, with copies to the Residence Coordinator and Director, within five (5) days of the hearing.



Members of the Huskies Football displayed their community spirit on September 23, 2007 by participating in the Habitat for Humanity Build.

Academic Regulations

Philosophy behind Academic Regulations

Academic regulations exist to assist the students in academic matters; to delineate the terms of students' contract with the University; and to maintain the integrity of the University's academic programs. While regulations enable the system to operate smoothly and effectively, they also facilitate growth, development, and responsibility in students. Saint Mary's makes every effort to ensure that advice on academic matters is available to its students, but in the final analysis it is the students' responsibility to seek such advice.

The information, regulations, and guidelines contained in this section apply to all students at the University. Additional regulations pertaining to degree programs are in the Section 3 of the *Calendar*, while regulations pertaining to majors, honours, concentrations, and minors are found in Section 5.

Note: The University continuously reviews all of its academic regulations and hereby serves notice that significant revision(s) thereto may occur from time to time and will be duly promulgated officially.

Introductory Information

Glossary

This glossary explains some terms which are used frequently throughout this *Calendar*. It is intended as a quick-reference guide and may not necessarily offer the complete, official definitions and explanations which apply to the University's programs and the administration of its regulations.

Academic Audit	A computerized checking of courses completed against the requirements for a student's academic program. An important aid for advising students. Sometimes referred to as a degree audit or academic progress report. This audit produces an unofficial document. This web-based product is a powerful and important tool empowering students to be completely up-to-date as to their academic progress and to check out alternate academic program options.
Academic Year	The period immediately following Labour Day in September to and including Convocation Day in May of the following year. It is comprised of two academic sessions or semesters.
Academic Status	See "Year of Study" below.
Add and Drop Period	A designated timeframe during which students can add or drop courses for the current academic session without those dropped showing on their permanent academic record; sometimes referred to as a "change of registration period". See Academic Regulation 13.
Admission	Acceptance of an applicant as a student.

Advanced Standing	Credit hours granted for work completed at a post-secondary institution before admission to Saint Mary's University. See Academic Regulation 20.
Area of Concentration	The main subject area of study [used in the Faculties of Arts and Science undergraduate programs and for the Master of Business Administration Program].
Attendance Status	A student officially registered for at least nine (9) credit hours in a semester is considered to be "full-time", whereas a part-time student is registered for less than nine (9) credit hours in a semester. See Academic Regulation 1.
Audit	Formal registration for a course(s) for which academic credit hours are not sought or granted. See Academic Regulation 2.
Baccalaureate	Refers to an undergraduate degree awarded by the University upon successful completion of the requirements of a specific academic program.
Baccalaureate Service	An interfaith service traditionally held on campus prior to Spring Convocations.
Bursary	A monetary grant based on financial need. See Section 6 of this <i>Academic Calendar</i> .
Chairperson	Faculty member responsible for an academic area of study.
Concentration	See "Area of Concentration" above.
Co-operative Education (Co-op)	A method of learning in which students move between formal academic study terms on campus and work terms during which they are employed full-time by companies or institutions related to their academic field.
Co-requisite	A course which must be taken concurrently with another course which lists it as a co-requisite.
Course	A unit of study in a particular subject identified by a course title and a unique course number.
Credit Hours	A unit of academic value earned within a particular program. Six (6) credit hours are granted for each successfully completed full year course (designated .0

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	– e.g., ENGL 2307.0); three (3) credit hours are granted for a successfully completed one-semester course (designated either .1 or .2 – e.g., ENGL 1201.1 or ENGL 1202.2).	Grade Point Average	A grade point average (GPA) is used to determine the standard of a student’s academic performance. See Academic Regulation 6.
	Credit hour values are used in the calculation of averages for academic standing and in the determination of the student’s year of study or level within a specific academic program.	Honours	The main subject area of study in a degree program, chosen in addition to or in lieu of a major(s). A student cannot pursue an honours program and a major or concentration in the same subject area.
Cross-Listed Courses	Courses which are listed under two different numbers in two different departments or academic units. Cross-listed courses may be taken through either department/ academic unit, but credit hours may be earned for only one of the courses.	Independent Study	An approved course in which an individual student carries out a specified independent study project(s) under the supervision of an individual faculty member.
Cumulative Grade Point Average	A cumulative grade point average (CGPA) is calculated using all Saint Mary’s grades. Withdrawals (W’s) are not included in these calculations. See Academic Regulation 6.	Instructor	A member of faculty.
Dean	Also called Dean of the Faculty; the chief academic administrator of a Faculty.	Letter of Permission	An official document issued by Saint Mary’s to enable its own students to register for a course(s) at another post-secondary institution and to guarantee transfer of the credit hours for that course(s), if successfully completed, to the student’s academic program. See Academic Regulation 21.
Degree Grade Point Average	A degree grade point average (DGPA) is calculated based upon the courses presented in fulfillment of the degree requirements.	Liberated Learning	Courses which enable students to see the spoken lecture displayed as text and receive speech recognition software generated lecture notes. Visit www.liberatedlearning.com to learn more about this technology.
Directed Reading	An approved course in which an individual student studies, discusses and writes about a selected set of readings under the direction of an individual faculty member.	Major	A formal, specific subject area of study within an academic unit as defined by its degree program.
Directed Study	An approved course in which an individual student carries out a specific course of study designed and taught one-on-one by an individual faculty member.	Open Studies Status	An admission status permitting a student to take a course although that individual has not been accepted in an academic program at Saint Mary’s University. See Admission Regulation 4a.
Elective	A course not specifically required by a student’s program of studies. Various types of electives exist, such as “free”, “open” and “non-Commerce”.	Part-time	See “Attendance Status” above.
Faculty	When spelled with a capital F, refers to an academic unit offering its own degree, diploma, and certificate program(s); when spelled with a small f, refers to instructors in a Faculty.	Plagiarism	Described in detail in Academic Regulation 19.
Full-time	See “Attendance Status” above.	Preparatory Course	Nova Scotia Grade 12 equivalent course designed to prepare students for entry level course work and hence not counted toward any degree, diploma, or certificate. A preparatory course’s number begins with zero (0).
Grade	The letter indicating an instructor’s evaluation of a student’s work in a course. See Academic Regulation 5 (undergraduate) and Graduate Regulation 6 (graduate).	Prerequisite	A course for which credit hours must have been earned prior to registration in another course, lab, or recitation which lists it as a prerequisite. Students have the right to explore being admitted to a particular course for which they lack the stated prerequisite(s). The chairperson of the department must override the

	prerequisite on the Student Information System (Banner) before the student may register.	Summer Sessions	Terms of study during the summer. See “term” below.
Probation	A conditional status assigned to a student who has shown evidence of academic weakness. See Academic Regulation 7. A student on academic probation can be required to follow regular or special terms as delineated by the Dean or Associate Dean of his/her faculty.	Term	A formal period of instruction. There are normally 4 terms per year: September to December, January to April, May to June, and July to August.
Program	An approved combination of courses in a subject area(s) which fulfils the requirements for a degree, diploma, or certificate.	Transcript	An academic document issued by the Office of the Registrar which records all aspects of a student’s registrations and grades obtained at the University. An “official” transcript is one which bears the official seal of the University and which is sent directly to another institution or official of an organization. “Unofficial” transcripts also may be issued to the student. See Academic Regulation 32.
Program Grade Point Average	A program (major, honours, minor, concentration) grade point average (PGPA) is calculated based upon the courses presented in fulfillment of the program requirements.	Transfer Credit	Credit granted for work completed at another post-secondary academic institution after admission and initial registration at Saint Mary’s. See Academic Regulation 21.
Qualifying Year	Students may be required to complete one or more courses to qualify for admission to a graduate program.	Upgrading Student	A student who already holds an undergraduate degree or professional certificate and who wishes to take an additional credit course(s) at Saint Mary’s University. See Admission Regulation 4c.
Registration	The process of officially selecting courses, labs, and recitations AND making the appropriate arrangements with the Financial Services Office for payment of all required fees. See the “Registration” component of Section 2 of the Academic Calendar.	Visiting Student	A student from another post-secondary academic institution who has a Letter of Permission to register for a course(s) at Saint Mary’s University.
Registration Advisory Unit	A special service available to all students requiring assistance with their registration. (See the Registration component of this Section of the <i>Calendar</i> , 1(b).	Withdrawal	A formal procedure set out within the regulations of the University for withdrawing from an individual course(s), or from the University entirely. See Academic Regulation 16.
Satisfactory Academic Standing	Maintaining a grade point average of at least 1.70 if an undergraduate; at least 3.00 if in a graduate program.	Year of Study	Attaining a degree, diploma, or certificate depends in part on earning credit hours for individual courses required in that academic program. However, progress may be measured in years or levels. Advancement from one year (or level) to the next signifies students having earned credit hours in the number of courses normally specified on an annual basis for their academic program. The following are the credit hour totals required for each year of study. Year 1: 0 to thirty (30) credit hours Year 2: thirty-three (33) to sixty (60) credit hours Year 3: sixty-three (63) to ninety (90) credit hours Year 4: ninety-three (93) or more credit hours
Scholarship	A monetary award based on academic achievement.		
Semester	Same as “term” below.		
Session	Same as “term” below.		
Special Topics	Approved seminar courses dealing with specialized subject-matter that is announced from time to time by Departments; they involve classes are regularly scheduled times and are included in the normal timetable.		
Subject	Also called a discipline; a specific field of study, e.g., Accounting, Chemistry, History.		

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Explanation of Abbreviations

Accounting	ACCT	Film Studies	FILM
Administrative Incomplete	AI	General Business Studies	GBST
Advanced Placement Certificate	AP	Geography	GEOG
Aegrotat Standing	AE	German	GEOL
Anthropology	ANTH	Global Business Management	GRMN
Arabic	ARBC	Graduate Diploma in Criminology	GLBM
Asian Studies	ASNT	Graduate Diploma in International Development Studies	G.Dip.(CRIM) G.Dip.(IDST)
Astronomy	ASTR	Greek	GREK
Astrophysics	ASPH	Hebrew	HEBW
Atlantic Canada Studies	ACST	Hispanic Studies	HPST
Audit	AU	History	HIST
Biology	BIOL	Human Resource Management (formerly Personnel and Industrial Relations)	PIR
Business Administration	BUSI	Incomplete	IC
Certificate in Atlantic Canada Studies	Cert. A.C.S.	Independent Study Program	INST
Certificate of Chinese Studies	Cert. C.S.	Information Systems	ISS
Certificate in Financial Instrument Analysis	Cert. F.I.A.	Information Technology	IT
Certificate of German Language and Culture	Cert. G.L.C.	In Progress	IP
Certificate of Human Resource Management	Cert. HRM	The Institute for Computational Astrophysics	ICA
Certificate of Japanese Studies	Cert. J.S.	International Baccalaureate Certificate	IB
Certificate in Mathematical Sciences for Education	Cert. M.S.E.	International Development Studies	IDST
Certificate of Proficiency in French	Cert. Fren.	Irish Studies	IRST
Certificate of Spanish Language and Hispanic Culture	Cert. S.L.H.C.	Japanese	JPNS
Certified Management Accountant Program	CMA	Latin	LATN
Chemistry	CHEM	Linguistics	LING
Chinese	CHNS	Management	MGMT
Classics	CLAS	Management Research Project	MRP
Commercial Law	CMLW	Management Science	MGSC
Communication	COMM	Master of Science (Applied Sciences)	MSc (APS)
Computing and Information Systems	CISY	Marketing	MKTG
Computing Science and Business	CSCI	Master of Business Administration	SBMA
Administration Major and Computing Science courses		MBA Consulting Project	MCP
Computing Science Major	CPSC	Master of Finance	M.Fin.
Co-operative Education	COOP	Master of Management - Co-operatives & Credit Unions	MMCCU
Co-operative Education Program in Biology	COEB	Mathematics	MATH
Co-operative Education Program in Chemistry	COEC	Philosophy	PHIL
Co-operative Education Program in Computing Science	COES	Physics	PHYS
Co-operative Education Program in Geology	COEG	Political Science	POLI
Creative Writing	CRW	Prior Learning Assessment and Recognition	PLAR
Credit	CR	Psychology	PSYC
Criminology	CRIM	Registration Advisory Unit	RAU
Directed Independent Study	DIS	Research Ethics Board (Saint Mary's)	REB
Economics	ECON	Religious Studies	RELS
Education	EDUC	Sociology	SOCI
Egyptian	EGYP	Spanish	SPAN
Engineering	EGNE	Thesis Continuation	THE
English	ENGL	Test of Written English	TWE
English for Academic Purposes	EAP	Withdrawal (without academic penalty)	W
English as a Foreign Language	EFL	Women and Gender Studies (undergraduate)	WMST
English for Personal and Professional Communication	EPPC	Women and Gender Studies (graduate)	GWST
English as a Second Language	EGSL		
English for Specific Purposes	ESP		
Environmental Studies	ENVS		
Executive Master of Business Administration	EMBA		
Finance	FINA		
Forensic Sciences	FRSC		
French	FREN		

Students, members of faculty, and administrative officers concerned with academic matters are all expected to be familiar with the rules, regulations, and procedures of the University as published in this *Academic Calendar*. The University reserves the right to approve academic programs and timetables, and to control access to courses and individual classes. It is the particular responsibility of students to ensure that the courses

which they take are appropriate for their academic program, involve no timetable conflicts, and collectively satisfy all the requirements of that program.

Note: Academic administrators may appoint designates to carry out functions and responsibilities delineated in these academic regulations.

1. Number of Courses in an Academic Session

- (i) Students must formally register for all courses. In the Faculties of Arts, Commerce and Science (excluding Engineering), the normal load in an academic session for a full-time undergraduate is fifteen (15) credit hours per semester; while in the Division of Engineering, eighteen (18) credit hours per semester constitute a normal full-time load.

Undergraduate students registered for at least nine (9) credit hours in a semester are considered to be full-time, while students registered for fewer than nine (9) credit hours per semester are part-time. During the same academic year it is possible for students to be full-time in one semester and part-time in the other.

- (ii) Students who have earned at least thirty (30) credit hours at Saint Mary’s may elect to take up to an additional six (6) credit hours in the regular academic year. Permission is not required for such an overload.
- (iii) Students may take up to twelve (12) credit hours during any one summer term, i.e., May to June or July to August at Saint Mary’s, on Letter(s) of Permission, or a combination of these.

2. Auditing Courses

Students may audit courses but they must formally register as auditors in these courses. Auditors participate in all regular class activities, but are not expected to prepare formal assignments, write papers, or take quizzes, tests, or examinations. With the permission of the instructor, however, they may perform these activities and receive an informal evaluation of their work. Audited courses are not given credit hours or regular grades but the notation of AU is included on the students’ official record. Within the normal time limits for changing courses (see 13b), students may request permission to change from regular registration status in a course to auditing status or vice versa.

3. Academic Advising

a. Although students are responsible for ensuring that they meet the requirements of their academic programs, the University makes every effort to provide assistance in the selection of courses and programs. Students who have already declared their major, area of concentration, honours, or minor will be advised by the Chairperson of the appropriate departments or their appointees. All other students should seek advice from the Dean, Associate Dean or Undergraduate Program Advisor for their Faculty. Students are strongly urged to familiarize themselves with the academic audit program in Banner.

b. Academic counseling is particularly recommended for the following students:

- (i) all students who are on academic probation as defined in Regulation 7d;
- (ii) all students who do not attain a grade point average of at least 1.70 in any given semester;

4. Grading System

a. The final grade for a course will be based on the quality of a student’s work including, where appropriate, essays and exercises, class tests, end of semester examinations, final examinations, reports, class participation, laboratory work, tutorial sessions, projects and field work.

b. Instructors must inform students in writing of the grading system to be used in each of their courses. The written statement must include the relative weight which will be given to class and/or laboratory participation, examinations, tests, written assignments and other means of evaluation. The statement must also show how these evaluations will be used to determine the final letter grades. This detailed grading system for the course must be given to the students **ON THE FIRST DAY OF CLASS IN THAT COURSE**. Subsequent changes to this system must also be made available to students in writing. A copy of the grading system and any subsequent changes to it must be placed on file in the office of the Dean of the Faculty at the time when they are distributed to the students.

c. Instructors must also inform students in writing on the first day of class of any “in-class” test which will be scheduled outside of the regular instructional hours of the course. Students who cannot write the test outside of class time must be offered reasonable accommodation. Students must give the instructor a minimum of two weeks notice.

d. Instructors must also provide feedback to students regarding their progress in the course prior to the final date by which a student may cancel the course without academic penalty (see Academic Regulation 16 a). Normally, for undergraduate courses, this feedback must equal a minimum of 15% of the final grade.

5. Undergraduate Rating, Grades and Grade Points

a. The rating of undergraduate students’ performance is given as shown below in equivalent grades, grade points, and percentages.

Grades	Grade Points	Percentage Points	Rating
A+	4.30*	90-100	Excellent
A	4.00	85-89	
A-	3.70	80-84	
B+	3.30	77-79	Good
B	3.00	73-76	
B-	2.70	70-72	Satisfactory
C+	2.30	67-69	
C	2.00	63-66	
C-	1.70	60-62	Marginal
D	1.00	50-59	
F	.00	0-49	

Failure or withdrawal after deadline (see 16 below)

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IP

In Progress
(Applicable
ONLY for
undergraduate
honours courses.)

*In November 1997, the Senate of Saint Mary's University voted to have the A+ grade carry 4.30 grade points, retroactive to I Summer Session, 1988. All past decisions on academic matters, such as academic probation/requirement to withdraw, placement on the Dean's List, qualifications for graduation, academic distinctions, and scholarships, shall not be affected.

b. The following grades shall be given when appropriate but will not be calculated in the grade point average:

Aegrotat standing (see No. 12)	AE
Authorized withdrawal from course (see 16a below)	W

c. The minimum passing grade is D (or its equivalent). Students should be aware, however, that a grade of D (or the equivalent) is regarded as a marginal pass and therefore carries negative connotations. For example, many programs require a grade higher than "D" in an introductory course in order to declare a major.

d. In cases where students have not be able to complete the work of the course due to exceptional circumstances the instructor may, with the prior written authorization of the Dean of the Faculty, give the grade IC (incomplete). The IC grade will not be included in the calculation of any grade point average. The IC will be automatically converted to a failing grade, F, if the instructor does not submit a final grade as follows: for first term by Jan 31, for the second term by May 31, for summer session one by July 31 and for summer session two by Sept 30.

e. A temporary grade of IP (in progress) may be assigned by the instructor with the Dean's official concurrence in those instances where students do not complete on time the work in honours courses and theses. The IP grade will not attract any grade points and therefore will not be calculated into any grade point averages. If an IP grade has not been changed into a real grade six months from the last day of classes in the semester in which the course was taught it will automatically be converted to a failing grade of "F". The change from IP being a permanent grade with no impact on calculations of grade point averages to a temporary grade became effective on 1 September 2001 and is not retroactive.

f. The maximum time limit permitted for a change of final grade is six months from the last day of classes in the semester. Except for the changing of an already approved "incomplete" to a real grade, a grade change must be approved by the Dean of the Faculty in which the course is offered.

g. In cases where through no fault of the student, grades have not been received and processed by the deadline stipulated by Senate, a temporary grade of AI ("administrative incomplete") will be assigned but will not

be included in the calculations of grade point and cumulative grade point averages. This temporary grade of AI is assigned by the Registrar.

h. Once a final grade has been submitted to the Registrar, supplementary examinations or any additional assignments for the purpose of changing that grade are not permitted.

6. Grade Point Average

a. Each letter grade is given a grade point equivalent as described in 5a above. A grade point average (GPA) is calculated by multiplying each grade by the number of credit hours, totaling the grade points and dividing by the total number of credit hours attempted. Grade point averages may be calculated for a semester, year, degree, program or cumulatively. Common grade point averages are described below.

b. The cumulative grade point average (CGPA) is based upon all courses taken for credit hours in any Faculty at Saint Mary's other than those for which grades of AE have been given. Courses for which grades of F have been given are included in the calculation of the grade point average. In the case of a repeated course, only the most recent grade is included.

c. A degree grade point average (DGPA) is calculated based upon the courses presented in fulfillment of the degree requirements. Since courses without passing grades (W, F, IC, IP) are not used to fulfill degree requirements, they are not included in the DGPA. In the case of a repeated course, the most recent grade is included. Grades for courses in excess of degree requirements are not included.

d. A program (major, honours, minor, concentration) grade point average (PGPA) is calculated based upon the courses presented in fulfillment of the program requirements. Since courses without passing grades (W, F, IC, IP) are not used to fulfill program requirements, they are not included in the program GPA. In the case of a repeated course, the most recent grade is included. Grades for courses in excess of program requirements are not included.

e. Grades for courses taken at other institutions for which advanced standing is given *are not included* in calculations for a grade point average, a cumulative grade point average, or in calculations for determining awards and distinctions. Grades for courses taken at other institutions covered by the Pan Canadian Agreement for which transfer credit is given are included in these calculations.

7. Standing Required

a. There are multiple regulations governing a student's program of study. These include the overall regulations for the credential (degree, certificate or diploma) as well as those for the area(s) of specialization (concentration, major, honours, minor). For each set of regulations, the ones that apply are those in effect at the time the student first registers in the credential or declares the specialization. For example, a student admitted to a B.A. in 2004 who then declares an English major in 2006 is governed by the B.A. requirements in effect in 2004 and the English major requirements in

effect in 2006. If it is advantageous for a student to follow the new regulations in meeting the requirements for the credential or specialization, the new regulations will apply.

b. In the case of students readmitted after an absence of five or more years, or after having been required to withdraw for academic weakness, or in the case of students transferring to a different academic program, the regulations in force at the time of readmission or transfer apply. In addition, the Dean may attach specific and binding conditions to the students' performance to ensure that the normal standards of the degree requirements are met.

c. Good Standing

- (i) Student are deemed to be in "Good Standing" if they have achieved a minimum cumulative grade point average (CGPA) of at least 1.70.
- (ii) To qualify for a Bachelor's degree in Arts, Science, or Commerce a student must achieve a minimum degree grade point average (DGPA) of 1.70. Note: A higher DGPA may be required for some programs (e.g., honours).
- (iii) To qualify for a Diploma in Engineering or a Certificate students are required to achieve a program grade point average (PGPA) of at least 2.00. Note: Individual programs may require a higher PGPA.

d. Academic Probationary Status

Academic Probationary status is incurred:

- (i) if, at the end of any academic year (i.e., on or about 1 May), a student has attempted a minimum of 24 credit hours with a CGPA of at least 1.00 but less than 1.70;
- (ii) if on readmission after being required to withdraw because of academic weakness [see (i) below];
- (iii) if students are required to confer with their academic advisor and fail to do so or fail to make appropriate efforts to resolve problems which are affecting their academic performance.

e. Eligibility to Continue

Students in Good Standing are eligible to continue. Students on academic probation are eligible to continue if at the end of any academic year (i.e., on or about 1 May) their annual GPA is at least 1.70

Notes:

- (a) Transfer to a different Faculty does not remove probationary status.
- (b) Unless the permission of the Dean of the Faculty has been obtained in advance, courses taken at another educational institution cannot be used to remove probationary status. This is normally not granted.
- (c) All academic probationary notations are retained permanently on students' academic records.

f. Required Academic Counseling

Students whose academic performance at the University is unsatisfactory may be required by the Dean of his/her Faculty to confer with their academic advisor.

g. Required Withdrawal

At the end of each academic year (i.e., on or about 1 May), students will be required to withdraw for 12 months if:

- (i) they have attempted at least 24 credit hours with a CGPA below 1.00;
- (ii) they are on probation and do not satisfy the requirements for continuance;
- (iii) they are on probation and fail to comply with any formal conditions governing their probation.

Students who are required to withdraw from the University for both academic and non-academic reasons may be denied the right to return to Saint Mary's.

Note: No credit hours will be given for any course(s) taken at another institution during the period of required withdrawal.

h. Admission after Required Withdrawal

- (i) Students who are not eligible for readmission to their former institution are normally not admissible to Saint Mary's University.
- (ii) Students who have been required to withdraw from Saint Mary's, and who wish subsequently to be readmitted, must apply to the Admissions Office.
- (iii) If readmitted, students will be placed on academic probation and must fulfill those terms delineated by the Dean of the Faculty in which the student is enrolled and outlined in their letter of readmission. In agreeing to readmit a student, the Dean has the discretionary authority to set specific terms of special probation unique to each student. Students failing to satisfy all the terms of readmission may be denied the right to further registration. [See also Regulation 7b.]

Note: Students are advised that all communications concerning academic probationary status and dismissal are sent to the permanent address on file in the Registrar's Office. Therefore students are urged to ensure that this address is both accurate and complete.

8. Examinations

a. At the end of a Fall or Winter semester, at the discretion of the Department concerned, a final test or examination may be held during the special periods set aside for this purpose in December and in April.

b. All final tests and examinations held during the above periods are scheduled by the Registrar. The maximum time allowed for each examination is three hours.

- c.(i)** In a six (6) credit hour course, no single test given in a regularly scheduled class period (50 minutes or 75 minutes) shall contribute more than 20% of the overall evaluation for that course.
- (ii)** In a three (3) credit hour course, no single test given in a regularly scheduled class period (50 minutes or 75 minutes) or laboratory/recitation session (up to 3 hours) shall contribute more than 35% of the overall evaluation for that course.

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- (iii) In the fall and winter terms, test and examinations individually or collectively contributing more than 10% of the overall evaluation of the course are not permitted to be held during the last fourteen calendar days preceding the end of classes, except as noted in (iv) below. End of term tests and examinations are to be held during the final assessment period as specified in sections, 8a. and b.
- (iv) Prior to the first class date, the Dean of the Faculty may authorize a lab examination worth more than 10% of the final grade within the last 14 days preceding the end of classes. A lab examination requires the use of lab resources.

d. To be eligible to write any type of test or examination in any course, students must be properly registered in that course. Students must write all such tests or examinations at the designated times and in the designated places.

e. Students are responsible for knowing the date, time and location for writing each of their formal examinations. Students are responsible for ensuring they have up-to-date schedules. This information is posted on Banner Self Service with the student's schedule. While this is accurate when viewed/printed, it is subject to revision without any prior notice; hence students are responsible for ensuring they have up-to-date schedules. Missing an examination for reasons of misreading or misunderstanding the date, time, and location does not constitute grounds for a "special test or examination" or for rescheduling the test or examination.

Students are required to present their valid Saint Mary's University student identification cards at all tests and examinations for possible verification of their photographs or signatures.

f. The University acknowledges that due to the pluralistic nature of its community, some students may, on religious grounds, require alternative times to write tests and examinations. Accordingly, a student who requires an alternative test or examination time on these religious grounds should consult with the Dean of the Faculty in which the course is offered regarding alternative arrangements. Such a request must be made in writing within one week of the announcement of the test or examination date.

g. Participation in university sanctioned activities and events may occasionally conflict with exam schedules. Students experiencing such conflicts should follow the instructions in f. (above)

h. Supplementary examinations are not offered.

9. Evaluations

a. At the end of each semester, instructors must submit to the Registrar, on the forms provided, their evaluations of all students registered in their courses. For full courses (i.e., designated .0), interim grades will be submitted at the end of the first semester and final grades at the end of the academic year. The time frames for the submission of mid-year and final grades to the Registrar are:

- (i) in the case of courses in which no formal examination was scheduled by the Registrar within the period designated by Senate for formal examinations, one week from the beginning of the examination period;
- (ii) in the case of courses in which formal examinations were scheduled by the Registrar within the period designated by Senate for such examinations, five days from the day on which the examination was written; and
- (iii) in the cases of courses taught in Summer Sessions, grades are due in the Registrar's Office no later than one week from the last day of instruction in the course.

Students have the right to expect their grades to be submitted by these deadlines in conformity with the faculty members terms of appointment.

b. Final grades are available on Self-Service one day after submission by the instructor. Grade reports are not produced.

c. Final grades are withheld from students who have money owing to the University or who have either money or books owing the University Library system.

d. Grades given at the end of a semester shall not be made known to students except by the Registrar. Under the FOI-POP legislation, it is not legal for members of faculty to publicly post grades without the written permission of the student.

e. Grade changes must be approved by the Dean of the Faculty in which the course is offered **before** they can be accepted for processing by the Registrar. Reason(s) for the change(s) is required at the time of submission.

10. Special Examinations

A student who, due to a serious illness or emergency, was detained or rendered unfit to write a required final examination, may appeal for a special examination. Elective arrangements (such as travel plans) are not considered acceptable grounds for granting an alternative examination time. A student who wishes to have such an appeal considered must:

a. Within 48 hours after the end of the final examination, report, or have a representative report (in writing if possible), to the Instructor and the Dean of the Faculty in which the course is offered, intention to appeal for a special examination and

b. Within one week after the end of the examination submit to the Dean a written request for a special examination. This request must be accompanied by an explanation of the circumstances which made it impossible for the student to write the regular examination and a medical doctor's report, or other document, which supports the appeal. For full consideration of a medical excuse, refer to the Registrar's website for the downloadable Verification of Illness form.

c. The Dean's decision will be communicated to the student and the instructor within one week of receipt of the request.

d. If the Dean approves the special examination, the responsibility for setting and conducting special examinations will lie with the instructor and the department. Special examinations should be completed as soon as possible and normally (i.e. wherever possible) as follows: for first term by Jan 31, for the second term by May 31, for summer session one by July 31 and for summer session two by Sept 30.

11. Academic Appeals

Students who have good reason to believe they have been subject to mistaken, improper or unjust treatment with respect to their academic work have the right to appeal to the Committee on Academic Appeals. An appeal must be based on solid evidence and not merely on injured feelings. This Committee's jurisdiction extends only to individuals currently enrolled at the University or enrolled during the previous academic year and required to withdraw, (i.e., the Committee's jurisdiction does not apply to individuals whose application for admission to a program at the University has not been accepted). Appeals shall be governed by the following procedures:

a. Appealing of Final Grades

The only grades that may be appealed are official final grades. Students should be aware that when a grade appeal is launched, the grade can be raised, lowered, or remain unchanged.

- (i) Students who wish to appeal a grade must first consult the instructor concerned within one month of receiving the grade and, if unsatisfied, should then consult the appropriate Chairperson and Dean. If the problem is still unresolved, students may forward the appeal to the Committee on Academic Appeals. This must be done in writing, through the Registrar, within three months from the last day of the semester in which the course is taken. This appeal statement must contain specifics as to when the instructor, the Chairperson, and the Dean were consulted, together with any other information the student considers relevant. A form to launch an appeal is available from the Registrar and students are strongly encouraged to use this.
- (ii) It is the responsibility of students and instructors to provide the Committee with all relevant available material on which the grade was based. A student's course documentation should include grade history and copies of any retained graded materials on which the student's grades were based (i.e. exercises, reports, papers, tests, examinations). This documentation shall be retained on-campus for a minimum of twelve months from the deadline of submission of grades.
- (iii) The Committee will normally appoint two qualified examiners to review the evidence presented and reconsider the grade. The examiners will submit their report and the evidence reviewed to the Chairperson of the Committee.
- (iv) On the appeal for a change of grade, the decision of the Committee shall be final.

b. Other Appeals

On appeals other than those for a change of grade, the procedures shall be as follows:

- (i) Normally within one month of the event or the decision being received by the student, the student shall submit the appeal in writing and direct it to the Committee on Academic Appeals through the Registrar.
- (ii) The Chairperson of the Committee on Academic Appeals shall forward a copy of the appeal to the Dean of the appropriate Faculty, and, if relevant, to the Chairperson of the Department and the instructor.
- (iii) On 5 May 1993, the Academic Senate of the University passed an Enabling Motion which reads in part "...that the Executive Committee of Senate [be] empowered to deal with all appeals concerning graduation which may be made prior to Convocation." Procedurally, these appeals are made to the Registrar.

c. Decision

If possible, within one month of receiving any appeal under (a) or (b) above, the Committee shall render and communicate its decision through the Registrar to all parties concerned. Pending possible further appeal, the Committee will retain the evidence presented to it for a period of six weeks after rendering its decision.

d. Appeal of Committee's Decision

Except in the case of an appeal for a change of grade, students shall have the right to appeal an adverse decision to the Executive Committee of Senate. Such an appeal shall be governed by the following procedures.

- (i) Within one month of receiving the decision of the Committee, students shall submit their appeal in writing to the Secretary of Senate who shall forward the appeal together with all previously considered evidence to the Executive Committee of Senate for its consideration.
- (ii) Within one month of receiving the appeal, the Executive Committee shall render and communicate its decision through the Secretary of Senate to the Registrar, who in turn shall communicate the decision to the student and to the Committee on Academic Appeals and take any further required action.
- (iii) The decision of the Executive Committee shall be final.

e. Fee

All appeals to the Committee on Academic Appeals must be accompanied by a payment of a \$30.00 fee. Further appeal under (d) above requires an additional payment of \$30.00. In the event of a decision favourable to the appellant, all payments will be refunded.

Notes:

- (a) Appellants may ask or be asked to appear before the committee(s) hearing their appeal.
- (b) Members of a committee cannot participate in the hearing of an appeal arising from an action to which they were a party.

12. Credit Hours without Final Examination

Students who, for medical or compassionate reasons, have been unable to finish a course but who have satisfactorily completed the other requirements, may apply to the Dean of the Faculty for credit hours in that course without examination. They must support their request with adequate evidence. If the Dean permits the request to go forward, instructors involved will be asked to assign an estimated final grade. If the instructors judge that the student should be given credit hours for the course but are unable to determine a precise grade point grade, then they will assign the grade of AE (aegrotat). This grade will not be included in computing the grade point average. Students may apply for aegrotat standing for a maximum thirty (30) credit hours during their undergraduate program. This grade of AE is available only as a final grade and therefore cannot be awarded at mid-year for six (6) credit hour courses [i.e., those designated .0].

13. Course Changes

- a. At the beginning of each academic session, a period of time is provided for students to alter their registration without the change being noted on their permanent records. During these periods, and subject to availability, a course (or section of a course), lab, or recitation may be added, dropped or exchanged for another.
- b. For all these changes the period of time required from the first official day of classes is eight working days (excluding Saturdays) during the academic year; five days in a summer session.
- c. Changes can be effected only through Banner Self-Service. Consult the Calendar of Events for specific dates.
- d. Only in extraordinary cases will a Dean or Associate Dean authorize any course changes after the time deadlines. Special forms for this purpose are available **only** from those with this signing authority.

Warning: Students are responsible for all required work in the course regardless of the date of their entry into the course. Students can expect reasonable accommodation if they are impacted negatively by late registration and/or course changes. Also, tuition fees are charged from the first day of classes, even when a student registers late.

- e. Students cannot be registered in a course, lab, or recitation which has reached its maximum enrolment and therefore is regarded as being full. In exceptional circumstances, the course instructor or heads of academic units (i.e., chairperson, subject area representatives, directors of divisions, or area coordinators) may authorize a student to register in a closed course, lab, or recitation. This must be done through an over-ride on the student information system. The student may then register in the course. Permission to register does not mean that the student is registered.

14. Declaration or Change of Major, Area of Concentration, Honours, or Minor

- a. In order to declare or change a major, area of concentration, honours, or minor, students must file a Declaration of Major form with the Registrar. This form must have been signed by the Chairperson of the Department in which the student has been authorized to pursue a major, area of concentration, honours, or minor. Students are strongly urged to declare their major, area of concentration, honours, or minor before registering for their final sixty (60) credit hours and before 1 June.
- b. The regulations governing the major, area of concentration, honours, or minor program will be those in effect at the time of declaration or change.
- c. Students are advised that general regulations governing majors, areas of concentration, honours, or minors are found below in subsection (d) of this regulation, and also in Academic Regulations 20 and 21; specific Faculty regulations are found in Section 3 of this *Calendar*; and specific departmental and subject area regulations are found in the relevant parts of Section 5. Students should check carefully because minors are not available in all subject areas.
- d. Students must file a Change of Registration form indicating the dropping of their major, area of concentration, honours, or minor if they no longer intend to pursue it. Otherwise it will be assumed to be valid and the student will be expected to complete the requirements in order to qualify for graduation.

Note: Students are advised that possession of the minimum qualifications does not guarantee admission to a particular academic program. Limits to the number of students who can be in a particular program at any one time exist and depend very much on the number of faculty members available in a particular academic unit.

15. Procedure for Changing Faculty

In order to register an official Change of Faculty, students must file with the Registrar, a Change of Registration form which has been signed by the Dean of the Faculty into which the students intend to transfer. Students should be aware that a change of Faculty is not automatic. Students on academic probation at the time of authorized transfer of Faculty or academic program automatically remain on academic probation.

Note: Students are advised that possession of the minimum qualifications does not guarantee admission to a particular academic program. Limits to the number of students who can be in a particular program at any one time exist and depend very much on the number of faculty members available in a particular academic unit.

16. Withdrawing from a Course

- a. In the case of three (3) credit hour courses, after the time limits indicated in 13b above have expired, and provided the three (3) credit hour course still has one quarter

of the instruction time remaining, students may withdraw from the course. In the case of six (6) credit hour courses, after the time limits indicated in 13b above have expired, and providing the tenth day of classes in the second semester has not passed, students may withdraw from the course. In such cases a grade of W will automatically be awarded. Students withdrawing from a course after these time limits automatically receive a grade of F. Students should refer to Regulation 4 d regarding feedback that must be provided prior to the last day to withdraw without academic penalty to allow for an informed decision to be made to withdraw from a course.

- b.** A student who registers for a course and does not withdraw is considered to be taking the course, and if no grade is assigned by the instructor, a grade of F will be recorded automatically. Non-attendance at class or non-payment of tuition fees does not constitute an official withdrawal from a course, lab, or recitation for which the student initiated registration procedures.
- c.** For purposes of registration, sections of courses, labs, and recitations are considered the same as individual courses; hence academic regulations, procedures, and deadlines apply to all types of changes.
- d.** Students are advised that if they completely withdraw from all their courses prior to the end of the add/drop period, a \$50.00 processing/administrative fee will be levied.
- e.** Students who are granted a complete retroactive withdrawal (regardless of the number of courses involved) will be charged a \$50.00 processing/administrative fee.

Notes:

- (i) Students must withdraw through Banner Self-Service. Alternatively, a letter of withdrawal can be forwarded to the Registrar which must include the student's name, address, Saint Mary's I.D. number, and the courses (with section numbers if applicable), labs, and recitations involved in the withdrawal. Students must initiate the withdrawal from all courses, labs, and recitations. The automatic withdrawal from courses because of the withdrawal from another course which is a stated prerequisite does not occur. This same principle applies when students fail a course which is a prerequisite for another for which they have already registered. In these instances, students must initiate the withdrawal from the course(s) for which they lack the stated prerequisite.
- (ii) Students should note that the deadlines for academic withdrawal differ from those for financial adjustment and possible refund of tuition and related fees.

17. Retaking a Course

- a.** Students may retake any course. Each course counts only once as credit hours in the academic program. In accordance with regulation 6b above, only the most recent grade is included in the cumulative GPA, even if this is a lower grade.
- b.** In the cases where courses have been renumbered, changed in level, or where a six (6) credit hour course

(formerly referred to as a "full course") has been split into two three (3) credit hour courses (formerly termed "half courses") or vice versa, a student who received credit hour recognition for the original course is not entitled to repeat the course in its new format or on its new level for additional credit hour recognition.

- c.** Students will not ordinarily be given credit hours for a course taken at another educational institution which they have already taken and failed at Saint Mary's.

18. Withdrawal for Academic Reasons

Students whose participation, work or progress is deemed to be unsatisfactory may have their registration terminated and be denied the right to continue at the University by the Dean of their Faculty.

19. Academic Integrity

See the section preceding Academic Regulations, entitled Academic Integrity and Student Responsibility

20. Advanced Standing

a. University and Other Post-Secondary Institutions

After an official transcript has been received by the Registrar, and providing the students have identified the subject area(s) in which they intend to major or declare an area of concentration, students transferring from other recognized universities or post-secondary institutions to an academic program at Saint Mary's may be given advanced standing credit hours, if appropriate, in consultation with the Dean of the Faculty. To obtain a first baccalaureate degree or a diploma, the student must successfully complete a minimum of 50% of the credit hours required for their degree, diploma or certificate program at Saint Mary's. Among these credit hours, students must complete a minimum of 50% of the credit hours required for the major, honours or concentration at Saint Mary's. Note that the equivalency of courses conducted at other institutions is at the discretion of the Dean of the Faculty.

Notes:

- (a)** A request for advanced standing will not be considered after one year from the date of the student's first registration in an academic program at Saint Mary's.
- (b)** Advanced standing will be given only for courses with satisfactory grades as required by the relevant Saint Mary's program. In accordance with the Pan Canadian Protocol on Transfer Credits, all first and second year courses taken and passed at Canadian universities will be recognized for credit. Deans have the discretion to stipulate a minimum grade which must be attained to receive credit for a specific Saint Mary's course, otherwise elective credit may be granted. Advanced standing for third and fourth year courses is at the discretion of the Dean.

- (c)** Credit will not automatically be recognized for university courses completed more than ten (10) years prior to the students' return to University study. The Dean's

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assessment of the number of credit hours that students must complete to satisfy their academic program is final.

(d) Normally, for courses completed at universities outside Canada, a minimum grade of C (65%) is required for advanced standing.

(e) Advanced standing for courses taken at community or private colleges is granted on a case by case basis, except where formal articulation agreements exist.

b. Prior Learning Assessment and Recognition (PLAR)

PLAR recognizes learning acquired outside post-secondary institutional settings when that learning is comparable in scope and extent to University courses. Persons applying for PLAR for advanced standing are required to document that learning to the satisfaction of the academic unit in which the credit is sought and have it approved by the Dean of the Faculty in which the unit is housed.

21. Transfer Credit Hours

a. While registered at Saint Mary's University, students may be authorized by the appropriate Dean to take a course(s) at another academic institution for transfer credit hours to an academic program at Saint Mary's. Students seeking such permission must apply to the Dean using the Letter of Permission form, available from the Registrar's Office. The letter of application should state why the student wishes to take the course at another institution, how the requested course fits into the student's academic program, and whether it has been determined that no equivalent or other suitable course is available at Saint Mary's University. A full description of the course(s) for which transfer credit hours are requested must be included. The description from an academic calendar will suffice. Students are responsible for completing the proper application and registration procedures at the designated institution. These same procedures apply to summer session courses.

b. Students who are permitted to take a course(s) at an institution other than Saint Mary's by means of a Letter of Permission are responsible for paying all appropriate fees to the institution at which they are taking the course(s). The only exception is a few formal exchange programs, details of which are available from Financial Services.

c. Before transfer credit hours can be considered, students must have the institution concerned send to the Registrar an official transcript of the work undertaken.

d. All courses at Canadian Universities for which a student receives a passing grade [D (or equivalent) or higher] on Letter of Permission will be accepted for transfer credit hours. However, the Deans have the authority to stipulate a minimum grade which must be attained to transfer a particular course for fulfillment of a particular degree or program requirement.

e. Students should also note that in some departments a grade of C or higher is required if the course is to be

considered as part of the students' major, area of concentration, honours, or minor program.

f. In accordance with regulation 6e Grades for courses taken at other institutions covered by the Pan Canadian Agreement for which transfer credit is given are included in GPA calculations.

g. Letters of Permission will not be authorized on a retroactive basis.

Note: Students should note that **at least 50%** of all credit hours for any academic program (degree, diploma, or certificate) must be taken at Saint Mary's. The only exceptions to this are exchange programs with which Saint Mary's University has entered into formal agreements, and formal joint programs.

22. Advanced Standing Credit by Examination for Undergraduate Degree Programs

Such credits are no longer available.

23. Students Whose First Language Is Not English

In the majority of cases the primary language of instruction at Saint Mary's University is English. Therefore, students for whom English is not their first language and who do not have the facility to communicate well, both verbally and in writing, are strongly encouraged to register for English language training prior to registering in their academic program at the University.

24. Requirements of Two Academic Programs (Dual Program)

a. If students are endeavouring to satisfy the requirements of two academic programs at the University, it may not be possible to satisfy the requirements of both of these within the minimum number of credit hours stipulated for either or both of them. The two programs include, but are not limited to: dual degree programs; double major/concentration; major in one subject and honours in another; and degree and certificate programs. Students are advised that they must meet the specific requirements of each portion of their academic program or programs in order to qualify for graduation.

b. It is possible to satisfy simultaneously the requirements for two baccalaureate degrees in the Faculties of Arts, Business or Science. To formally declare their status as dual degree, students must complete the appropriate form in the Registrar's Office and have it signed by each appropriate Dean. Prior to signing this form, each Dean will assess the students' university course work to date and inform the Registrar in writing of other general requirements that must be completed in order to earn a degree within that Faculty. The Registrar, in turn, will officially notify the student. Specific program requirements should be discussed with the Chairperson of the Department of the students' major or area of concentration. Students in a dual degree program are advised that in order to receive the two degrees at the same Convocation, they must meet the specific requirements of each portion of their academic program(s). Students must

complete the requirements of both degree programs for a minimum of 150 credit hours in order to qualify for graduation. Dual degree students will receive both of their degrees at the same Convocation. Students who complete the requirement for only one degree and who graduate are considered to have discontinued the second degree program. Should they subsequently wish to resume their studies in the second faculty, they must reapply for admission and, if admitted, are considered to be pursuing a second undergraduate degree and hence required to follow the appropriate regulations and guidelines.

25. Second Undergraduate Degree

a. Students who hold a first baccalaureate degree may obtain a second baccalaureate degree in the same Faculty, but with a different major, or in a different Faculty and with a different major, by completing all requirements for that degree as specified by the Dean of that Faculty. The minimum number of credit hours required will be 50% of the number stipulated for a first undergraduate degree. Specifically, therefore, for a Bachelor of Arts degree with a Double Concentration and a Bachelor of Science degree with a concentration, a minimum of forty-five (45) credit hours will be required; for a Bachelor of Arts degree or a Science degree with either a major or honours, as well as a Bachelor of Commerce degree, the minimum number of credit hours will be sixty (60) credit hours. Students must also complete the regulations of the *Academic Calendar* in existence when they officially began their program. In so doing, they must complete all of the minimal additional credit hours at Saint Mary's.

b. All students who wish to register in a program leading to a second baccalaureate degree must complete the appropriate application form available from the Office of Admissions. Their application must include the subject(s) of their major(s).

c. Undergraduate Certificates and Diplomas as Second Credentials

- (i) Students who already hold a Saint Mary's University degree and subsequently wish to obtain a Saint Mary's University undergraduate certificate or undergraduate diploma are required to apply officially to the Admissions Office. The academic administrator of that specific program will automatically evaluate the student's previous academic work and advise the Registrar officially of the precise courses remaining to qualify for this second credential. This evaluation is an integral part of the admission process and, hence, an acceptance cannot be confirmed nor can a student register until this process has been completed.
- (ii) Students who hold a degree from a recognized post-secondary institution other than Saint Mary's University are required to follow the admission procedures delineated above in (i). If admitted, the student must complete a minimum of 50% of the courses required for that academic program at Saint Mary's University, including all additional courses specified in individual program requirements.

(iii) In addition to regular degree programs, the undergraduate certificate programs to which this regulation applies are:

- Certificate in Atlantic Canada Studies
- Certificate of Chinese Studies
- Certificate of Proficiency in French
- Certificate in German Studies
- Certificate of Human Resource Management
- Certificate of Linguistics
- Certificate of Japanese Studies
- Certificate of Hispanic Studies
- Certificate in Financial Instrument Analysis
- Certificate in Mathematical Science for Education

The undergraduate diploma programs to which this regulation applies are:

- Diploma in Engineering
- Diploma in Forensic Sciences

(iv) Students are advised to check carefully the grade point average requirements for the specific certificate or diploma program in which they plan to enroll.

26. Certificate of Honours Equivalency

a. The Certificate of Honours Equivalency was established by the University Senate to provide a means of granting appropriate recognition to those Saint Mary's graduates who did not follow the regular honours program of the University but have subsequently completed all requirements for graduation in such a program, and having already received a degree, cannot have a second undergraduate degree in the same Faculty conferred upon them. To earn the Certificate of Honours Equivalency, students must complete all the requirements (or their equivalents) for the appropriate honours program.

b. Students who have earned a first undergraduate degree from another post-secondary institution may be admitted to the Certificate if they have achieved a cumulative grade point average of 3.00 or above. Admission requires the approval of the appropriate department chairperson and the Dean. Advanced standing will be granted in accordance with regulation 20 above. Students must complete at least 30 additional credit hours at Saint Mary's and satisfy all course and grade requirements for the honours program.

27. Convocation Dates, Degrees, Diplomas, and Certificates

a. Students **MUST** file an Application for Graduation from a specific academic program, accompanied by a degree audit (manual or computer generated), with the Registrar by the dates stipulated in the University Calendar of Events. If during the course of the student's final academic year at the University, a change is made in the Faculty or in the type of program in which the student is enrolled (i.e., from honours to major), it will be necessary for the student to officially withdraw their original application and reapply for graduation.

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b. There are three convocations annually, May, October/November and January, with ceremonies held in May and October/November. Once all requirements are completed, students must graduate at the next Convocation. Students are permitted to receive two parchments at one Convocation only in the following instances, namely, registered in a dual degree program (see Academic Regulation 24b above) or a degree and diploma/certificate program.

c. Students are required to obtain the academic regalia appropriate to their academic program at the times, dates and locations indicated in the *Graduation Booklet* which is mailed to all students who have filed an application for graduation and who qualify as potential graduates. This mailing occurs approximately six weeks prior to graduation. It is the students' responsibility to ensure that they have received a copy of the publication.

Students will not be permitted to convocate if they are not attired appropriately and in the academic regalia designed for their particular academic program at Saint Mary's University.

d. The parchment shows the academic designation (i.e., degree, diploma, or certificate) as well as any academic distinction (as defined in Academic Regulation 29) which has been conferred but not the major, area of concentration, or minor. This, however, is noted in the students' official academic record and hence appears on any transcript issued, whether official or unofficial. The subject of honours is shown on the parchment.

e. The University grants the following degrees:

Bachelor of Arts	B.A.
Bachelor of Commerce	B.Comm.
Bachelor of Science	B.Sc.
Master of Arts	M.A.
Master of Business Administration	M.B.A.
Master of Finance	M.Fin.
Master of Management - Co-operatives & Credit Unions	M.Mgt.
Master of Science	M.Sc.
Doctor of Philosophy	Ph.D.
Doctor of Civil Law, Honoris Causa	D.C.L.
Doctor of Commerce, Honoris Causa	D.Comm.
Doctor of Education, Honoris Causa	D.Ed.
Doctor of Fine Arts, Honoris Causa	D.F.A.
Doctor of Laws, Honoris Causa	LL.D.
Doctor of Letters, Honoris Causa	D.Litt.
Doctor of Science, Honoris Causa	D.Sc.

The University grants the following diplomas and certificates:

Certificate in Atlantic Canada Studies	Cert ACS
Certificate of Chinese Studies	Cert.C.S.
Certificate of Proficiency in French	Cert.Fren.
Certificate of German Studies	Cert..G.S..
Certificate of Human Resource Management	Cert. HRM
Certificate in Financial Instrument Analysis	Cert. F.I.A.
Certificate of Honours Equivalency	Cert. Hons.

Certificate of Linguistics	Cert. Ling.
Certificate of Japanese Studies	Cert. J.S.
Certificate of Hispanic Studies	Cert. H.S.
Certificate in Mathematical Sciences for Education	Cert. MSE
Co-operative Education Certificate	Coop.
Diploma in Engineering	Dip.Egne.
Diploma in Forensic Sciences	Dip.F.Sc.
Graduate Diploma in International Development Studies	G.Dip.(I.D.S)

f. Details of the University's policies on the reissuing of parchments are available from the Registrar.

g. Students whose accounts with either or both of Financial Services or the Library Systems are in arrears may be denied the right to graduate until the debt is cleared.

28. Degree, Diploma, or Certificate in Absentia

Provided that candidates have officially notified the Registrar in writing at least ten days in advance that they will not be present at Convocation, they may receive their parchment in absentia.

29. Distinctions

a. In the undergraduate degree and diploma program, distinctions are awarded to successful candidates on the basis of overall performance as measured by the cumulative grade point average as specified below :

Cumulative Grade Point Average	Distinction:	
	B.A., B.Sc., & B.Comm.	Diploma in Engineering
4.00 - 4.30	summa cum laude	With greatest distinction
3.85 - 3.99	magna cum laude	With great distinction
3.70 - 3.84	cum laude	With distinction

b. No distinctions are awarded in graduate and certificate programs.

30. University Medals

At each Spring Convocation the following are presented:

a. Governor General's Silver Academic Medal

This medal is awarded annually to the undergraduate deemed to be the top candidate.

b. Faculty and Division Medals

In the Faculties of Arts, Business and Science; and in the Division of Engineering, medals are awarded to the undergraduate students with the highest cumulative grade point average.

Notes:

(a) In the case of undergraduate degrees and diplomas, the cumulative grade point averages will be calculated on the same basis as that for determining distinctions (see

Academic Regulation 29). In the case of a tie, Senate will determine the recipient of the medal. In the case of graduate degrees, students' entire graduate academic records will be considered.

- (b) Students who graduate in the Fall or January Convocation will be considered for medals at the next Spring Convocation.

31. Dean's Lists for Undergraduate Programs

Saint Mary's University recognizes students of high academic standing by placing them on the Dean's List. There are two systems by which students may qualify for placement on the Dean's List:

- a. At the end of each academic year (i.e., on or about 1 May), full-time students whose grade point average indicates high academic achievement will be placed on the Dean's List and have that achievement recorded on their official academic records. To qualify for this recognition, students must have taken at least thirty (30) credit hours during that academic year, have achieved a minimum grade point average of 3.67, and received no "F" grades. In instances where Saint Mary's has authorized a student to enroll in a course(s) on a Letter of Permission which, when counted with courses taken at Saint Mary's in one academic year, totals at least thirty (30) credit hours and which gives the required minimum grade point average, students are invited to apply officially for placement on the Dean's List. Because the Student Information System (SIS) cannot easily identify these cases, a formal application form is required. These are available from the Registrar's Office.
- b. (i) For students registered in less than thirty (30) credit hours in an academic year to qualify for placement on the Dean's List, they must have taken and completed overall at least thirty (30) credit hours. They must have achieved a minimum grade point average of 3.67 and received no "F" grades on these courses. After having been placed on the Dean's List, these students must take at least 30 additional credit hours to qualify again for placement on the Dean's List. Placement on the Dean's List will be assessed at the end of each academic year (i.e., on or about 1 May) and recorded on students' official academic records.
- (ii) Because the Student Information System cannot easily identify those who qualify for placement on the Dean's List under Academic Regulation 31b (i) above, only those students must apply for placement on the Dean's List. Application forms are available from the Registrar's Office and can only be filed after final marks have been processed and officially received by the students.

32. Students' Academic Records and Transcripts

a. Students' academic records, including their official University files, are the property of the University. Access to those records and release of information from them will be governed by the University's policies and by the laws of the Province (Nova Scotia's Freedom of Information and Protection of Privacy Act, S.N.S. 1993, chapter 5) and the country (Personal Information Protection and Electronic

Documents Act). As the University is committed to the integrity of its student records, students are required to provide, on their Application for Admission, their complete legal name. Any requests to change that name, by means of alteration, deletion, substitution or addition, must be made in writing to the Registrar and accompanied by appropriate supporting documentation. The University's official policy on this subject is contained in the pamphlet entitled, "Policy Regarding the Release of Information about Students". Copies are available from the Registrar.

In addition to the internal policies, procedures, and practices of the University and the requirements of the provincial FOI-POP legislation and the national PIPEDA legislation, as a public institution the University is mandated to collect and report annually to Statistics Canada through the Maritime Provinces Higher Education Commission (MPHEC). The types of information collected in this E.S.I.S. project; the uses to which this data is put; and the opting-out mechanism for those students who do not wish this material about them to be used in any fashion are available on request from Statistics Canada's web site: <http://www.statcan.ca> or by writing to the Postsecondary Section, Centre for Education Statistics, 17th Floor, R.H. Coats Building, Tunney's Pasture, Ottawa, ON K1A 0T6.

- b. Students' transcripts of records are privileged information and to that end will not be released by the Registrar to any individual outside the University without the prior written permission of the students. As required by their appointment, academic administrators within the University have access to students' complete academic records.
 - c. To request a transcript, students must complete the appropriate form obtainable from the Registrar or mail or fax a letter of request to the Records Office. It is not possible to accept a transcript request over the telephone. Transcript requests are processed strictly in the order in which they are received. Although the normal processing time for both official and unofficial transcripts is the same and is approximately ten working days, additional time will be required at peak periods.
- Further information as to timeframes and costs is available on request. Transcripts include the following information:
- (i) Faculty, program, major, area of concentration, minor, and/or honours;
 - (ii) advanced standing and/or transfer credit hours;
 - (iii) grades (failing as well as passing) in respect of all academic work attempted while registered at Saint Mary's.
- d. Where appropriate, reference is also made to:
 - (i) placement and continuance on, and removal of, academic probation;
 - (ii) requirement to withdraw for academic weakness, or for non-academic (i.e., disciplinary) reasons;
 - (iii) distinctions and scholarships, including placement on the Dean's List.

NOTE: All transcripts carry only the student's birth month and day, not the birth year.

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e. While the University takes every reasonable precaution to ensure the confidentiality of student records, students should be aware that the University is connected to a number of external electronic systems, and a number of academic and administrative offices have access, at least on a display basis, to the Student Information System. Copies of the "Policy Regarding the Release of Information about Students", as approved by Senate in April 1994, are available from the Registrar. Effective 23 November 2000, all post-secondary institutions in Nova Scotia are also governed by the Freedom of Information and Protection of Privacy legislation (FOI POP).

33. Safety and Responsibility in Officially-Sanctioned University Activities

Saint Mary's University has policies on the safety and responsibility of students in laboratories, on field courses/trips, in exchange programs/courses, and involved in other university-sanctioned activities. Copies of those

policies are available through the Offices of the Deans of the Faculties, the Office of the Safety Coordinator, and the Office of the Director of International Activities. In courses where a safety policy is particularly relevant because of the special nature of the course, or because of the place of study, instructors will make it known to students in writing at the first class, or in the case of study programs outside Nova Scotia, before the program begins.

34. University Research Ethics Board (REB)

It is the responsibility of all members of the University community - students, faculty, administrators, and staff - carrying out research involving human subjects to seek approval from the University Research Ethics Board (REB) for their research. Student submissions to the REB should be made through the thesis supervisor. For further information, please consult the REB website: www.smu.ca/academic/reb.



*The Saint Mary's University **Random Acts of Kindness (RAK) Squad** celebrated another successful year with an end-of-semester neighbourhood litter cleanup on April 4, 2007. Among other activities during the past year, the student volunteers organized a community clothing drive for Hand-in-Hand Outreach, participated in the annual FEED Nova Scotia stuff-a-buss food drive and brought International RAK Week to the Saint Mary's campus.*

Registration

1. Procedures

Registration procedures are the responsibility of the Registrar and will be made known to students, instructors and administrators on the website, www.smu.ca/registrar

2. Registration Advisory Unit (R.A.U.)

This Unit provides ALL students with the opportunity to receive assistance in a number of registration-specific areas.

For students unfamiliar with the registration process, the following will be helpful - the Saint Mary's University course numbering systems and designators; how to develop your own personal class schedule; the basic requirements for each academic program; an overview of the academic philosophy of the University; and a detailed explanation of key specific academic regulations, policies, procedures, and deadlines, both academic and financial.

The R.A.U. operates annually during the periods of formal registration, late registration, and the official change of registration periods - i.e., from mid July to mid September and again during the first two weeks of January.

3. Change of Registration: Biographical Information

In addition to changes of courses, labs, and recitations, change of registration also consists of maintaining the accuracy of biographical information (i.e., addresses, and telephone numbers, name). Only students can initiate these changes through Banner Self-Service. Only the Registrar can officially process changes submitted in writing. Changes made in any other way, formally or informally, are not honored.

4. Registration in Dual Academic Programs

Students are advised that if they are registered in a dual academic program and opt to graduate with only one of these qualifications, they are assumed to have discontinued the second program. To reactivate their status, students must reapply for admission and qualify for the second program with at least the minimum number of credits specified for that second specific program (see Academic Regulations 24 and 25).

5. Registration in Directed Studies/Special Topics/Reading Courses

Before students can register for such a course(s), it is necessary for information to have already been received and processed in the Registrar's/Records Office with respect to the precise course number (and section number,

if applicable), and also the faculty member who will be responsible for the course. If you are planning to register for such a course during the 2008-2009 academic year, please ensure that you have made the necessary arrangements with the faculty member and that the Chairperson of the Department in which the course is offered has made this information available in writing to the Assistant Registrar-Scheduling. Until this information has been received and processed, registration in that course cannot be undertaken. Attention to this detail will facilitate registration for all concerned.

6. Alterations to Academic Timetable

The University reserves the right to change the times and the academic instructor(s) of a course from those advertised in the official Timetable posted on Banner Self-Service.

7. Cancellation of Courses

If the number of students registered for a course (or section of a course) is insufficient to warrant it being offered, that course may be cancelled by the Dean of the Faculty. Other circumstances may also require the cancellation of a course or a section thereof by the Dean of the Faculty and/or the Vice President, Academic and Research.

8. Addresses

During the academic year, all communications are mailed to local addresses. Therefore students are urged to keep theirs up-to-date in the Registrar's Office. During the summer months, communications are normally sent to the students' permanent addresses unless an alternate address has been filed with the Registrar prior to the advertised deadlines.

9. Identification Cards

At the time of first registration, students are required to obtain an I.D. card. These I.D. cards provide students with an official University identification which can be required for the writing of examinations and tests. [See Academic Regulation 8(e).] These cards also serve as Library cards, permit computer lab use, allow access to The Tower (Fitness and Recreation Centre), and enable students to qualify for discounts at some local businesses. There is no charge for the initial I.D. card.

Each subsequent year I.D. cards are validated by the Library at no cost. A replacement card costing \$15.00 for lost or damaged cards will be issued with proof of valid registration.

Students can obtain their I.D. card at the Library.



Dr. George Elliott Clarke and Dr. J. Colin Dodds congratulate graduates at the Fall 2008 Convocation ceremony. Dr. Clarke, a noted Nova Scotian poet, playwright, novelist, columnist, and professor of English literature, was the recipient of an Honorary Doctor of Letters degree.

Faculties and Programs

**Faculty of Arts
Sobey School of Business
Faculty of Science
Continuing Education
Study Abroad Opportunities
Pre-Professional Programs**

Section 3

Faculty of Arts

Dr. Esther E. Enns, Dean
 Dr. Donald J. Naulls, Associate Dean
 Stacey French, B.A. Program Advisor
 Olu Oredugba, B.A. Program Advisor

1. General Information

The Faculty of Arts offers a wide range of programs based on research in the Humanities, Social Sciences and Sciences. Students have many opportunities to include both traditional disciplines and/or new and interdisciplinary fields of study in their degrees. A B.A. from Saint Mary's University encourages students to develop a broad sense of citizenship, international experience and a uniquely interdisciplinary perspective.

The Bachelor of Arts (BA) is a well-established, foundational degree recognized both across Canada and around the world. A general education component that helps students develop a broad base of knowledge and skills is central to the degree. Students also specialize in the theory and methods of selected fields of study. The B.A. degree prepares students for entry into various professional schools (e.g. education, law, social work), employment in various careers, or graduate-level training and research.

The following three types of B.A. degrees are available:

BA – Major	BA – Honours	BA – General (Double Concentration)
Students develop a considerable level of conceptual sophistication, intellectual autonomy, and specialization in a particular field. <i>This is the standard B.A. program taken by most students.</i>	Students develop a high level of conceptual sophistication, intellectual autonomy, and specialization in a particular field. Students carry out independent scholarly research and show capacity for advanced intellectual work. <i>This program is intended for high-achieving students planning post-graduate studies.</i>	Students develop a moderate level of conceptual sophistication, and focus in at least two fields of study. <i>This degree can satisfy entry requirements for certain professional programs, or provide access to certain careers.</i>

New students are normally admitted into the BA-Major program (120 credit hours). Alternatively, students may choose the BA-General program (90 credit hours). Students wishing to complete a BA-Honours program may seek admission at a later stage provided they have achieved a minimum Grade Point Average of 3.00.

2. Requirements for Completing a B.A. Degree

BA – Major	BA – Honours	BA – General (Double Concentration)
120 credit hours	120 credit hours	90 credit hours
Basic Arts Requirements (see details below)	Basic Arts Requirements (see details below)	Basic Arts Requirements (see details below)
66 credit hours: 2000 level or higher in Arts	66 credit hours: 2000 level or higher in Arts	48 credit hours: 2000 level or higher in Arts
A minimum of 36 and maximum of 48 credit hours to complete a selected Major (as specified by Departments or Programs).	At least 60 credit hours in the Honours subject, of which 48 credit hours must be at the 2000 level or higher	24 distinct credit hours in each of two Arts areas (for a total of 48 to complete the two concentrations) with at least 18 in each area at the 2000 level or above.

BA – Major	BA – Honours	BA – General (Double Concentration)
Minimum Grade Point Average of 2.00 in the credits constituting the Major. Students who fail to achieve 2.00 in the Major may graduate as “Non-Majors” provided they have fulfilled all other BA Requirements.	Minimum Grade Point Average of 3.00 in the credits constituting the Honours subject, with grades of B or higher in at least 48 credit hours, and no grade lower than C.	Minimum Grade Point Average of 2.00 in the credits constituting the two concentrations. Students who fail to achieve 2.00 in the Concentrations may graduate without the Double Arts Concentration designation provided they have fulfilled all other BA Requirements.
A Minor may be declared as part of the degree program.	A Minor may be declared as part of the degree program.	Minors in any Arts areas are <u>not</u> allowed. A Minor in a non-Arts area or a Minor in Business may be declared.
Up to thirty (30) credit hours from non-Arts fields of study may count toward the degree.	Up to thirty (30) credit hours from non-Arts fields of study may count toward the degree.	Up to eighteen (18) credit hours from non-Arts fields of study may count toward the degree.
Minimum Degree Grade Point Average of 1.70	Minimum Degree Grade Point Average of 3.00	Minimum Degree Grade Point Average of 1.70

3. Basic Arts Requirements - *The First Thirty Credit Hours*

The *Basic Arts Requirements* are the “general education” core of the B.A. degree, and are designed to develop the broad base of knowledge and skills that are central and foundational for any B.A. degree. Students are strongly encouraged to build their first year (the first 30 credit hours) using the *Basic Arts Requirements* as the framework.

<i>Basic Arts Requirements</i>		
a.	English 1205 or at the discretion of the Chairperson of the English Department, an alternative three (3) credit hours in English	Development of literacy and cultural understanding
b.	Six (6) credit hours from one or two of the following: Philosophy 1200 (Critical Thinking) (No other Philosophy course satisfies this requirement.) Or Mathematics [including MGSC 1205; MGSC 1206; and CISY 1225] Or a language other than English Or a natural science (except Psychology)	Development of logical reasoning and analytical skill
c.	The equivalent of nine (9) credit hours from at least TWO of the following Humanities: Classics, English other than ENGL 1205, History, Philosophy other than PHIL 1200.0, Religious Studies, and Modern Languages courses on literature and/or culture	Interpretation of human imagination and experience
d.	The equivalent of twelve (12) credit hours from at least two of the following Social Sciences: Anthropology, Economics, Geography, Linguistics, Political Science, Psychology, and Sociology. (A maximum of six (6) credit hours will be counted from any one area.)	Analysis of structures and systems of social life and aspects of nature

Programs in the Faculty of Arts

	Honours B.A. (120-credit-hr)	B.A. Major (120-credit hr)	B.A. General Double Arts Concentration (90-credit-hr)	Minor	Certificate	Elective Courses
Anthropology	✓	✓	✓	✓		✓
Arabic						✓
Asian Studies	✓	✓	✓	✓		✓
Atlantic Canada Studies	✓	✓	✓	✓	✓	✓
Chinese					✓	✓
Classics		✓	✓	✓		✓
Criminology	✓	✓	✓			
Economics	✓	✓	✓	✓		✓
Education						✓
English	✓	✓	✓	✓		✓
Film Studies				✓		✓
French	✓	✓	✓	✓		✓
Geography	✓	✓	✓	✓		✓
German Studies		✓	✓	✓	✓	✓
Hispanic Studies		✓	✓	✓	✓	✓
History	✓	✓	✓	✓		✓
International Development Studies	✓	✓	✓	✓		✓
Irish Studies		✓	✓	✓		✓
Japanese					✓	✓
Linguistics	✓	✓	✓	✓	✓	✓
Mathematics	✓	✓	✓			✓
Philosophy	✓	✓	✓	✓		✓
Political Science	✓	✓	✓	✓		✓
Psychology	✓	✓	✓	✓		✓
Religious Studies	✓	✓	✓	✓		✓
Sociology	✓	✓	✓	✓		✓
Spanish		✓	✓	✓	✓	✓
Women & Gender Studies	✓	✓	✓	✓		✓

4. Declaration of Program

Bachelor of Arts - Major

B.A. students, in consultation with the designated Department and/or Program advisor, must formally declare the particular field of study in which they wish to take their Major **not later than the completion of sixty (60) credit hours**. For full-time students, this normally means **by the end of their second year**.

It is possible to declare a *Double Major* (i.e., two majors, one in each of two different subject areas). It is also possible to declare a *Minor* as part of the Bachelor of Arts – Major degree program.

The Faculty of Arts offers *Major* programs in the following fields of study:

- Anthropology
- Asian Studies
- Atlantic Canada Studies
- Classics
- Criminology
- Economics
- English
- French
- Geography
- German Studies
- Hispanic Studies
- History
- International Development Studies
- Irish Studies
- Linguistics
- Mathematics
- Philosophy
- Political Science
- Psychology
- Religious Studies
- Sociology
- Women and Gender Studies

The regulations governing the Major program will be those in effect at the time of the declaration of the Major.

It is possible for students to change their Major at a later stage.

Bachelor of Arts – Honours

The Faculty of Arts offers Honours programs in the following fields of study:

- Anthropology
- Asian Studies
- Atlantic Canada Studies
- Criminology
- Economics
- English
- French
- Geography
- History
- International Development Studies
- Mathematics
- Philosophy
- Political Science

- Psychology
- Religious Studies
- Sociology
- Women and Gender Studies

It is possible to take *Double Honours* in any two of these fields of study. It is also possible to declare a *Minor* as part of the Bachelor of Arts – Honours degree program.

B.A. students, in consultation with the designated Department and/or Program advisor, must formally declare the particular field of study in which they wish to take an Honours degree **after completing eighteen (18) credit hours in the field**, or after completing sixty (60) credit hours in the BA.

The prerequisite for admission into the B.A. – Honours is a minimum cumulative grade point average of 3.00. Students seeking admission to the B.A. – Honours will be assessed also on the basis of their overall academic record.

To continue in the program, students must achieve a minimum degree grade point average of 3.00. Students are advised that some academic units have stipulated a higher minimum cumulative grade point average.

To graduate, students must achieve a minimum degree grade point average of 3.00. Students are advised that some academic units have stipulated a higher minimum cumulative grade point average.

For a double honours degree, students must complete not fewer than forty-two (42) credit hours in each of two honours subjects. At least sixty (60) of these credit hours must be at the 2000 level or above, including a minimum of twenty-four (24) credit hours in each subject. Students are required to have a minimum grade point average of 3.00 in the double honours courses, with grades of B or higher in at least sixty-six (66) credit hours, and no grade lower than C.

Bachelor of Arts – General (Double Arts Concentrations)

B.A. students, in consultation with the designated Department and/or Program advisors, must formally declare the two (2) subject areas in the Faculty of Arts in which they wish to complete the Double Arts Concentration Requirement **not later than the completion of thirty (30) credit hours**. For full-time students, this normally means **by the end of their first year**.

Students can do their B.A. *Concentrations* in the following fields of study:

- Anthropology
- Asian Studies
- Atlantic Canada Studies
- Classics
- Criminology
- Economics
- English
- French
- Geography
- German Studies
- Hispanic Studies
- History

- International Development Studies
- Irish Studies
- Linguistics
- Mathematics
- Philosophy
- Political Science
- Psychology
- Religious Studies
- Sociology
- Women and Gender Studies

The regulations governing this program will be those in effect at the time of declaration.

Minors

Students completing a *Bachelor of Arts - Major* or a *Bachelor of Arts – Honours* have the option of declaring one or more Minors as part of their degree program. The following Minors are available for such students:

Minors in Arts	Minors in Business	Minors in Science
<ul style="list-style-type: none"> ▪ Anthropology ▪ Asian Studies ▪ Atlantic Canada Studies ▪ Classics ▪ Economics ▪ English ▪ French ▪ Geography ▪ German Studies ▪ Film Studies ▪ Hispanic Studies ▪ History ▪ International Development Studies ▪ Irish Studies ▪ Linguistics ▪ Mathematics ▪ Philosophy ▪ Political Science ▪ Psychology ▪ Religious Studies ▪ Sociology ▪ Women and Gender Studies 	<ul style="list-style-type: none"> ▪ Business 	<ul style="list-style-type: none"> ▪ Astronomy ▪ Biology ▪ Chemistry ▪ Computing Science ▪ Geology ▪ Physics

To satisfy the requirements for a Minor in Arts, students must complete at least twenty-four (24) credit hours in the field of study. At least twelve (12) of these credit hours must be at the 2000 level or above. Specific Departmental requirements may apply to particular Minors; see discipline statements in Section 5 of the *Calendar*.

Minors in Business and Science require a minimum of 30 credit hours. Requirements for the Minor in Business can be found in the next section on programs in the Sobey School of Business. For requirements for minors in Science, see the discipline statements in Section 5 of this *Calendar*.

5. Non-Arts Credits

Students may count towards a Bachelor of Arts – Major or Honours thirty (30) credit hours outside of the recognized Arts subjects. Recognized Arts subjects are those in which a student may pursue a BA - major. With a Bachelor of Arts - General degree, the equivalent of up to eighteen (18) credit hours from outside the range of recognized Arts subjects may be counted. The following courses are acceptable as Arts credits: MGMT 2383, MGMT 2384, MGSC 1205, MGSC 1206, MGSC 2207, CISY 1225 and all courses in Education (EDUC prefix).

6. Certificates

Certificates in Arts

The Faculty of Arts offers a number of Certificate programs. Students can take these programs either as an add-on to their B.A. degree program, or separate from a degree program.

- Certificate in Atlantic Canada Studies
- Certificate of Chinese Studies
- Certificate in German Language and Culture
- Certificate of Honours Equivalency
- Certificate of Japanese Studies
- Certificate in Linguistics
- Certificate in Spanish Language and Hispanic Culture

Certificate in Human Resource Management

It is also possible for students in the Faculty of Arts to complete the Certificate in Human Resource Management either on a stand-alone basis through the Department of Psychology, or in combination with a Major in Psychology:

Certificate of Honours Equivalency

Students who have graduated from Saint Mary’s University with a Bachelor of Arts – Major or Double Concentration may earn a Certificate of Honours Equivalency by returning to the University and completing all of the requirements specified for Honours in the subject.

Students who have earned a first undergraduate degree from another post-secondary institution may be admitted to the Certificate if they have achieved a cumulative grade point average of 3.00 or above. Admission requires the approval of the appropriate department chairperson and the Dean. Advanced standing will be granted in accordance with Academic Regulation 20. Students must complete at least 30 additional credit hours at Saint Mary’s and satisfy all course and grade requirements for the honours program.

7. Co-operative Education Programs

Students may pursue a cooperative education option with the major or honours in Psychology. The requirements for cooperative education are found in the Bachelor of Science portion of Section 3 of this *Calendar*.

8. Dual Bachelor Degree Programs

Since it is possible to pursue two bachelor degrees from Saint Mary's University, students may desire to arrange their courses so as to obtain a bachelor degree in any two of the following three Faculties - Arts, Science, or Business.

While the total time required is somewhat longer, such dual degree programs are quite feasible. In essence, students have to fulfill the degree requirements of each faculty with respect to required courses. Courses which are common to both degree programs and electives can be counted toward both degree programs.

Students who contemplate pursuing any dual degree program should consult with the Deans of both Faculties before embarking on their program of study.

If a student opts to graduate after completing only one of the degree programs, and subsequently wishes to complete the second program, the requirements are those for a second undergraduate degree as stated in Academic Regulation 24.

8. Second Undergraduate Degrees

At least half of the credits presented in fulfillment of a second undergraduate degree must have been taken at Saint Mary's after the conferring of the first degree. Students wishing to complete a second undergraduate degree at Saint Mary's should consult Academic Regulation 25, Section 2 of this *Academic Calendar*.

9. Internationalization and the Bachelor of Arts Degree

The B.A. programs at Saint Mary's University offer a wide variety of learning opportunities to help students become citizens of the world. Through the Faculty of Arts students can gain cross-cultural experience and develop an international perspective. Such preparation is valuable for entry into various careers and for effective engagement in the contemporary world.

The Faculty provides international learning opportunities a number of following ways:

a. Academic Programs with International Scope

- Interdisciplinary "Area Studies" – Asian Studies, Atlantic Canada Studies, German Studies, Hispanic Studies, Irish Studies
- Studies on Aspects of World Cultures – Anthropology, Classics, English, French, History, Linguistics, Philosophy, Religious Studies
- Analysis of World Issues – Criminology, Economics, Geography, International Development Studies, Political Science, Religious Studies, Sociology

b. International Languages

In a world of increasing international mobility, there is particular advantage in acquiring competency in one or more international languages. Furthermore, in Canada, a nation that is officially bilingual, there is significant advantage in acquiring a working knowledge of the French language.

It is possible to study the following languages in the Faculty of Arts:

- Arabic
- Chinese
- English
- French
- German
- Irish
- Japanese
- Scottish Gaelic
- Spanish

c. International Field Schools and Study Abroad

The Faculty provides a variety of courses that involve field study in other parts of the world. Such courses may be offered in the following programs:

- Anthropology
- Asian Studies
- English
- German
- Geography
- International Development Studies

There are also opportunities to study abroad in such countries as France, Germany, Japan, China, Mexico. Further information can be found at www.smu.ca/international/international_learning

Sobey School of Business

Dr. David Wicks, Dean
Dr. Janet Gregory, Acting Associate Dean
Dr. Gordon Fullerton, Acting Associate Dean, Masters Programs
Lois Larson, Undergraduate Program Manager
Mahbouba Nassim, Undergraduate Program Officer

General Information

Frank H. Sobey, a Canadian entrepreneur whose dedication, creativity and hard work built an extensive retail empire, including Canada's second largest food retailer, is the inspiration of the Sobey School of Business. The leading business school in Atlantic Canada, the Sobey School offers a full range of graduate and undergraduate programs:

Bachelor of Commerce
Bachelor of Commerce (Honours) in Economics
Certificate in Human Resource Management
Certificate in Financial Instrument Analysis
Master of Business Administration
Master of Business Administration / Certified Management Accountant
Master of Finance
Master of Management – Co-operatives and Credit Unions
Executive Master of Business Administration
Doctor of Philosophy in Business Administration (Management)

The four-year Bachelor of Commerce program provides a strong foundation of general knowledge and skills, followed by an opportunity to specialize. After the two-year foundation program, eligible students may choose a major area of study in Accounting, Computing and Information Systems, Economics, Finance, General Business Studies, Global Business Management, Human Resource Management and Industrial Relations, Management, Marketing, or Small Business and Entrepreneurship. A cooperative education option, placements at the Sobey Business Development Centre and study-abroad opportunities are available to qualified students.

A certificate program in Human Resource Management can be completed independently or concurrently with a Bachelor of Commerce. For information on these programs see Section 5 of the Calendar: Human Resource Management.

For information on graduate business programs, consult the *Graduate Academic Calendar*.

Bachelor of Commerce

The following requirements apply to all entering Commerce students.

1. a. The Bachelor of Commerce program consists of one hundred and twenty (120) credit hours beyond Nova Scotia Grade 12 (or equivalent). Students lacking the equivalent of

Nova Scotia Grade 12 may be required to complete additional courses as specified by the Dean. Courses beginning with zero (0) are designated preparatory and will not be credited toward any degree, diploma or certificate.

b. Nova Scotia Grade 12 Academic Mathematics (or equivalent) is a prerequisite for two first-year MGSC courses [MGSC 1205 and MGSC 1206]. Students who do not have Nova Scotia Grade 12 Academic Mathematics on admission, will be required to upgrade their mathematical knowledge before taking MGSC 1205 and 1206.

c. To receive a Saint Mary's University Bachelor of Commerce, transfer students must complete all requirements for the degree as stipulated in this *Academic Calendar*.

2. a. In conformity with Academic Regulation 7c (i), students must achieve a minimum degree grade point average of 1.70 in order to qualify for graduation.

b. Honours and co-operative education students must attain a minimum degree grade point average of 3.00.

c. To be eligible to declare a major, students must have completed 45 credit hours and must have a cumulative grade point average of 2.0.

d. Completion of a major – i.e., to have a major formally recognized on a student's academic record – requires that students complete the designated courses with a grade point average of 2.2. (The courses required for each major are listed in Regulation 5 below.)

3. During the regular Academic Year (September to May), full time students will normally take the equivalent of thirty (30) credit hours (i.e. five courses in each academic term). Students who have completed at least thirty (30) credit hours at Saint Mary's may elect to take an additional three (3) credit hours (i.e., one course) each term. Permission is not required. (See academic regulation 1.)

4. All students must successfully complete the following required courses, arranged by year as a guide to students in preparing their programs of study. Students required to complete additional courses due to background deficiencies should consult the BComm Program Manager. Course descriptions, listed alphabetically by discipline, can be found in Section 5, Description of Courses.

Note:

.1 indicates a course taken in the fall academic term.
.2 indicates a course taken in the winter academic term.
A non-Commerce elective is a course offered by the Faculties of Arts or Science.
A free elective is a course offered by Arts, Science or Business.

Year 1

CISY 1225.1(.2) Introduction to Computer Applications
ECON 1201.1(.2) Principles of Economics: Micro

ECON 1202.1(.2) Principles of Economics: Macro
 ENGL 1205.1(.2) Introduction to Literature
 MGMT 1281.1(.2) Introduction to Business Management
 MGSC 1205.1(.2) Quantitative Methods I
 MGSC 1206.1(.2) Quantitative Methods II
 Nine (9) non-Commerce elective credit hours

Year 2

ACCT 2241.1(.2) Introductory Financial Accounting
 ACCT 2242.1(.2) Introductory Managerial Accounting
 CMLW 2201.1(.2) Legal Aspects of Business - Part I
 COMM 2293.1(.2) Communications
 MGSC 2207.1(.2) Introductory Statistics
 MGMT 2383.1(.2) Micro Organizational Behaviour
 MGMT 2384.1(.2) Macro Organizational Behaviour
 MKTG 2270.1(.2) Introduction to Marketing
 Three (3) credit hours in Economics electives - see Note below
 Three (3) credit hours in non-Commerce electives

Notes:

- (i) It is recommended that students planning to major in Economics take ECON 3300.1(.2) or ECON 3301.1(.2) in Year 2 and defer three (3) credit hours of Economics electives to Year 3.
- (ii) Students planning to major in Human Resource Management should take ECON 3340.1(.2).
- (iii) Students may elect to take FINA 2360 in Year 2 (once prerequisites are completed) and the Economics elective in Year 3 or 4.
- (iv) Students may substitute one of BIOL 2308, ENGE 2309, GEOG 3326, MATH 2207, MATH 2216, PSYC 2350 or SOCI 2365 in lieu of MGSC 2207

Year 3 and Year 4

FINA 2360.1(.2) Business Finance I (may be taken in Year 2, once prerequisites completed)
 FINA 3361.1(.2) Business Finance II
 MGMT 3480.1(.2) Ethical Responsibilities of Organizations
 MGMT 4489.1(.2) Strategic Management
 At least twelve (12) credit hours in non-Commerce electives Courses required by the major or non-major route to the degree – see Regulation 5 below.

Note:

The BComm degree requires students to successfully complete at least twenty-four (24) credit hours of non-Commerce electives. (Some majors require students to complete more than the minimum). Non-Commerce courses taken in lieu of Commerce courses cannot be counted as non-Commerce electives. For example, Math 1210 could not be counted both as a replacement for MGSC 1206 and a non-Commerce elective.

5. Students are not required to complete a major. However, upon completion of 45 credit hours, students with a cumulative grade point average of 2.0 may elect to choose a major. (In exceptional circumstances, students can also be admitted to a major by permission of the appropriate Chairperson or Program Coordinator.)

Eligible students can undertake majors in
 Accounting
 Computing and Information Systems

Economics
 Entrepreneurship
 Finance
 General Business Studies
 Global Business Management
 Human Resource Management and Industrial Relations
 Management
 Marketing

To complete a major, students must attain a grade point average of 2.2 in the designated required courses.

It is possible for students to double major by fulfilling the requirements of two majors (with the exception of General Business Studies). However, undertaking a double major may require students to complete more than the standard 120 credit hours required for the degree.

To assist students, the Year 3 and Year 4 course requirements for each major, and the core BComm degree program requirements, are listed below. Course descriptions, listed alphabetically by discipline, can be found in Section 5, Description of Courses.

a. BComm (without major)

Year 3

FINA 2360.1(.2) Business Finance I
 FINA 3361.1(.2) Business Finance II
 MGMT 3480.1(.2) Ethical Responsibilities of Organizations
 9 credit hours Commerce electives at 3000 level or above
 6 credit hours non-Commerce electives
 6 credit hours free electives

Year 4

MGMT 4489.1(.2) Strategic Management
 9 credit hours Commerce electives at 3000 level or above
 6 credit hours non-Commerce electives
 12 credit hours free electives

b. Accounting Major

In addition to all other requirements for the major, a minimum GPA of 2.2 is required in ACCT 2241, ACCT 2242, and the 3rd and 4th year ACCT courses (as indicated below by *).

Year 3

*ACCT 3323.1(.2) Management Information Systems
 *ACCT 3333.1(.2) Cost Management: Measurement Systems – See Note (i)
 *ACCT 3334.1(.2) Cost Management: Systems Evaluation
 *ACCT 3341.1(.2) Intermediate Financial Accounting I
 *ACCT 3342.1(.2) Intermediate Financial Accounting II
 *ACCT 3345.1(.2) Financial Accounting Theory
 FINA 2360.1(.2) Business Finance I
 FINA 3361.1(.2) Business Finance II
 MGMT 3480.1(.2) Ethical Responsibilities of Organizations
 Three (3) credit hours in free electives

Year 4

*ACCT 4455.1(.2) Financial Accounting Seminar
 or
 *ACCT 4470.1(.2) Management Accounting Seminar

*Six (6) credit hours in Accounting electives - see Notes below

MGMT 4489.1(.2) Strategic Management

Twelve (12) credit hours in non-Commerce electives

Six (6) credit hours in free electives

Notes:

- (i) Students cannot receive credit for both ACCT 3332 and ACCT 3333.
- (ii) CISY 2324, CISY 3326, or CISY 4435 as well as ACCT 3357 or any 4000 level course in Accounting not used to fulfill other requirements may be used to satisfy this requirement.

c. Computing and Information Systems Major

In addition to all other requirements for the major, a minimum GPA of 2.2 is required in ACCT3323 and all Computing and Information Systems courses taken at the 2000 level or above (as indicated below by *).

Students who are planning to major in Computing and Information Systems are advised to take CISY 2320 during year two.

Year 3

*ACCT 3323.1(.2) Management Information Systems

*CISY 2320.1(.2) Business Applications Programming

*CISY 3326.1(.2) Database Programming

*CISY 3327.1(.2) Web Information Systems

*CISY 3328.1(.2) Computer Organization

FINA 2360.1(.2) Business Finance I

FINA 3361.1(.2) Business Finance II

MGMT 3480.1(.2) Ethical Responsibilities of Organizations

Six (6) credit hours in non-Commerce electives

Year 4

*CISY 4425.1(.2) System Analysis and Design

*CISY 4435.1(.2) Information Systems Projects and Practice

*CISY 4436.1(.2) Communications Networks and Security

MGMT 4489.1(.2) Strategic Management

Six (6) credit hours in non-Commerce electives

Twelve (12) credit hours in free electives

d. Economics Major

In addition to all other requirements for the major, a minimum GPA of 2.2 is required in ECON 1201, ECON 1202, Economics electives from second year, and the 3rd and 4th year ECON courses (as indicated below by *).

Year 3

*ECON 3300.1(.2) Intermediate Microeconomic Theory - see note below

*ECON 3301.1(.2) Intermediate Macroeconomic Theory - see note below

*ECON 4400.1(.2) Advanced Microeconomic Theory or

*ECON 4401.1(.2) Advanced Macroeconomic Theory

FINA 2360.1(.2) Business Finance I

FINA 3361.1(.2) Business Finance II

*Three (3) credit hours in Economics electives at the 3000 level or above

Six (6) credit hours in humanities or language electives [Classics, History, Philosophy (except PHIL 1200.0), Religious Studies, English, or Modern Languages]

MGMT 3480.1(.2) Ethical Responsibilities of Organizations

Three (3) credit hours in free electives

Year 4

MGMT 4489.1(.2) Strategic Management

*Six (6) credit hours Economics electives at 3000 level or above

*Three (3) credit hours in Economics electives at 4000 level

Six (6) credit hours in social sciences (excluding Economics)

[Anthropology, Geography, Political Science, Sociology, or Psychology]

Twelve (12) credit hours in free electives

Note: It is recommended that students planning to major in Economics take ECON 3300.1 (.2) or 3301.1 (.2) in Year 2 and defer three (3) credit hours of Economics electives to Year 3.

e. Entrepreneurship Major

In addition to all other requirements for the major, a minimum GPA of 2.2 is required in ACCT 3332, MGMT 2383, MGMT 2384, MGMT 2380, MGMT 3389, MGMT 4487, MGMT 4494, and MGMT 4495 (as indicated below by *)

Year 3

*ACCT 3332.1(.2) Planning and Control – see Note

FINA 2360.1(.2) Business Finance I

FINA 3361.1(.2) Business Finance II

*MGMT 3380.1(.2) Family Business

*MGMT 3389.1(.2) Structuring the Start-Up

MGMT 3480.1(.2) Ethical Responsibilities of Organizations

Six (6) credit hours in non-Commerce electives

Six (6) credit hours in free electives

Year 4

*MGMT 4487.1(.2) New Venture Opportunities

MGMT 4489.1(.2) Strategic Management

*MGMT 4494.1(.2) Entrepreneurship: Theory and Concepts

*MGMT 4495.1(.2) Small Business Performance

Improvement

Six (6) credit hours in non-Commerce electives

Twelve (12) credit hours in free electives

Note: Students cannot receive credit for both ACCT 3332 and ACCT 3333.

f. Finance Major

In addition to all other requirements for the major, a minimum GPA of 2.2 is required in FINA 4463, FINA 4466, FINA 4467 and the six (6) credit hours used to satisfy the 4000 level Finance electives requirement (as indicated below by *).

Year 3

ACCT 3343.1(.2) Financial Accounting Analysis

FINA 2360.1(.2) Business Finance I

FINA 3361.1(.2) Business Finance II

MGMT 3480.1(.2) Ethical Responsibilities of Organizations

Three (3) credit hours in Commerce electives at 3000 level or above.

Six (6) credit hours in non-Commerce electives.

Nine (9) credit hours in free electives.

Year 4

*FINA 4463.1(.2) Financial Management

*FINA 4466.1(.2) Investments

*FINA 4467.1(.2) Portfolio Management

MGMT 4489.1(.2) Strategic Management

*Six (6) credit hours in Finance electives at 4000 level except FINA 4491.1(.2) [ACCT 4445.1(.2) and ECON 4403.1(.2) may be used to satisfy this requirement].

Six (6) credit hours in non-commerce electives.

Six (6) credit hours in free electives.

g. General Business Studies Major

The General Business Studies Major is designed to enable students to customize a major. Students may not double major by combining another major in Commerce with a Major in General Business Studies.

In addition to all other requirements for the major, a minimum GPA of 2.2 is required in the eighteen (18) credit hours in Commerce electives completed in fulfillment of the major. (Courses included in the GPA calculations are indicated by *).

Year 3

FINA 2360.1(.2) Business Finance I

FINA 3361.1(.2) Business Finance II

MGMT 3480.1(.2) Ethical Responsibilities of Organizations

*Nine (9) credit hours in Commerce electives at 3000 level or above

Six (6) credit hours in non-Commerce electives

Six (6) credit hours in free electives

Year 4

MGMT 4489.1(.2) Strategic Management

*Nine (9) credit hours in Commerce electives at 3000 level or above

Six (6) credit hours in non-Commerce electives

Twelve (12) credit hours in free electives

h. Global Business Management Major

In addition to all other requirements for the major, a minimum GPA of 2.2 is required in ACCT 3357, MKTG 3375, FINA 4476, MGMT 4488, and the Geographic and cognate electives completed in fulfillment of the major (as indicated below by *).

This program is administered by the Department of Management. Students are advised that they should take their language requirements as early as possible in their program so that later they will have increased flexibility in choosing their courses. Students are responsible to schedule their classes to meet prerequisite requirements for their advanced courses.

Year 3

ACCT 3332.1(.2) Planning and Control - see Note (viii)

*ACCT 3357.1(.2) International Accounting

FINA 2360.1(.2) Business Finance I

FINA 3361.1(.2) Business Finance II

MGMT 3480.1(.2) Ethical Responsibilities of Organizations

*MKTG 3375.1(.2) International Marketing

Six (6) credit hours in a Modern Language (except English) [Arabic, Chinese, French, German, Japanese, or Spanish] - see Note (i) below.

*Six (6) credit hours in Geographic electives – see Note (ii) below.

Year 4

*FINA 4476.1(.2) International Financial Management

*MGMT 4488.1(.2) International Business Management

MGMT 4489.1(.2) Strategic Management

Six (6) credit hours in a Modern Language (except English) [Arabic, Chinese, French, German, Japanese, or Spanish] see Note (iii) below.

*Six (6) credit hours in Geographic electives – see Note (iv) below.

*Six (6) credit hours in cognate electives – see Note (v) below.

Three (3) credit hours in free electives

Notes:

- (i) If the non-Commerce elective in Year 1 was a Modern Language, then this requirement can be replaced with six (6) credit hours in free electives.
- (ii) Six (6) credit hours in electives must be selected from the following regions: Africa, Americas, Asia, or Europe. Approved courses for each region are listed in the entry “Global Business Management” in Section 5 of this Calendar.
- (iii) Credit must be in the same language as Year 3 language credit.
- (iv) Six (6) credit hours in electives must be selected from any of the following areas (Africa, Americas, Asia, or Europe).
- (v) Six (6) credit hours in electives must be selected from the approved list of cognate credits found in the “Global Business Management” entry in Section 5 of this Calendar. If ECON 3310.1(.2), ECON 3312.1(.2), ECON 3315.1(.2), ECON 3365.1(.2), ECON 4410.1(.2), ECON 4413.1(.2), or ECON4414.1(.2) were used to satisfy the Economics elective in Year 2, the number of free electives at the 2000 level or above is increased by three (3) credit hours.
- (vi) In cases where a student is fluent in two languages, other courses relevant to the major may be substituted for the language credits with the approval of the Program Coordinator.
- (vii) Notwithstanding the course substitutions possible in (i), (v), and (vi) above, all students must complete at least twenty-four (24) credit hours in non-Commerce electives.
- (viii) Students cannot receive credit for both ACCT 3332 and ACCT 3333.

i. Human Resource Management and Industrial Relations Major

In addition to all other requirements for the major, a minimum GPA of 2.2 is required in ACCT 3332, MGMT 2383, MGMT 2384, MGMT 3385, MGMT 3386, MGMT

4482, MGMT4483, MGMT 4485 and MGMT 4486 (as indicated below by *).

Students who successfully complete the above requirements for the Human Resource Management major will automatically be granted the Certificate in Human Resource Management.

Year 3

*ACCT 3332.1(.2) Planning and Control - see Note (i)
ECON 3340.1(.2) Human Resource Economics
FINA 2360.1(.2) Business Finance I
FINA 3361.1(.2) Business Finance II
*MGMT 3385.1(.2) Human Resource Management
*MGMT 3386.1(.2) Industrial Relations
MGMT 3480.1(.2) Ethical Responsibilities of Organizations
Nine (9) credit hours in free electives - see Note (ii) below

Year 4

*MGMT 4482.1(.2) Staffing and Selection
*MGMT 4483.1(.2) Management Skills I
*MGMT 4485.1(.2) Wage and Salary Administration
*MGMT 4486.1(.2) Training and Development
MGMT 4489.1(.2) Strategic Management
Twelve (12) credit hours in non-Commerce electives
Three (3) credit hours in free electives

Notes:

- (i) Students cannot receive credit for both ACCT 3332 and ACCT 3333.
- (ii) If ECON 3340.1(.2) was used to satisfy the required Economics elective in Year 2, the number of free electives credits is increased by three (3) credit hours.

j. Management Major

In addition to all other requirements for this major, a minimum GPA of 2.2 is required in ACCT 3332, MGMT 2383, MGMT 2384, MGMT 3385, MGMT 3386, MGMT 4481, MGSC 3317, plus the courses satisfying the required ACCT, FINA, and MKTG electives (as indicated below by *).

Year 3

*ACCT 3332.1(.2) Planning and Control – see Note
FINA 2360.1(.2) Business Finance I
FINA 3361.1(.2) Business Finance II
MGMT 3480.1(.2) Ethical Responsibilities of Organizations
*MGSC 3317.1(.2) Operations Management
*Three (3) credit hours in Accounting electives
*Six (6) credit hours in Marketing electives
Three (3) credit hours in Commerce electives
Three (3) credit hours in free electives

Year 4

*MGMT 3385.1(.2) Human Resource Management
*MGMT 3386.1(.2) Industrial Relations
*MGMT 4481.1(.2) Organization Theory: Structure, Process, Analysis and Design
MGMT 4489.1(.2) Strategic Management
*Three (3) credit hours in Finance electives
Twelve (12) credit hours in non-Commerce electives
Three (3) credit hours in free electives

Note: Students cannot receive credit for both ACCT 3332 and ACCT 3333.

k. Marketing Major

In addition to all other requirements for the major, a minimum GPA of 2.2 is required in MKTG 2270 and the 3rd and 4th year MKTG courses (as indicated below by *).

Year 3

FINA 2360.1(.2) Business Finance I
FINA 3361.1(.2) Business Finance II
MGMT 3480.1(.2) Ethical Responsibilities of Organizations
*MKTG 3376.1(.2) Consumer Behaviour
*MKTG 3378.1(.2) Marketing Research
*MKTG 3379.1(.2) Marketing Management
Nine (9) credit hours in non-Commerce electives
Three (3) credit hours in free electives

Year 4

MGMT 4489.1(.2) Strategic Management
*MKTG 4479.1(.2) Marketing Policy
*Six (6) credit hours in Marketing electives
Six (6) credit hours in non-Commerce electives
Twelve (12) credit hours free electives

Bachelor of Commerce Degree (Honours - Economics)

1. Admission Requirements

- a. Minimum grade point average of 3.00 at the end of Year 2.
- b. Students must make application for admission to the Honours program on the special form obtainable from the Registrar no later than the last day of registration at the beginning of Year 3. They must obtain the approval of the Chairperson of the Economics Department and the Dean of Sobey School of Business.

2. Requirements for Continuance and Graduation

- a. To continue in the program and to graduate, students must maintain a minimum degree grade point average of 3.00.
- b. The specific course requirements of the program are:

Year 1

CISY 1225.1(.2) Introduction to Computer Applications
MGSC 1205.1(.2) Introduction to Quantitative Methods I
*MGSC 1206.1(.2) Introduction to Quantitative Methods II
MGMT 1281.1(.2) Introduction to Business Management
*ECON 1201.1(.2) Principles of Economics: Micro
*ECON 1202.1(.2) Principles of Economics: Macro
ENGL 1205.1(.2) Introduction to Literature
Six (6) credit hours in humanities electives [Classics, History, Philosophy (except PHIL 1200.0), Religious Studies, English, or Modern Languages]
Three (3) credit hours in non-Commerce electives

Year 2

*MGSC 2207.1(.2) Introductory Statistics
 ACCT 2241.1(.2) Introductory Financial Accounting
 ACCT 2242.1(.2) Introductory Managerial Accounting
 MKTG 2270.1(.2) Introduction to Marketing
 MGMT 2383.1(.2) Micro Organizational Behaviour
 MGMT 2384.1(.2) Macro Organizational Behaviour
 CMLW 2201.1(.2) Legal Aspects of Business - Part I
 COMM 2293.1(.2) Communications
 *ECON 3300.1(.2) Intermediate Microeconomic Theory
 *ECON 3301.1(.2) Intermediate Macroeconomic Theory

Year 3

FINA 2360.1(.2) Business Finance I
 FINA 3361.1(.2) Business Finance II
 *ECON 3302.1(.2) Mathematical Economics
 *ECON 3303.1(.2) Intermediate Economic Statistics
 *ECON 4400.1(.2) Advanced Microeconomic Theory
 *ECON 4401.1(.2) Advanced Macroeconomic Theory
 MGMT 3480.1(.2) Ethical Responsibilities of Organizations
 * Three (3) credit hours in Economics electives
 Six (6) credit hours in social science electives
 (Anthropology, Geography, Political Science, Sociology, or
 Psychology but not Economics)

Year 4

MGMT 4489.1(.2) Strategic Management
 *ECON 4403.1(.2) Econometrics
 *ECON 4404.1(.2) Special Topics in Microeconomics
 or
 *ECON 4405.1(.2) Special Topics in Macroeconomics
 *ECON 4498.1(.2) Research Seminar in Economics
 *ECON 4499.1(.2) Honours Project in Economics or
 another three (3) credit hours in an advanced economics
 course approved by the Chairperson
 *Fifteen (15) credit hours in Economics electives

- c. For courses marked with an asterisk (*), no grade below a C is acceptable and at least forty-eight (48) credit hours must have a grade of B or higher.
- d. With the approval of the Chairperson of the Economics Department, a student may be permitted to substitute up to twelve (12) credit hours from a related subject for Year 3 and Year 4 required Economics courses.
- e. With the approval of the Chairperson of the Economics Department, a student may substitute nine (9) credit hours from the Department of Mathematics and Computing Science for ECON 3302.1(.2), 3303.1(.2), and 4403.1(.2).
- f. Commerce students doing an honours in economics are permitted to count nine (9) economics credit hours at the 3000-level or above as non-commerce electives.

Minors for Bachelor of Commerce Students

Students in the Sobey School of Business are permitted to declare a minor in a subject taught in the Faculty of Arts or Faculty of Science from those academic units which currently offer this program option. The specific requirements for minor programs are those set forth by the host academic unit. Although students may take a minor in another Faculty, they must fulfill the requirements of the

degree in which they are registered, including officially declaring and fulfilling the requirements for a major or honours (or in the case of Science, a concentration).

Minor in Business for Arts and Science Students

A minor in Business is available for students pursuing a Bachelor of Arts or Bachelor of Science degree. This minor consists of the equivalent of thirty (30) credit hours, namely: ACCT 2241.1(.2) Introductory Financial Accounting
 ACCT 2242.1(.2) Introductory Managerial Accounting
 CISY 1225.1(.2) Introduction to Computer Applications
 CMLW 2201.1(.2) Legal Aspects of Business I
 COMM 2293.1(.2) Communications
 MGMT 1281.1(.2) Introduction to Business Management
 MGMT 2383.1(.2) Micro Organizational Behaviour
 or MGMT 2384.1(.2) Macro Organizational Behaviour
 MKTG 2270.1(.2) Introduction to Marketing
 Six (6) credit hours in electives in Commerce subjects

Notes:

- (i) This minor is not available to students pursuing a Bachelor of Commerce degree. The regular "Declaration of Major/Minor/Concentration" form is to be used to declare a minor. Students must fulfill all requirements for any minor(s) which they officially declared in order to qualify for graduation, or officially (i.e., in writing) withdraw their declaration of a minor(s).
- (ii) A minimum cumulative grade point average of 2.00 is required for the minor in Business.

Cooperative Education Programs

Sobey School of Business
 Cooperative Education Advisor Karen Lightstone

The Sobey School of Business offers cooperative education options to the Bachelor of Commerce program. Cooperative education is a dynamic approach to university education which integrates academic classroom studies with related practical work experiences outside the formal university environment. The principle upon which this concept is based is that learning and individual development are greatly enhanced when the concepts studied in the classroom are periodically applied, tested and observed by the students in meaningful work situations. Through this program, participating businesses have an excellent opportunity to observe and influence the education of bright enthusiastic students. They also benefit from the access gained to university faculty and expertise, while university faculty and students become aware of the concerns of business and the varied problems which they face. Mary Ellen MacEachern is the Manager of the Cooperative Education and the Student Employment Centre. Sherry Ross is the Senior Employment Development Officer.

1. Admission Requirements for Undergraduate Cooperative Education Programs

- a. Enrolment in the cooperative education option is limited and admission is on a competitive basis. The

requirements listed below are the normal minimums. Satisfying these requirements does not guarantee admission.

- b. Students are considered for admission to the cooperative education option in the Faculty of Commerce after the completion of forty-five (45) credit hours. Normally, this will occur at the end of the first semester of the second year.
- c. The normal admission requirement to the cooperative education program in a regular Bachelor of Commerce program is a minimum cumulative grade point average of 3.00.
- d. Candidates will be admitted to a cooperative education program on the basis of their interest, aptitude, and assessed ability to combine successfully the academic requirements of a major program together with the special work-term requirements of the program.

2. Requirements for Continuance in and Graduation from the Cooperative Education Program

- a. Students must complete all of the regular requirements for a Bachelor of Commerce (see regulations 1 through 7 in the Bachelor of Commerce section of the *Calendar*). Students are advised that for some majors, pursuing a cooperative education option may complicate course scheduling and therefore delay degree completion. It is the student's responsibility to schedule their courses to satisfy major requirements.
- b. In addition to the above requirements, students must officially register for and complete three work experiences.
- c. To continue in and graduate from the cooperative education program, students must earn a minimum degree grade point average of 3.00.

3. Policies and Regulations Governing Cooperative Education Work Terms

- a. The University will make every effort to locate work term positions for co-operative education students in academically related areas of employment, but cannot guarantee placements. Employment settings may also be identified by cooperative education students, but require the approval of the Commerce Cooperative Education Program Advisor.
- b. The satisfactory fulfillment of cooperative education work terms require:
 - (i) the completion of three terms of work experience in academically related paid employment situations of 13 to 16 weeks duration. Under certain circumstances, and with the approval of the appropriate department, students may be permitted to satisfy their work terms requirements in an unpaid position. Self-employment will be considered.
 - (ii) a satisfactory employer evaluation for each cooperative education work term (self-employed students will be evaluated by an individual selected by the department);
 - (iii) the satisfactory completion of a written report submitted within 30 days after the end of each work term detailing the student's work experience.

- c. A notation will be included on students' academic transcripts following satisfactory completion of each work term.
- d. Graduating students who have successfully completed their co-operative work term requirements will have this noted on their academic transcripts. If, in addition, all other normal academic requirements are fulfilled, a "Cooperative Education" notation will be printed on their parchments.
- e. Students may be required to withdraw from the co-operative education option of their degree if:
 - (i) they are dismissed from, quit, or fail to accept an appropriate and approved cooperative work term position;
 - (ii) they fail to submit or successfully complete a work term report;
 - (iii) they do not maintain the required grade point average necessary for continuance in the Cooperative Education Program;
 - (iv) in the judgment of the faculty, they are no longer suited for the particular requirements of the Co-operative Education Program.
- f. Students who voluntarily withdraw from or who are required to withdraw from the Cooperative Education Program may remain enrolled in and continue with the major or honours degree program offered by their department.
- g. Co-operative Education students will be expected to attend any special seminars or colloquia developed by the Sobey School of Business, or the Cooperative Education Department, which deal with employment orientation and the application of formal academic study to work experiences.
- h. Academic study during work terms is discouraged. No more than six (6) credit hours may be taken during a work term. Up to six (6) credit hours within the student's major subject may be taken on a Letter of Permission at another institution. This waiver of normal University policy is permitted only for study during work terms and only if the courses cannot be taken at Saint Mary's University due to program sequencing.

4. Registration and Fees for Cooperative Education

- a. Students are required to register for all work terms, according to normal registration procedures, including all stipulated deadlines. Work terms will be officially designated on students' transcripts as:

Work Term 1 = COOP 1000
Work Term 2 = COOP 2000
Work Term 3 = COOP 3000

- b. Students pay for their academic courses and work terms as they take them.

5. Timing and Sequencing of Work Terms

The basic principles behind a co-op education are that (a) work terms should build upon the studies in the preceding

semester(s) and (b) work terms should enrich subsequent study terms. Ideally, work terms and study terms should alternate after the student has an academic foundation suitable for the first work term.

- a. Normally, the first work term will commence after the completion of the requirements for years 1 and 2 of the Bachelor of Commerce degree program.
- b. A “study term” is a semester of full -time study [minimum of 3 courses (nine (9) credit hours)]. Normally students must end their program with a study term.
- c. Normally, at least one work term must be in the fall or winter semester. That is, students are not permitted to complete all work terms in the summer.
- d. Back to back work terms are permissible with prior approval of the Commerce Co-op Advisor. These work terms must be with different employers or require significantly different job descriptions if with the same employer. Normally, students must make application to the Sobey School of Business Cooperative Education Advisor not less than one month before the start of the second work term, providing justification for back to back work terms and a job description for the second work term.
- e. Three work terms in succession, with no intervening full-time study term, are not permitted.
- f. Students may “stop out” for a semester, i.e., have a semester that is neither a work term nor a study term. Students must make application to the Commerce Co-op Advisor at least one month before the start of the “stop out” semester.

Dual Bachelor Degree Programs

Since it is possible to pursue two bachelor degrees from Saint Mary’s University, students may desire to arrange their courses so as to obtain a bachelor degree in any two of the following three Faculties - Arts, Science, or Commerce.

While the total time required is somewhat longer, such dual degree programs are quite feasible. Students must fulfill the degree requirements of each faculty with respect to required courses. Courses which are common to both degree programs and electives can be counted toward both degree programs.

Students who contemplate pursuing any dual degree program should consult with the Deans of both Faculties before embarking on their program of study.

If a student opts to graduate after completing only one of the degree programs, and subsequently wishes to complete the second program, the requirements are those for a second undergraduate degree as stated in academic regulation 24.

Second Undergraduate Degrees

At least half of the credits presented in fulfillment of a second undergraduate degree must have been taken at Saint Mary’s after the conferring of the first degree. Students wishing to complete a second undergraduate degree at Saint Mary’s should consult Academic Regulation 25, Section 2 of this *Academic Calendar*.

Information concerning the Sobey School of Business’ programs at the graduate level is found in the *Graduate Academic Calendar*.

Faculty of Science

Dr. Malcolm N. Butler, Dean
Dr. Steven Smith, Associate Dean
Dr. William A. Bridgeo, Dean Emeritus
Dr. David H. S. Richardson, Dean Emeritus
Susan Doré, Undergraduate Program Advisor

General Information

Students electing to pursue a program leading to the Bachelor of Science degree should consider which of three programs best suits their aspirations.

Honours

The honours program demands a minimum grade of C in all courses followed in the honours subject. (Particular requirements for the honours in Environmental Studies are found in this *Academic Calendar*, Section 5, “Environmental Studies”.) These honours programs are designed primarily for students who wish to proceed to graduate work or who wish to obtain professional status in the area of the honours subject. Students of above-average ability are urged to contact the Chair of the Department in which they wish to follow an honours program before the end of Year 3 for application details. Formal application for admission to an honours program must be made on a form available in the Registrar’s Office.

Major

The major program demands a minimum grade of C in all courses in the major subject. (Particular requirements for the major in Environmental Studies are found in this *Academic Calendar*, Section 5, “Environmental Studies”.) The major program is designed to meet the needs of those students who wish to be employed in work related to the area of their major. It will be useful to those wishing to practice as technicians or technical officers. Additionally, this program permits students to prepare adequately for continued study at the graduate level, if warranted by performance and motivation.

General

The general program is designed to give a person a good educational background for life in today’s technological world, and an understanding of the importance of the relationship between science and society. The general program is broader in scope than the major or honours programs, and students are encouraged to supplement their science studies with courses in the humanities and social sciences.

Bachelor of Science

The following are considered “science subjects” at Saint Mary’s University: Astronomy, Biology, Chemistry, Computing Science, Environmental Studies, Geology, Mathematics, Physics and Psychology.

Bachelor of Science - General (with a Concentration)

1. A concentration program can be taken in the following disciplines: Biology, Chemistry, Computing Science, Geography, Geology, Mathematics, Physics or Psychology. Subject to the regulations set forth in this *Academic Calendar*, students must complete ninety (90) credit hours. Courses beginning with zero (0) are designed to prepare students for entry level course work and will not be credited towards any academic program.

Note: Students should note that at least 50% of all courses for any academic program must be taken at Saint Mary’s University and at least 50% of all courses taken in the concentration subject must be taken at Saint Mary’s University.

2. Students will normally take thirty (30) credit hours during the regular academic year.

3. For the degree of Bachelor of Science, students must successfully complete:

a. three (3) credit hours in English [ENGL 1205.1(.2)] and three (3) credit hours in Humanities: Classics, English other than ENGL 1205.1(.2), History, Philosophy, Religious Studies and Modern Languages (courses on literature and/or culture). Students planning to apply to professional schools, which require six (6) credit hours of writing components, are advised to take English 1205 (Introduction to Literature) and three (3) credit hour courses in English from among the ENGL 2300 to ENGL 2393 courses. These courses have been designated by the Department of English as having a major writing component

b. six (6) credit hours in Mathematics and/or Computing Science at the 1210 level or above.

c. twelve (12) credit hours in Arts subjects and/or Economics [except ECON 1205.1(.2), ECON 1206.1(.2), ECON 2207.1(.2)]; excluding Mathematics and Psychology. With respect to this regulation, all courses taught in Geography are considered Arts courses and all courses taught in Psychology [including PSYC 3348.1(.2)/WMST 3348.1(.2)] and Mathematics are considered Science courses and cannot fulfill this requirement. These twelve (12) credit hours are in addition to requirement (a) above;

d. not less than thirty (30) or more than forty-two (42) science credit hours in their area of concentration;

e. eighteen (18) science credit hours not in the subject of concentration and in addition to the required Mathematics or Computing Science courses (see note below); excluding Geography and Engineering. With respect to this regulation, all courses taught in Psychology and Mathematics are considered Science courses and all courses taught in

Geography are considered Arts courses and cannot fulfill this requirement; and

f. sufficient electives to complete the ninety (90) credit hours required for a general Bachelor of Science; and achieve a minimum degree grade point average of 1.70 in order to qualify for graduation with a Bachelor of Science degree.

Note: Students in the Faculty of Science are NOT permitted to use the following courses as “other sciences” in fulfilling the requirements of their academic program:

ASTR 1010 Life in the Universe
 BIOL/ENVS 1203 Biology and the Human Environment
 CHEM 1220 Chemistry and Industry
 CHEM 1221 Chemistry of Life
 CHEM 2380 Communications in Chemistry
 FRSC 2200 Basic Sciences for Forensics I
 FRSC 2201 Basic Sciences for Forensics II
 GEOL 1202 Planet Earth: Atlantic Canada Perspective
 GEOL 1203 Earth History: Atlantic Canada Perspective
 GEOL 1210 Dinosaurs and Their World
 MATH 1190 Pre-Calculus Review
 MATH 1202 Concepts and Topics in Mathematics
 MATH 1203 Concepts in High School Mathematics
 MATH 1207 Survey of Statistics
 PSYC 1200 Introduction to Psychology
 And excluding Geography and Engineering courses.

Bachelor of Science - Major

4. A major program can be taken in the following disciplines: Astrophysics, Biology, Chemistry, Computing Science, Environmental Studies, Geography, Geology, Mathematics, Physics or Psychology. Subject to the regulations set forth in this *Academic Calendar*, students must complete one hundred and twenty (120) credit hours. Courses beginning with zero (0) are designed to prepare students for entry level course work and will not be credited towards any academic program.

Note: Students should note that at least 50% of all courses for any academic program must be taken at Saint Mary’s University and at least 50% of all courses taken in the major subject must be taken at Saint Mary’s University.

5. Students will normally take thirty (30) credit hours during the regular academic year.

6. To earn a degree of Bachelor of Science with a major, students must successfully complete:

a. three (3) credit hours in English [ENGL 1205.1(.2)] and three (3) credit hours in the humanities [see 3(a) above];

b. six (6) credit hours in Mathematics and/or Computing Science at the 1210 level or above.

c. twelve (12) credit hours in Arts subjects and/or Economics [except ECON 1205.1(.2), ECON 1206.1(.2), ECON 2207.1(.2)]; excluding Mathematics and Psychology. With respect to this regulation, all courses taught in Geography are considered Arts courses and all courses

taught in Psychology [including PSYC 3348.1(.2)/WMST 3348.1(.2)] and Mathematics are considered Science courses and cannot fulfill this requirement. These twelve (12) credit hours are in addition to requirement (a) above; in addition to ENGL 1205.1(.2);

d. not less than forty-two (42) in the major subject. The Astrophysics major requires thirty-nine (39) credit hours in Physics and eighteen (18) credit hours in Astronomy, namely, ASTR 1100 and ASTR 1101 plus twelve (12) credit hours at the 2000 level or above (or equivalent). The Biology major requires 6 required core courses and a minimum of 48 credit hours in biology. The Computing Science major requires fifty-four (54) credit hours with a CSCI or MATH course designation, in addition to the Faculty of Science requirement 6(b);

e. eighteen (18) science credit hours — not in the subject of major and excluding the following courses: ASTR 1010; BIOL/ENVS 1203.0; CHEM 1220, CHEM 1221, CHEM 2380; FRSC 2200, FRSC 2201; GEOL 1202, GEOL 1203, GEOL 1210 ; MATH 1190, MATH 1202, MATH 1203, MATH 1207; and PSYC 1200 — and in addition to the required Mathematics or Computing Science credit [six (6) credit hours]; excluding Geography and Engineering. With respect to this regulation, all courses taught in Psychology and Mathematics are considered Science courses and all courses taught in Geography are considered Arts courses and cannot fulfill this requirement;

f. sufficient elective credits to complete the one hundred and twenty (120) credit hours are required for a Bachelor of Science with a major; and achieve a minimum degree grade point average of 1.70 in order to qualify for graduation with a Bachelor of Science degree;

g. an additional three (3) credit hours in Mathematics or Computing Science is required for the major in chemistry; and

h. students must obtain a grade of at least C in all those courses used to satisfy section 6(d) above and any other courses in the major required by the academic unit unless given a written waiver by the Dean of Science, acting in consultation with the academic unit concerned.

Bachelor of Science - Double Major

7. With the approval of the chair of the academic units involved, students may pursue a double major program in any two science subjects (except Astrophysics). In addition to satisfying the requirements for the Bachelor of Science major (see above), students must complete the following:

Note: Students should note that at least 50% of all courses for any academic program must be taken at Saint Mary’s University and at least 50% of all courses taken in the major subjects must be taken at Saint Mary’s University.

a. at least thirty-six (36) credit hours in each major subject;

b. twelve (12) science credit hours not in the major subjects and in addition to the required Mathematics or

Computing Science credit [six (6) credit hours]; excluding Geography and Engineering. With respect to this regulation, all courses taught in Psychology and Mathematics are considered Science courses and all courses taught in Geography are considered Arts courses and cannot fulfill this requirement;

c. sufficient electives to complete the one hundred and twenty (120) credit hours required for a Bachelor of Science with a double major [exclusion list under Major 6(e) applies]; and achieve a minimum degree grade point average of 1.70 in order to qualify for graduation with a Bachelor of Science;

d. students must obtain a grade of at least C in all those courses used to satisfy section 7(a) above and any other courses in the major required by the academic unit unless given a written waiver by the Dean of Science, acting in consultation with the academic unit concerned.

8. Students programs must be approved by the department(s) in which the major is taken and must satisfy any core programs specified by the department(s) and approved by the Faculty of Science. These requirements may be waived in special cases by the Dean of Science who may approve a special program for the student in consultation with the department(s) concerned.

9. Students must obtain a program grade point average of at least 2.00 in the major subjects.

Bachelor of Science - Major and Minor

10. With the approval of the departments involved, students may pursue a major-minor program in any two science subjects (except Astrophysics). Science students may also pursue a minor in another faculty (see details later in this section of the *Academic Calendar*). In addition to satisfying requirements for the Bachelor of Science major (see above), students must complete the following course requirements:

Note: Students should note that at least 50% of all courses for any academic program must be taken at Saint Mary's University and at least 50% of all courses taken in the major and minor subjects must be taken at Saint Mary's University.

a. at least forty-two (42) credit hours in the major subject;

b. at least thirty (30) credit hours in the minor subject;

c. twelve (12) science credit hours not in the major or minor subjects, in addition to the required Mathematics or Computing Science credit [six (6) credit hours]; excluding Geography and Engineering. With respect to this regulation, all courses taught in Psychology and Mathematics are considered Science courses and all courses taught in Geography are considered Arts courses and cannot fulfill this requirement;

d. sufficient electives to complete the one hundred and twenty (120) credit hours required for a Bachelor of Science with a major-minor;

e. in addition, students must obtain a grade of not less than C in every course for the major subject and a GPA not less than 2.0 in the minor subject. A student failing to meet either of these conditions will be permitted to continue in the major-minor program only with the approval of the Dean of Science, acting in consultation with all of the departments/programs concerned.

Note: In conformity with academic regulation 7c (i) students must achieve a minimum degree grade point average of 1.70 in order to qualify for graduation with a Bachelor of Science degree - with a concentration, major, double major, or major-minor.

Bachelor of Science - Honours and Double Honours

11. An honours program can be taken in the following disciplines: Astrophysics, Biology, Chemistry, Computing Science, Environmental Studies, Geography, Geology, Mathematics, Physics or Psychology; or as a combination of any two of these subjects (except Astrophysics). Students who plan to take an honours program must have the approval of the honours department(s) and the Dean.

Note: Students should note that at least 50% of all courses for any academic program must be taken at Saint Mary's University and at least 50% of all courses taken in the honours and double honours subjects must be taken at Saint Mary's University.

12. For the Bachelor of Science degree with honours, students must complete the requirements for a major [i.e., 6(a), 6(b), and 6(c) above] and the following:

a. sixty (60) to seventy-two (72) credit hours in the honours subject, or in double honours [see Science Regulation 12(d)]. The exceptions are: Astrophysics at least fifty-four (54) credit hours in Physics and twenty-one (21) credit hours in Astronomy, namely, ASTR 1100 and ASTR 1101 plus fifteen (15) credit hours in Astronomy at the 2000 level or above (or equivalent); and Computing Science, in which a total of seventy-eight (78) credit hours in CSCI and MATH credits are required, in addition to the Faculty of Science requirement 6(b);

b. eighteen (18) credit hours not in the honours subject [six (6) credit hours in double honours, eighteen (18) credit hours in Astrophysics and Computing Science] in addition to the required Mathematics and Computing Science credit [six (6) credit hours]; excluding Geography and Engineering. With respect to this regulation, all courses taught in Psychology and Mathematics are considered Science courses and all courses taught in Geography are considered Arts courses and cannot fulfill this requirement; [exclusion list under Major 6(e) apply];

c. sufficient electives to complete the one hundred and twenty (120) credit hours are required for a Bachelor of Science with honours.

d. For a double honours program, students must complete:

- forty-eight (48) credit hours in the subject in which they are completing their thesis. (This includes the thesis and seminar course where relevant.)
- students must complete forty-two (42) credit hours in their second honours subject,
- six (6) credit hours in another science,
- twelve (12) credit hours in Arts, as well as the required three (3) credit hours for English [ENGL 1205] and three (3) credit hours in the humanities,
- six (6) credit hours in Mathematics and Computing Science (MATH 1210 and one of MATH 1211 or MATH 1216; or CSCI 1226 and one of CSCI 1227 or CSCI 1228; or CSCI 1228 and one of CSCI 2355 or MATH 1216, as stipulated in the departmental regulations).

for a minimum of one hundred and twenty (120) credit hours. Entry into this double honours program requires approval by the chairs of the two departments and the Dean of Science.

- e. For an honours and major program, students must complete:
- forty-eight (48) credit hours in their honours subject.
 - students must complete thirty-six (36) credit hours in their major subjects,
 - six (6) credit hours in another science,
 - twelve (12) credit hours in Arts, as well as the required three (3) credit hours for English [ENGL 1205] and three (3) credit hours in the humanities, and
 - six (6) credit hours in Mathematics and Computing Science (MATH 1210 and one of MATH 1211 or MATH 1216; or CSCI 1226 and one of CSCI 1227 or CSCI 1228; or CSCI 1228 and one of CSCI 2355 or MATH 1216, as stipulated in the departmental regulations).

for a minimum of one hundred and twenty (120) credit hours.

13. Students' academic programs must be approved by the department(s) involved.

14. For a Bachelor of Science degree with honours, students must obtain a degree grade point average of at least 3.00 in those courses used to satisfy the requirements of section 12, above. In cases where a course has been taken more than once for upgrading purposes, only the latest instance of the course will be used to evaluate graduation standing.

Bachelor of Science (Major in Computing Science and Business Administration)

For details on this program, please consult the "Computing Science and Business Administration" entry under Mathematics and Computing Science in Section 5 of this *Academic Calendar*.

Bachelor of Science (Major in Geography)

For details on this program please consult the "Geography" entry in Section 5 of this *Academic Calendar*.

Bachelor of Science (Geology/Commerce)

For details on this program, please consult the "Geology" entry in Section 5 of this *Academic Calendar*.

Combined Co-operative Education Program in Commerce/Geology

Students enrolled in the combined commerce/geology major/honours may also pursue a co-op option in this dual program. Applications to and completion of this combined option is the same as those for other Science co-op major/honours programs.

Bachelor of Science (Major/Honours in Geology/Geography)

For details on this program, please consult the "Geology" entry in Section 5 of this *Academic Calendar*.

Bachelor of Science (Major/Honours in Environmental Studies)

For details on this program, please consult the "Environmental Studies" entry in Section 5 of this *Academic Calendar*.

Dual Bachelor Degree Programs

Since it is possible to pursue two bachelor degrees from Saint Mary's University, students may desire to arrange their courses so as to obtain a bachelor degree in any two of the following three Faculties - Arts, Commerce, or Science.

While the total time required is somewhat longer, such dual degree programs are quite feasible. In essence, students have to fulfill the degree requirements of each Faculty with respect to required courses. Courses which are common to both degree programs and electives can be counted toward both degree programs. The minimum degree grade point average for graduation is 3.00.

Students who contemplate pursuing any dual degree program should consult with the Deans of both Faculties before embarking on their program of study.

If a student opts to graduate after completing only one of the degree programs, and subsequently wishes to complete the second program, the requirements are those for a second undergraduate degree as stated in academic regulation 24.

Minors for Students in the Faculty of Science

Students in the Faculty of Science are permitted to declare a minor in a subject taught in the Faculty of Arts or Faculty of Commerce from those academic units which currently offer this program option. The specific requirements for minor programs will be those set forth by the host academic unit and that while students may take a minor in another Faculty, they must fulfill the requirements of the degree in which they are registered, including officially declaring and fulfilling the requirements for a major or honours (or in the case of Science, a concentration).

A minor in Film Studies is available to undergraduate students in all three faculties. Details are found in Section 5 of the *Calendar*.

A minor in the Sobey School of Business is available for students pursuing a Bachelor of Arts or Bachelor of Science degree. This consists of the equivalent of thirty (30) credit hours, namely:

ACCT 2241 Introductory Financial Accounting
ACCT 2242 Introductory Managerial Accounting
CMLW 2201 Legal Aspects of Business I
COMM 2293 Communications
MGMT 1281 Introduction to Business Management
MGMT 2383 Micro Organizational Behaviour
or MGMT 3384 Macro Organizational Behaviour
MKTG 2270 Introduction to Marketing
CISY 1225 Introduction to Computer Applications
Six (6) credit hours in Commerce subjects

A minimum program grade point average of 2.00 is required for the minor in Business.

The regular “Declaration of Major/Minor/Concentration” form is to be used to declare a minor. Students must fulfill all requirements for any minor(s) which they officially declared in order to qualify for graduation, or officially (i.e., in writing) withdraw their declaration of a minor(s).

Second Undergraduate Degrees

At least half of the credits presented in fulfillment of a second undergraduate degree must have been taken at Saint Mary’s after the conferring of the first degree. Students wishing to complete a second undergraduate degree at Saint Mary’s should consult Academic Regulation 25, Section 2 of this *Academic Calendar*.

Cooperative Education Programs (Major and Honours)

Mary Ellen MacEachern, Manager, Cooperative Education and Student Employment Centre

The Faculty of Science offers Cooperative Education programs in Biology, Chemistry, Environmental Studies, Geology, Computing Science and Psychology. Cooperative Education is a dynamic approach to university education which integrates academic classroom studies with related practical work experiences in the major subject. The principle upon which this concept is based is that learning and individual development are greatly enhanced when the concepts studied in the classroom are periodically applied, tested and observed by the students in meaningful work situations. Through this program, participating industries have an excellent opportunity to observe and influence the education of bright enthusiastic students. They also benefit from the access gained to university faculty and expertise, while university faculty and students become aware of the concerns of industry and the technical problems which they face.

A “Cooperative Education” notation is entered on the parchments and academic transcripts of undergraduate students who successfully complete Cooperative Education requirements in addition to their regular degree requirements.

Admission Requirements for Undergraduate Cooperative Education Programs

- a. Application for admission to the program is normally after the first semester of Year 1. Final decision on admission to the program is made at the end of the second semester.
- b. Students should make application for admission to the Cooperative Education program on a special form obtainable from the Cooperative Education Office. Students will be admitted to the Cooperative Education program on the basis of their formal academic achievement and interviews with the Liaison Officer of the Co-operative Education Programs, and the appropriate departmental Co-operative Education Advisor.
- c. The normal prerequisite for admission to the Cooperative Education program in a regular Bachelor of Science program is a minimum cumulative grade point average of 2.50 and a minimum grade point average of 3.00 in the course(s) of the student’s declared major subject(s).
- d. Students will be admitted to the Cooperative Education program on the basis of their interest, aptitude and assessed ability to combine successfully the academic requirements of a major or honours science program together with the special work term requirements of the Cooperative Education program they wish to enter.

Requirements for Continuance in and Graduation from the Co-operative Education Program

- a. Students must complete all of the regular requirements for a Bachelor of Science degree (see regulations 1 through 14 above). Since individual programs may have specific additional requirements for Cooperative Education students, students should consult the appropriate departmental section of this Calendar for a description of these regulations.
- b. In addition to the above requirements, students must officially register for and complete a minimum of three work terms as specified by the department of their major program (see regulations below and departmental Cooperative Education regulations). Official registration is on the regular registration forms available from the Registrar’s Office.
- c. To continue in and graduate from the Cooperative Education program, students must earn a minimum program grade point average of 2.50 with a minimum grade point average of 3.00 in all courses in their major subject(s).

Policies and Regulations Governing Cooperative Education Work Terms

- a. The University will make every effort to locate work term positions for Cooperative Education students in

academically related areas of employment, but cannot guarantee placements. Employment settings may also be identified by Cooperative Education students, but require the approval of the Liaison Officer, Cooperative Education Programs, in consultation with the appropriate departmental Cooperative Education Advisor.

b. The satisfactory fulfillment of Cooperative Education work terms require:

- (i) the completion of a minimum of three terms of work experience in academically related paid employment situations of 13 to 16 weeks. Under certain circumstances, and with the approval of the appropriate department, students may be permitted to satisfy their work terms requirements in an unpaid position.
- (ii) a satisfactory employer evaluation for each Cooperative Education work term;
- (iii) the satisfactory completion of a written report submitted within 30 days after the end of each work term detailing the student's work experience in accordance with departmental standards and expectations.

c. A notation will be included on students' academic transcripts following satisfactory completion of each work term.

d. Graduating students who have successfully completed their Co-operative work term requirements will have this noted on their academic transcripts. If, in addition, all other normal academic requirements are fulfilled, a "Cooperative Education" notation will be printed on their parchments.

e. Students may be required to withdraw from the Cooperative Education program if:

- (i) they are dismissed from, quit or fail to accept an appropriate and approved Cooperative work term position;
- (ii) they fail to submit or successfully complete a work term report;
- (iii) they do not maintain the required grade point average necessary for continuance in the Cooperative Education program;
- (iv) in the judgment of their department, they are no longer suited for the particular requirements of the Cooperative Education program.

f. Students who voluntarily withdraw from or who are required to withdraw from the Cooperative Education program may remain enrolled in and continue with the major or honours degree program offered by their department.

g. Co-operative Education students will be expected to attend any special seminars or colloquia developed by the Cooperative Education Office which deals with employment orientation and the application of formal academic study to work experiences.

h. Since academic study during work terms is discouraged, registration in any courses during a work term requires the approval of the Dean of Science or appropriate departmental Cooperative Education Advisor. If approval is granted, no more than six (6) credit hours may be taken during a work term.

Fees for Cooperative Education

a. Students are required to register for all work terms at the Registrar's Office, according to normal registration procedures, including all stipulated deadlines. Work terms will be officially designated on students' transcripts as:

Work Term 1 = COP 1000

Work Term 2 = COP 2000

Work Term 3 = COP 3000

b. Students pay for their academic courses and work terms as they take them.

In general, the Cooperative Education program takes one year longer to complete than the corresponding traditional program, but the academic content of both is the same. Students may, with the permission of the Department, transfer from the Cooperative Education program to the non Cooperative Education program.

Information concerning the Faculty of Science's programs at the graduate level is found in the *Graduate Academic Calendar*

Diploma in Engineering

General Information

Saint Mary's University offers the first two years of an engineering degree program accredited by the Association of Professional Engineers of the Provinces through the Canadian Accreditation Board, which will assist students in developing the following qualities:

- a basic understanding of scientific principles
- a foundation in engineering mathematics
 - a competence in engineering design and technical communication
- creativity
- social understanding
- an appreciation for continued learning

Engineering studies at Saint Mary's University provides the first two years of the Bachelor of Engineering degree in association with Dalhousie University. Students follow a program for the discipline of their choice leading to a Diploma of Engineering, or a Bachelor of Science with Diploma in Engineering, upon completion of their courses at Saint Mary's.

Entrance Requirements

Nova Scotia Grade 12 (or equivalent) including the following five courses with an average of at least 65%:

1. English 12 academic
2. Pre-calculus Mathematics 12 academic
3. Physics 12 academic
4. Chemistry 12 academic
5. One other Grade 12 academic or an approved open course. For more information, please consult "Admissions" in Section 2 of this *Calendar*.

Requirements for the Diploma in Engineering

Year One:

MATH 1210	Introductory Calculus I
MATH 1211	Introductory Calculus II
CHEM 1210	General Chemistry I
CHEM 1213	General Chemistry II for Engineering
PHYS 1100	University Physics I
PHYS 1101	University Physics II
ENGL 1205	Intro to Literature (Humanities I)
EGNE 1203	Engineering Mechanics (Statics)
EGNE 1204	Computer Methods for Engineers
EGNE 1206	Engineering Design Graphics (Design I)
EGNE 1209	Engineering Economics
Humanities	Humanities/Soc. Science II

Note: To qualify for the Diploma in Engineering, a student is required to achieve a minimum grade point average of 2.0.

Year Two:

Students must declare their chosen discipline at the end of year one. The second year curriculum is specialized for each discipline. The seven choices are listed below, followed by a complete list of courses. Each course is followed by the numbers, one to seven, for each discipline that requires it.

1. Environmental Engineering
2. Biosystems Engineering
3. Chemical Engineering (Note that Saint Mary's does not provide all courses required)

4. Electrical Engineering
5. Civil Engineering
6. Industrial, Metallurgical & Mining Engineering
7. Mechanical Engineering

Courses		Disciplines
MATH 2301	Linear Algebra	All
MATH 2303	Differential Equations	All
MATH 2311	Intermediate Calculus II	3, 4, 5, 6
Hum./Soc.Sci. III	Free Elective	1, 2, 5, 6, 7
Hum./Soc.Sci. IV	Free Elective	7 only
BIOL 1201/1202	Principles of Biology	1 & 2
CHEM 2344	Organic Chemistry I	1, 2, 3
GEOL 1214	Introduction to Geology: Earth Materials	1
GEOL 1215	Introduction to Geology: Earth Process	1
EGNE 2301	Dynamics	2, 5, 6, 7
EGNE 2303	Fluid Mechanics	1, 2, 3, 5, 6, 7
EGNE 2304	Mechanics of Deformable Bodies	2, 5, 6, 7
EGNE 2305	Digital Logic Circuits	4 only
EGNE 2306	Thermodynamics	3, 4, 5, 6, 7
EGNE 2307	Design II	4 & 7
EGNE 2308	Electric Circuits	All
EGNE 2309	Probability and Statistics	All
EGNE 2310	Technical Communications	4, 5, 6
EGNE 2311	Circuit Analysis II	4 only
CSCI 2301	Data Structures and Numerical Methods	4 only

Notes:

(a) Chemical Engineering requires nine (9) credit hours, (Chemical Process Industries, Fundamentals of Chemical Engineering, and Fundamentals of Environmental Engineering) which are offered only at Dalhousie University but which may be taken by Saint Mary's students using a Letter of Permission procedure. See academic regulation 21 in Section 2 of this *Academic Calendar*.

(b) To qualify for the Diploma in Engineering, a student is required to achieve a minimum grade point average of 2.0.

(c) Humanities are defined as English (excluding ENGL 1205), History, Classics, Philosophy, Religious Studies, and Modern Languages (culture/literature). Credits for spoken language instruction do not qualify as Humanities Credits. Social Sciences are defined as Anthropology, Political Science, Psychology, and Sociology.

(d) Of the electives required, 6.0 credit hours must be in Humanities or Social Sciences.

Three Year Bachelor of Science (General) plus Diploma in Engineering

This program entails an extra year of thirty (30) credit hours as listed below:

- six (6) credit hours in Mathematics electives at the 3400-level or above.
- six (6) credit hours in Chemistry electives at 2300 level or above
- six (6) credit hours in Physics or Biology electives at 2300 level or above
- twelve (12) credit hours in Humanities or Social Sciences elective credits at 1200 level or above

Four Year Bachelor of Science with Major in Mathematics plus Diploma in Engineering

This program requires the student to complete the Engineering Diploma program for their particular discipline of choice, plus sufficient mathematics courses chosen in consultation with the Department of Mathematics to complete a major in Mathematics, plus sufficient electives to complete one hundred and twenty (120) credit hours consistent with the requirements for the Bachelor of Science degree. Students who anticipate taking this option are advised to substitute CSCI 1226 and 1227 or 1228 for ENGE 1204, and consult with the Department of Mathematics and Computing Science before registering for any 3000-level math course or EGNE 2309.

Note: It is also possible to arrange a four year program consisting of Diploma in Engineering and Bachelor of Science degree with other concentrations.

Entrance to Dalhousie

With a Saint Mary's University Diploma of Engineering and without additional examination students may enter Dalhousie University, and obtain the degree of Bachelor of Engineering on successful completion of the Dalhousie's portion of the Bachelor of Engineering Degree. This will normally require an additional two years of study, and students will normally be admitted to the discipline they have selected for the second year Diploma program. However, all Departments at Dalhousie are subject to a maximum number of annual admissions, and therefore available seats will be allotted on the basis of academic standing. Students with low academic standings may be offered alternative departments. Dalhousie will treat students from the Associated University programs in the same manner as students who entered the program as freshmen at Dalhousie University. Academic merit will be the only deciding factor on admission to disciplines.

Diploma in Forensic Sciences

Dr. Colleen Barber Program Coordinator

Forensic science encompasses the methodology and interpretation of data collected in the investigation of deaths, or other events, which could be criminal in nature. In Canada, police forces are regularly involved in forensic investigations, but there are others, e.g., medical personnel, dentists, biologists, criminologists and anthropologists, who are interested in, or can benefit from, training in forensic sciences.

This program is designed to give the student a strong grounding in the different science disciplines (e.g., biology, chemistry, and physics) that form the basis of the techniques used in forensic investigations. This science basis is provided through introductory and specialty courses offered from Departments in the Science Faculty. Students may broaden their knowledge by choosing from a list of complementary courses offered by Departments in the other Faculties (e.g., anthropology, sociology). Experts in forensic techniques will expose students to the application of this knowledge, primarily through the Application of Forensic Techniques course [FRSC 3300].

This Diploma program is housed in the Department of Biology where a Program Coordinator oversees the program.

Admission

Entry to this Diploma program is by permission of the Program Coordinator. To be admitted, students must be enrolled in a Saint Mary's University degree program in the Faculty of Arts, Commerce, or Science, have completed thirty (30) credit hours with a grade point average of at least 3.00 and declared a major. Application is made in writing, by **May 1** to the Program Coordinator and must include a brief statement describing reasons for choosing the program and any work-related experience or goals. Because of the significant interest in forensic science, the number of qualified students permitted entry to this Program may have to be limited. Those admitted to this Diploma program, are regarded as being in a dual academic program and are required, therefore, to follow the rules and regulations stipulated for this status. (**Reference Academic Regulation 24.**)

Students who hold an undergraduate degree are eligible for admission to the Diploma program alone provided they have a 3.00 GPA (or equivalent) from the home institution and are admitted to Saint Mary's University. Students may transfer up to half the required credit hours (30) from their previous degree provided the courses are equivalent to courses applicable to the diploma (Reference Academic Regulation 20). They must also achieve a minimum 3.00 GPA in the courses taken at Saint Mary's.

Police officers and mature students not having a degree, but with work-related experience in forensic science may also be admitted directly to this Diploma program without being admitted to a degree program.

Graduation

The requirement of a minimum degree grade point average of 3.00 applies to all students in this Diploma program.

Requirements for the Diploma in Forensic Sciences [sixty (60) credit hours]

1. Required courses [twenty-seven (27)]

*FRSC 2200 Basic Sciences for Forensics I
*FRSC 2201 Basic Sciences for Forensics II
BIOL 1201 Molecular and Cell Biology
BIOL 1202 Organismal and Ecological Biology
CHEM 1210 General Chemistry I, and
CHEM 1212 General Chemistry II for Life Sciences
*FRSC 3300 Application of Forensic Techniques
*BIOL 2307 Genetics
BIOL 4419 Molecular Biology

2. Group A – Science-intensive courses [twenty-one (21) to twenty-four (24) credit hours]

ANTH 3373 Fieldwork in Archaeology
ANTH 4464 Advanced Fieldwork in Archaeology
ANTH 3471 Forensic Skeletal Identification
ANTH 3472 Forensic Skeletal Analysis
*BIOL 2322 General Physiology I
*BIOL 2323 General Physiology II
BIOL 3327 Anatomy and Functional Morphology of Vertebrates
BIOL 2398 Introduction to Microbiology
BIOL 3426 Animal Tissues
*BIOL 2427 Introductory Entomology
CHEM 2332 Introductory Analytical Chemistry: Wet Methods

CHEM 2333 Introductory Analytical Chemistry: Instrumental Methods

CHEM 2344. Organic Chemistry I

CHEM 2345 Organic Chemistry II A, or

CHEM 2346 Organic Chemistry IIB

CHEM 3451 Introductory Biochemistry

PHYS 1000 Physics for Life Sciences I

PHYS 1001 Physics for Life Sciences II

3. Electives [nine (9) - twelve (12) credit hours], diploma students may qualify for up to six (6) credit hours based on prior training]

ANTH 3374 Archaeology Laboratory

ANTH 4465 Advanced Archaeology Laboratory

BIOL 2308 Biostatistics

BIOL 4408 Vertebrate Embryology

CRIM 2303 Crime and Society, entry to this course may be restricted

CRIM 2304 Canadian Criminal Justice System, entry to this course may be restricted

GEOG 2316. Map and Air Photo

GEOG 3386 Concepts in Geographical Information Systems (G.I.S.)

PSYC 1210 Mind and Brain

PSYC 1230 Memory

PSYC 3320 Psychology and Law

*PSYC 3355 Cognitive Psychology

*PSYC 1260 Personality: Normal and Abnormal

Note: students must satisfy all prerequisites for entry into these courses.

Courses marked * may be offered on-line. For more information contact the Division of Continuing Education.

Continuing Education

Betty MacDonald, Director

The Division of Continuing Education facilitates the administration of University programs for part-time and mature learners. This includes admission advising for mature and Open Studies (non-degree) students, credit courses at extension centres, and executive and professional development programs. As well, in cooperation with the Faculty of Science and the Department of Mathematics and Computing Science, the Division coordinates the Certificate in Mathematical Sciences for Education. The main office of the Division of Continuing Education is located on campus at 883 Robie Street, the white house directly south of the McNally Building. Executive and Professional Development programs are offered at the World Trade Centre, 8th Floor, 1800 Argyle Street and on the 4th floor of the Sobey Building on campus.

Mature Students

The staff of the Division of Continuing Education are available to assist mature students with both on and off campus programs and with application procedures for mature and **open studies** students. To receive an information package, or to book an appointment, call the Division of Continuing Education, 902-420-5492. For details of the Mature and Open Studies admissions procedures, consult Section 2 of this *Academic Calendar*.

Open Studies

Students who are interested in taking one or more courses at the University without being registered in an academic program may take up to 30 credit hours under Open Studies. Students who are subsequently admitted to an academic program may count the university credits they have earned under the program. Contact Continuing Education for further information.

Part-time Degree Programs

It may be possible to complete the Bachelor of Arts and the Bachelor of Commerce entirely through part-time, evening study. As well, it is possible to begin the Bachelor of Science program by part-time study. Each year the Division of Continuing Education publishes a schedule of web course as well as late afternoon and evening courses to assist part-time students in planning their programs. Part-time students are encouraged to seek academic counselling from the dean of their faculty, the chairperson of the department in which they are majoring, or their designated faculty advisor.

Extension Centre Courses

Each year Saint Mary's University offers degree credit courses in a number of off-campus extension centres. Courses are offered in a variety of settings: schools, libraries, office buildings, and cultural centres and in many locations, including Dartmouth and downtown Halifax. A

number of credit courses are now available over the internet using the World Wide Web. These courses allow part-time and mature learners to begin or continue their university studies without having to leave their community or place of work. For information on courses being offered during the academic year contact the Division of Continuing Education or check **out** our website.

Executive and Professional Development

Executive and Professional Development Programs are designed to promote and improve skills that benefit both individual career development and organizational and business success. We offer seminars that promote innovative management practices and contribute to successful operations. Seminars and Programs are offered in the following areas:

- Business Communications
- Supervisory
- Negotiation, Mediation and Conflict Resolution
- Sales and Customer Service
- Human Resource Management
- Project Management
- Business Management and Operations
- Leadership
- Accounting and Financial Management

For further information, please contact Saint Mary's University at the World Trade Centre, 902-420-5638 or visit our website: <http://epd.smu.ca>.

Management Development for Women

As an alternative to a business degree, this ten-month program, offered jointly by Mount Saint Vincent University and Saint Mary's University, gives participants a thorough grounding in management skills. Designed specifically for women in management, the program offers intensive classroom learning, in-depth assignments, self assessment, practice and feedback. For information please contact Saint Mary's University at the World Trade Centre, 902-420-5278 or check out our website: <http://epd.smu.ca>

Diploma in Management

This program provides experienced managers with the skills and knowledge necessary to ensure that their business goals and objectives are met and exceeded. The program consists of three one-week **sessions** plus a Directed Study. The courses can be taken in any order and must be completed within a one-year period.

The Diploma covers topics such as finance, marketing, human resources, leadership and strategic management. To help apply the concepts and techniques featured in the program, the Directed Study includes five hours of individual coaching. For further information, please contact Saint Mary's University at the World Trade Centre, 902-420-5638 or visit our website: <http://epd.smu.ca>

University Preparatory Courses

The Division of Continuing Education offers upgrading courses in writing skills and mathematics, calculus and foundation skills for university. Preparation and review courses are also offered for the General Management Admissions Test (GMAT) required for admission into the MBA program. For a descriptive course brochure please contact the Division of Continuing Education at 902-420-5492 or check out our website.

Elder Learners

Each fall and winter, the Division of Continuing Education offers a monthly lecture series for Elder Learners, an organization that promotes active learning for seniors. As well, general interest courses and study tours are offered. For more information call 420-5020 or check out our web site.

Information

Descriptive pamphlets and evening program schedules are available from

The Division of Continuing Education
Saint Mary's University
Halifax Nova Scotia B3H 3C3
Telephone: 902-420-5492
Fax: 902-420-5103
Web: conted.smu.ca

Executive and Professional Development program information is available at the
World Trade Centre
1800 Argyle Street, 8th Floor
Halifax Nova Scotia B3J 3N8
Telephone: 902-420-5638
Fax: 902-420-5284
Web: <http://epd.smu.ca>

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Study Abroad Opportunities

Saint Mary's University believes that exposure to other cultures in the national and international community is an important part of a university education. Graduates with international and cross-cultural experience will be well placed to participate in the global economy. Thus, Saint Mary's students are encouraged to take advantage of on-campus opportunities to gain such experience and to undertake a part of their study in another country or another part of Canada.

International programs may take the form of a field trip, a semester-long residence at another institution, or a volunteer work opportunity. Most programs are open to students from any academic program of study. Credits earned from these programs are applicable to the extent that they fulfill the requirements of each student's own degree program.

To make the most of these opportunities students are encouraged to:

- Begin with some of the many courses available at Saint Mary's which focus on global issues or which develop foreign language skills.
- Plan well in advance, to allow time for academic, logistical, financial, and travel arrangements.
- Investigate the options available. Each program is unique, and the range of opportunities for students is different each year. As a first step, students should consult the information available on the web pages for International Learning www.smu.ca/international/international-learning. This information provides guidance in choosing an international program, details the options which are made possible through agreements with university partners in other countries, and provides information about applying for funding support.
- Consult with a faculty advisor about how an international experience can be recognized for academic credit and what works best for a specific program of study.

General inquiries and requests for assistance can be addressed to the Project Manager for International Mobility at mobility.international@smu.ca

The list of Saint Mary's partner universities and opportunities for study abroad continues to grow. Opportunities for study abroad are made possible through agreements with institutions such as:

University of Western Sydney, Australia
 Xiamen University, People's Republic of China
 Université Catholique de l'ouest, France
 Constance University of Applied Sciences, Germany
 Hokkaido University of Education, Japan
 Kumamoto Guaken University, Japan
 Lappeenranta University of Technology, Finland
 Universidad La Salle, Mexico
 University of KwaZulu Natal, South Africa
 Sun Yat-sen University, Taiwan
 University of the Arctic ("virtual" study abroad through online courses)

Study abroad options for Saint Mary's students include:

- Field trips of one or two weeks
- Summer programs
- One or two semester programs

Through the AVP and SMUSA, Inc. International Mobility Awards the Vice President, Academic and Research, and SMUSA, Inc. provide modest amounts of funding to encourage participation by students who would not otherwise have such opportunities.

In addition, in January 2004, the University received a very generous donation from Richard Homburg to fund the Homburg International Mobility Awards. These awards were established to assist full-time and part-time Saint Mary's University undergraduate and graduate students from Atlantic Canada to participate in approved international study abroad programs or other international experiences which:

- form or contribute substantially to the student's program of study, with an overseas duration of one semester or more
- entail learning or improving knowledge of a language other than the student's primary language.

Details on these and other sources of funding for study abroad are available at www.smu.ca/international/international-learning

Pre-Professional Programs

Professional Schools

Students who intend to continue studies at professional schools, such as Theology, Law, Medicine, Architecture, Education, and Dentistry, should ensure that their plan of studies includes courses needed for admission to the appropriate professional schools. Calendars of professional schools may be consulted in the Library, but students should also seek information from the professional schools directly as admission requirements may change.

Though not strictly required by some professional schools, it is recommended that the student complete an undergraduate degree, usually with a major or honours program, before seeking admission to a professional school. Students taking a program as preparation for entrance to professional schools are urged from the beginning to place special emphasis on a high standard of performance. Prerequisite course requirements apply and students should ensure they meet the application deadline and complete tests, such as the MCAT in time to make the application deadline.

Pre-Medical

Students intending to study medicine should have a solid academic record (i.e., at least an A- average) for admission into medical school and, in the case of Dalhousie Medical School, take 15 credit hours per year for each of the two years prior to admission to medical school.

The following subjects are the normal minimum requirements of many Canadian medical schools: Biology, Chemistry, Physics and English, each of an academic year's duration. Students should extend their studies beyond the minimum requirements and include microbiology, physiology, etc., and biochemistry as well as a course in the humanities and social sciences in their program. In addition to the academic factors, medical schools also take into consideration other criteria such as the Medical College Admission Test, volunteer work, interviews, and factors such as emotional stability, social values, leadership, personal maturity, motivation, life experience, etc.

Dalhousie University requires applicants to hold a university degree. The student should write for information and consult the academic calendar of the university to which medical school admission is sought.

Pre-Dental

The preceding information is equally applicable to the Pre-Dental program. Students interested in complete information should write for information and consult the academic calendar of the university to which admission is sought.

Pre-Optometry

The University of Waterloo's School of Optometry accepts students from the Atlantic Provinces to its program of Optometry.

Applicants must complete at least one year of university study with courses in Chemistry, Physics, Biology, Mathematics and Psychology. Information and applications are obtainable from the University of Waterloo.

Pre-Veterinary

Applicants seeking admission to the Atlantic Veterinary College, Charlottetown, P.E.I., must have at least two years of university study, including mathematics, biology, chemistry, physics, and English, with at least a B+ average and complete the necessary volunteer work with a veterinarian. Students may also apply to Ontario Veterinary College and University of Guelph. The University of Saskatchewan also accepts competitive students into their Veterinary Medicine program. The University of British Columbia offers a two-year Pre-Veterinary program leading to a four-year Veterinary program at the University of Saskatchewan.

Prospective students should contact the veterinary college of their choice for specific information.

Pre-Occupational Therapy/Physiotherapy

Interested students should consult the School of Occupational Therapy/Physiotherapy, Dalhousie University, to determine acceptable prerequisite courses. Since enrolment in the program is limited, applicants should note that admission is on a competitive basis with preference given to residents of the Atlantic Provinces. Selection is based on completion of at least one year of university science courses, including Biology, Chemistry or Physics, Statistics, English, and Psychology. Application packages are available through the Registrar's Office, Dalhousie University.

Pre-Law

Students applying for admission to the Law School are required to submit results of the Law Schools Admission Test (LSAT) of the Educational Testing Service, Princeton, New Jersey. Information for taking this test at Canadian universities can be obtained from the Law School. Dalhousie University considers applications from students who have completed at least two full years' studies in a program leading to the degree of Bachelor of Arts, Bachelor of Science, or Bachelor of Commerce. Applications are considered as they are received or in the month of June.

Pre-Architecture/Environmental Design Studies

Saint Mary's University offers the first two years of study for students interested in pursuing a Bachelor of Environmental Design Studies. The following are the minimum academic requirements for admission to that program at Dalhousie University:

- two years (30 credit hours) of university study in any academic program with a minimum GPA of 2.5;
- one full-year class (or equivalent) in mathematics; Calculus is recommended, but a math-based class in Physics, Economics or Statistics also may be acceptable; and
- a portfolio of work (10-15 items) that demonstrates creative ability and/or artistic skill (for example, free-hand sketches, precision drawings, paintings, furniture, sculpture, craft objects, creative photography, construction projects, etc.). Photographs should be used for larger items. This may be fulfilled by taking a course in foundation drawing at the Nova Scotia College of Art and Design University.

Pre-Theological Courses

Students who are candidates for the Christian Ministry are in most cases required to obtain a Bachelor of Arts degree, or its equivalent, before proceeding to Theology. Normally the Bachelor of Arts degree will be followed by three years in Theology. Requirements may vary somewhat from one denomination to another, but generally speaking, students are advised to select a broad range of subjects from such departments as English, History, Philosophy, Classics, Psychology and Sociology, along with some course in

Religious Studies. A working knowledge of Greek is desirable for students entering Theology.

Pre-Education

Students intending to pursue a career in teaching must apply to enter a Bachelor of Education program after completing a Bachelor's degree in Arts, Science, or Commerce. Those persons who wish to teach at the secondary school level should undertake a program in the first Bachelor's degree that will develop sound academic preparation in a subject area normally taught at the secondary school level. Students wishing to teach at the elementary level should develop a program in the first Bachelor's degree which has a breadth of academic courses. Students who plan on applying to enter a Bachelor of Education program should determine the course requirements for the particular university where they plan to attend as well as the details of the requirements for teacher certification from the governing body of the geographical area in which they hope/intend to teach. See the Education entry in Section 5 for details on the articulation program with the University of Maine.

Student Counseling for Pre-Professional Programs

Because of the keen competition for admission to graduate and professional schools, students who are interested in applying to graduate or professional schools are urged to contact the Office of the Dean of Science for information on Health professions and the Dean of Arts for information on Education, Law and Theology.



**Programs and
Course Descriptions**

Section

4

Accounting (ACCT)

Chairperson, Associate Professor	B. Anderson
Professors	T. Cheng, B. Gorman, N. Young
Associate Professors	D. Bateman, P. Secord, X. Song
Assistant Professors	G. Ansong, L. Beaubien, K. Lightstone, J. Power, D. Rixon
Adjunct Professor	K. Mader
Professor Emeritus	R. Chesley, F. Dougherty

The Department of Accounting offers a program for accounting majors that will prepare students for careers in professional accounting, industry and government. The Department also offers courses in financial and managerial accounting and information systems for all Commerce students.

Joint SMBA-CMA Program

Saint Mary's University has an agreement with CMA Nova Scotia that will permit students to earn the Certified Management Accountant (CMA) designation and the Master of Business Administration degree concurrently. This program, unique in Canada, is designed for part-time students and normally requires 28 months to complete. For complete details, see *the Graduate Academic Calendar*.

Commerce graduates may receive exemption from many of the courses and examinations conducted by the Atlantic School of Chartered Accountancy, and various other institutes of chartered accountants, the Society of Management Accountants, the Institute of Internal Auditors, and the Certified General Accountants Association. The exemptions are based upon specific courses taken and the grades obtained in the undergraduate program. Details of these exemptions may be obtained from the Chairperson of the Department.

The Department also has an agreement with The Association of Chartered Certified Accountants (ACCA) by which all graduates of Saint Mary's Bachelor of Commerce degree program may gain exemption from virtually all of the Foundation and Certification stages of the ACCA program.

The Accounting Major

Upon completion of 45 credit hours, Commerce students with a cumulative grade point average of 2.0 may elect to declare a major in Accounting. (In exceptional circumstances, students can also be admitted to the major by permission of the Chairperson.)

To assist students, the Year 3 and Year 4 course requirements for an Accounting major and the core BComm degree program requirements are listed below. Course descriptions follow.

To complete a major in Accounting, students must attain a minimum grade point average of 2.2 in ACCT 2241, ACCT 2242, and the 3rd and 4th year ACCT courses (as indicated below by *).

Year 3

*ACCT 3323.1(.2) Management Information Systems
 *ACCT 3333.1(.2) Cost Management: Measurement Systems – See Note (i)
 *ACCT 3334.1(.2) Cost Management: Systems Evaluation
 *ACCT 3341.1(.2) Intermediate Financial Accounting I
 *ACCT 3342.1(.2) Intermediate Financial Accounting II
 *ACCT 3345.1(.2) Financial Accounting Theory
 FINA 2360.1(.2) Business Finance I
 FINA 3361.1(.2) Business Finance II
 MGMT 3480.1(.2) Ethical Responsibilities of Organizations
 Three (3) credit hours in free electives

Year 4

*ACCT 4455.1(.2) Financial Accounting Seminar
 or
 *ACCT 4470.1(.2) Management Accounting Seminar
 *Six (6) credit hours in Accounting electives - see Note (ii) below
 MGMT 4489.1(.2) Strategic Management
 Twelve (12) credit hours in non-Commerce electives
 Six (6) credit hours in free electives - see Note (iii) below

Notes:

- Students cannot receive credit for both ACCT 3332 and ACCT 3333.
- CISY 2324.1(.2), CISY 3326.1(.2), or CISY 4435.1(.2) as well as ACCT 3357.1(.2) or any 4000 level course in Accounting not used to fulfill other requirements may be used to satisfy this requirement.
- CMLW 3202.1(.2) is normally required by professional accounting associations.

Students with a grade of D and ACCT 2242.1(.2), ACCT 3341.1(.2) or ACCT 3342.1(.2) are advised against pursuing an Accounting major.

Course Descriptions

2241.1(.2) Introductory Financial Accounting

Prerequisite: Fifteen (15) credit hours, including MGMT 1281.1(.2) or appropriate work experience determined in advance by the Chairperson of the Department.

This course is concerned with a study of basic accounting concepts and principles, their application to business transactions and financial statements, and an understanding of the uses and limitations of the balance sheet, income statement, and statements of cash flow.

2242.1(.2) Introductory Managerial Accounting

Prerequisite: ACCT 2241.1(.2); ECON 1201.1(.2); and MGSC 1205.1(.2).

This course serves as an introduction to managerial uses of accounting data in the production of goods and the provision of services. Accounting concepts and principles will be studied from the perspective of managerial decision-making.

3323.1(.2) Management Information Systems

Prerequisite: ACCT 2242.1(.2).

The study of computer-based data processing and information systems, management problems of computers in business such as organization, control and feasibility.

3332.1(.2) Planning and Control

Prerequisite: ACCT 2242.1(.2) and CISY 1225.1(.2).

This course for non-accounting majors covers both the concepts and techniques of planning and control. Topics may include financial decision making, activity management, performance measurement and analysis, cost allocation, and management control systems. A major focus is the enhancement of teamwork, analytical, and other decision-making skills.

3333.1(.2) Cost Management: Measurement Systems

Prerequisite: ACCT 2242.1(.2) and MGSC 2207.1(.2).

The course focuses on topics related to the identification, classification, and evaluation of costs and various cost measurement systems (e.g., job order costing, process costing, activity-based costing, and cost estimation). This course is designed for majors in accounting.

Note: Students cannot receive credit for both ACCT 3332 and 3333.

3334.1(.2) Cost Management: Systems Evaluation

Prerequisite: ACCT 3333.1(.2); or ACCT 3332.1(.2) and written permission of the Chairperson of the Department of Accounting.

The course focuses on topics related to the evaluation of performance and business processes (e.g. cost variance analysis, revenue variance analysis, just-in-time inventory, computer-integrated manufacturing).

3341.1(.2) Intermediate Financial Accounting I

Prerequisite: ACCT 2242.1(.2) and CISY 1225.1(.2).

This course, together with ACCT 3342 provides a comprehensive study of financial accounting and financial reporting. This course is to be followed by Intermediate Financial Accounting - Part II.

Classes 3 hrs. and lab 75 min. a week.

3342.1(.2) Intermediate Financial Accounting II

Prerequisite: ACCT 3341.1(.2).

This course together with ACCT 3341 provides a comprehensive study of financial accounting and financial reporting.

Classes 3 hrs. and lab 75 min. a week.

3343.1(.2) Financial Accounting Analysis

Prerequisite: ACCT 2242.1(.2)

Financial Accounting Analysis is focused on the form and content of financial information disclosed by organizations to external parties together with the development of skills needed to analyze the information. The primary audience for this course is non accounting majors in their third or fourth year.

Note: Students cannot receive credit for this course if they already have credit for ACCT 3341 and 3342.

3345.1(.2) Financial Accounting Theory

Prerequisite: ACCT 3341.1(.2).

Study of objectives of financial accounting, major accounting theories, evolution of financial accounting theory and practice, survey of contemporary accounting practice with emphasis on latest developments and issues. This course should be taken concurrently with ACCT 3342 or after the completion of ACCT 3342.

3357.1(.2) International Accounting

Prerequisite: ACCT 2242.1(.2).

An introduction to accounting in the international environment, building on introductory financial (and to a lesser extent, managerial) accounting to provide the requisite background to understand accounting issues facing multinational firms. These include: foreign currency transactions, and translation of financial statements; inter-corporate investment, including consolidation of subsidiaries, both foreign and domestic; inflation and current value accounting; transfer pricing; as well as information systems and audits.

4423.1(.2) Accounting Information Systems and Control

Prerequisite: COMM 2293.1 (.2); ACCT 3323.1(.2); 3332.1(.2) or 3333.1(.2); and 3341.1(.2) or 3343.1(.2); also MGMT 2384.1(.2).

This course expands on the systems and control concepts introduced in ACCT 3323. Accounting transaction processing, the use of accounting information systems (AIS), and their design and construction are analyzed. Internal controls within AIS, evaluation techniques, and techniques for developing, documenting, and monitoring the effectiveness of AIS are investigated.

Classes 3 hrs. and lab 75 minutes a week.

4425.1(.2) Management Information Systems II

Prerequisite: ACCT 3323.1(.2) and COMM 2293.1 (.2).

This course is an introductory systems analysis and design course covering fundamental systems concepts; the systems development life cycle; and processes, tools and techniques for each stage in the life cycle, with emphasis on requirements analysis and design. Project management, proposal development and presentation and cost-benefit analysis techniques are also discussed. These concepts and skills are applied in a major practical case project.

4443.1(.2) Advanced Financial Accounting - Corporate Accounting

Prerequisite: COMM 2293.1 (.2) and ACCT 3342.1(.2).

This course covers long term investments in equity securities and international operations.

Classes 3 hrs. and lab 75 min. a week.

4444.1(.2) Advanced Financial Accounting - Special Topics

Prerequisite: COMM 2293.1 (.2); ACCT 3342.1(.2) and 3345.1(.2).

This course includes consideration of accounting standards of disclosure, accounting measurement and alternatives, entities in financial difficulties, financial instruments, and not-for-profit and public sector accounting issues.

4445.1(.2) Financial Statement Analysis

Prerequisite: COMM 2293.1 (.2); ACCT 3341.1(.2) or 3343.1(.2); and FINA 3361.1(.2).

This course will examine how accounting information can be used to evaluate a firm. The importance of economic conditions, accounting policy choice, and strategic management decisions for statement analysis will be considered. The course will also explore the usefulness and limitations of public disclosure for decision-making. Techniques for analysis and forecasting will be discussed as well as current research findings that impact on financial statement analysis.

4450.1(.2) Auditing

Prerequisite: ACCT 3342.1(.2) and COMM 2293.1 (.2).

A study of the basic concepts and theory of auditing including the auditing environment, the auditor's role, the structure of the profession, responsibilities of auditors, nature and theory of evidence, the auditor's report and other related topics.

4453.1(.2) Taxation - Part I

Prerequisite: COMM 2293.1 (.2) and ACCT 3342.1(.2) or FINA 3361.1(.2).

This course is the first of a two course sequence which introduces the student to the fundamental principles of taxation (the theory), the compliance aspects of the law (the practice), and the rationale for specific tax provisions (the policy). The course also examines the effect of taxation law on the investment decisions of individuals and corporations. Both personal and corporation income taxation are covered.

4454.1(.2) Taxation - Part II

Prerequisite: ACCT 4453.1(.2)

This course examines in greater depth the topics covered in ACCT 4453.1(.2), and introduces the student to the concept and principles of commodity taxation. Course assignments concentrate on the effect of tax law on personal and managerial decision making.

4455.1(.2) Financial Accounting Seminar

Prerequisite: COMM 2293.1 (.2); ACCT 3342.1(.2) and 3345.1(.2).

An intensive study of the problems of income determination, asset valuation and liability and equity measurements; a study of the conventional accounting model and the accounting theories that are proposed as a framework for the resolution of the problems in the conventional model.

4460.1(.2) Internal/Operational Auditing

Prerequisite: COMM 2293.1 (.2); ACCT 3332.1(.2) or 3333.1(.2); ACCT 3341.1(.2) or 3343.1(.2).

A study of the concepts and theory of internal/operational auditing including the internal/operational audit environment; the structure of the auditing profession; the duties, responsibilities and procedures of auditors; and the relationship between the internal/operational auditing function and the external audit.

4465.1(.2) Accounting for Financial Instruments

Prerequisites: ACCT 3342.1 (.2); COMM 2293.1 (.2); and FINA 3361.1 (.2).

The purpose of this course is to provide students with the background of, and accounting for, the most common financial instruments. Particular attention is paid to risk, internal controls, standard-setting in Canada, accounting for derivatives, fair value, and held funds.

4470.1(.2) Management Accounting Seminar

Prerequisite: ACCT 3334.1(.2) and COMM 2293.1 (.2).

This capstone course in the managerial accounting sequence provides an exposure to recent developments in the management accounting literature. The course introduces material relating to operations management, strategic planning, and management control systems. Integrating this material with knowledge gained in previous courses is a major purpose of the course. The course develops an understanding of the interactions between planning and control systems. These relationships deal with the three basic issues of management accounting: the choice of useful information, the problems in its measurement, and the behavioural consequences of using the data.

4475.1(.2) Business Consultancy

Prerequisite: COMM 2293.1 (.2); ACCT 3332.1(.2) or 3333.1(.2); ACCT 3341.1(.2) or 3343.1(.2), and permission of Chairperson of the Department.

This course allows students to gain hands-on business experience by working with clients of the Saint Mary's University Business Development Centre. Student groups receive a project proposal outlining the requirements, information needs and services they will provide the client during the semester. Projects generally take the form of a business plan, market study, or other business-related function and often involve financial projections. Each

project provides students an opportunity to use skills learned in business courses and to understand the interrelationship between marketing, accounting, finance, and management in a practical business setting. Under supervision, students prepare a professional report and final presentation that communicate the project's results for the client.

Work groups often include students from different business disciplines and are assigned based upon the needs of the project. Groups schedule their preferred meeting times but are required to meet a minimum of three hours each week. For more information see www.smu.ca/smubdc.

Internship. 1 semester.

4826.1(.2) – 4849.1(.2) Selected Topics in Accounting
Prerequisite: COMM 2293.1 (.2); ACCT 3332.1(.2) or 3333.1(.2); ACCT 3341.1(.2) or 3343.1(.2); and permission of chairperson.

This course deals with selected topics in accounting. The topics to be covered will vary depending on the interests of the instructor and are subject to departmental approval.

4876.1(.2) – 4899.1(.2) Directed Study
Prerequisite: COMM 2293.1 (.2) and permission of Chairperson of the Department and instructor.

This course provides an opportunity to study specific areas of accounting, auditing, taxation or information systems. A detailed course proposal must be submitted and will be evaluated on its educational merits. In-depth study of accounting concepts, systems, auditing, or taxation issues are intended to be within the scope of this course.

Anthropology (ANTH)

Chairperson, Professor	P. Erickson,
Professors	H. McGee
Associate Professors	A. O'Malley (cross-appt., IDST), S. Tulloch, S. Walter
Assistant Professors	C. Beaudoin-Lietz, J. Fowler, D. Grimes-MacLellan, T. Peckmann
Adjunct Professors	M. Daveluy, J. Dayle, H. MacLeod-Leslie, T. Sable, M. Zelenietz
Professor Emeritus	S. Davis

Departmental Policy

- To obtain a minor in Anthropology, students are required to have completed at least twenty-four (24) credit hours. Six (6) credit hours must be selected from among ANTH 1202.1(.2), 1271.1(.2), 1280.1(.2), or 1290.1(.2). Two of the remaining credits must be from courses at the 2000 level or above.
- To complete a double concentration in Anthropology, the requirement for the ninety (90) credit hour B.A., students are required to have completed at least twenty-four (24) credit hours in Anthropology. These must include the core program of ANTH 1202.1(.2), 1271.1(.2), 1280.1(.2) and 1290.1(.2). The remaining twelve (12) credit hours must be from courses at the 2000 level or above.
- To obtain a major in Anthropology, a student is required to have completed at least thirty-six (36) credit hours in Anthropology. These must include ANTH 1202.1(.2); 1271.1(.2); 1280.1(.2); and 1290.1(.2). The remaining credits must be at the 2000 level or above. The program of study for majors will be discussed with the student's departmental advisor who will be assigned at the time the major is declared.

4. To obtain an Honours in Anthropology, a student must first be admitted to the honours program and then graduate from the honours program.

a. To be admitted to the program, a student must satisfy pertinent Faculty of Arts requirements and secure an approved statement of a thesis topic (obtain form from the departmental secretary).

b. To graduate from the program, a student must satisfy pertinent Faculty of Arts requirements and complete the equivalent of sixty (60) credit hours in Anthropology including the following obligatory core: ANTH 1202.1(.2); 1271.1(.2); 1280.1(.2); 1290.1(.2); 4451.1(.2) OR 4452.1(.2); 4501.1(.2) and 4502.1(.2). In addition, students must complete, from the lists below, six (6) credit hours at the 2000-level or above in each of the four subfields of archaeological, biological, socio-cultural, and linguistic anthropology as well as three (3) credit hours in upper-level anthropological methods.

Archaeology Courses

2273 Who Owns the Past?
2379 Irish Material Culture
3371 Prehistory of Canada
3373 Fieldwork in Archaeology
3374 Archaeology Laboratory
3375 World Prehistory
3376 Archaeology of Death
3377 Urban Archaeology
4462 Method and Theory in Historical Archaeology
4463 Method and Theory in Pre-contact Archaeology
4464 Advanced Fieldwork in Archaeology
4465 Advanced Archaeology Laboratory
4466 Researching Halifax Heritage
4467 Cultural Resource Management (CRM) Archaeology

Biological Anthropology Courses

2282 Introduction to Forensic Anthropology
3381 Anthropological Genetics
3382 Paleoanthropology
3471 Forensic Skeletal Identification
3472 Forensic Skeletal Analysis
4473 Paleopathology
4474 Human Variation
4701 Internship in Forensic Anthropology

Socio-cultural Anthropology Courses

2301 Anthropology of Children and Childhood
2311 Ethnology: Melanesia
2316 Native Peoples of Canada
2317 Native Peoples of the United States and Mexico
2323 Traditional Culture of Micmac and Maliseet Peoples
2324 Contemporary Culture of Micmac and Maliseet Peoples
2326 Contemporary East Asia
2327 Japanese Society
2341 The Early Christian Church in Britain and Ireland
2401 Anthropology of Work
3301 Nature of Culture
3302 Social Organization
3303 Sex, Gender and Society
3304 Egalitarian Societies
3305 Chiefdoms
3306 Anthropology of Education
3309 Peasant Society and Culture
3316 Anthropology of Religion
3329 The Arctic Culture Area
3334 Warfare and Aggression: Anthropological Approaches to Human Conflict
3338 Medicine as Culture
3339 Medicine in Culture
3366 Worldview: Anthropological Approaches
3412 Explanation in Socio-Cultural Anthropology
4306 Foraging Adaptations
4365 Myth: Anthropological Approaches
4410 Methodology in Socio-cultural Anthropology
4411 Research Design in Socio-Cultural Anthropology
4412 Qualitative Data Analysis

Linguistic Anthropology Courses

2391 Linguistic Anthropology
2392 Language, Culture and Society
3395 Language Use and Issues in Northern Canada
3396 Language Use and Issues in Southern Canada
4491 Ethnography of Communication
4492 Anthropological Analysis of Linguistic Communities

Anthropological Methods Courses

The course used to satisfy the anthropological methods requirement cannot at the same time be used to satisfy the archaeological, biological, socio-cultural, or linguistic anthropology requirement.

2391 Linguistic Anthropology
3373 Fieldwork in Archaeology
3374 Archaeology Laboratory
3471 Forensic Skeletal Identification
3472 Forensic Skeletal Analysis
4411 Research Design in Socio-Cultural Anthropology
4412 Qualitative Data Analysis
4462 Method and Theory in Historical Archaeology

4463 Method and Theory in Pre-contact Archaeology
4464 Advanced Fieldwork in Archaeology
4465 Advanced Archaeology Laboratory
4466 Researching Halifax Heritage
4491 Ethnography of Communication
4492 Anthropological Analysis of Linguistic Communities
4701 Internship in Forensic Anthropology

c. To graduate from the program, students must also receive minimum grades of B (3.0) in ANTH 4501.1(.2) and 4502.1(.2).

5. The Department offers a prize for excellence in anthropological writing to major or honours students. The prize is named in honor of Prince John Loewenstein, the founder of the Department, and consists of a cash award and certificate of merit. Details for submission of essays may be obtained from the Chairperson of the Department.

Note: The prerequisite for a given course may have a prerequisite itself. It is important to keep this in mind when planning your academic career.

Course Descriptions**1202.1(.2) Introduction to Socio-Cultural Anthropology**

An introduction to the cultures and social systems of people from around the world. Topics include economics, politics, kinship, family and religion, as well as the expressive aspects of culture such as the arts, myth, and ritual.

1271.1(.2) Introduction to Archaeology

An introduction to archaeology and its contribution to an understanding of the development of culture. The course will investigate the history of the discipline and the development of techniques and principles used by archaeologists throughout the world.

1280.1(.2) Introduction to Biological Anthropology

A survey of human biological evolution. The principal topics are evolutionary theory, human genetics, the nature of race, living primates, and the fossil record of humanity.

1290.1(.2) Introduction to Human Communication

This course provides students with some of the basic concepts for understanding language as used by humans. Topics to be considered include, but are not limited to, the nature of language and communication, the organization of communicative behavior, and linguistic diversity. The emergence of ethno-linguistics as a sub discipline of anthropology is also discussed.

2273.1(.2) Who Owns the Past?

Prerequisite: one of ANTH 1202.1(.2), ANTH 1271.1(.2), ANTH 1280.1(.2), ANTH 2282.1(.2), ANTH 1290.1(.2)

Why preserve the past, and in what form? How has the past been used and abused for political purposes in different historical and cultural contexts? To what extent have administrative policies and ethnocentric attitudes towards indigenous peoples alienated indigenes from anthropologists? How do museums, collections, the restitution of cultural property and the illicit traffic in relics contribute to the situation?

2282.1(.2) Introduction to Forensic Anthropology

This course is an introduction to the multidisciplinary nature of forensic anthropology. It explores the myths and realities of the search for human remains in crime scenes, what should be expected from a forensic anthropology expert in the courtroom, some of the challenges in mass fatality incident responses, and what a student should consider if they want to pursue a career in forensic anthropology.

2301.1(.2) Anthropology of Children and Childhood

Prerequisite: ANTH 1202.1(.2), or consent of the instructor.

This course examines the nature of childhood in various societies with attention to the development and socialization of children from birth through adolescence. Primary emphasis will be given to a perspective that views children as active participants in their own worlds as well as the worlds of others. While focusing on the social and culture contexts of children's lives, we will explore topics that include parent-child relations, education, child labor, friendship, play, and the relationship of children to media technologies and consumer culture.

2311.1(.2) Ethnology: Melanesia

Selected societies and cultures of Papua New Guinea and adjacent island clusters are examined. Special attention is given to cultural diversity within this region. Specific topics covered include variation in the relationship between men and women, variation in leadership patterns, warfare and descent systems.

2316.1(.2) Native Peoples of Canada

Prerequisite: ANTH 1202.1(.2) or six (6) credit hours in HIST or a social science

This course provides a survey of the varied Native cultures of Canada. Some of the socio-cultural changes associated with contacts between indigenous peoples and Europeans are considered. Variation in roles assumed by men and women are also discussed.

2326.1(.2) Contemporary East Asia

Prerequisite: ANTH 1202.1(.2) or ASNT 3300.1(.2).

This course will consider East Asia as a region with shared cultural and historical legacies, while examining the radically diverse contemporary conditions of each country.

2327.1(.2) Japanese Society

Prerequisite: ANTH 1202.1(.2) or ASNT 3300.1(.2).

This course introduces Japanese society through a life course perspective. Topics include family, education, the work place, gender, class, ethnic minorities and contemporary social problems.

2391.1(.2) Linguistic Anthropology [LING 2391.1(.2)]

Prerequisite: ANTH 1290.1(.2) or three (3) credit hours in LING.

The study of the relationships between linguistics and anthropology through the understanding of the nature of language. Concepts and methods used by anthropologists to analyze linguistic data. Training in the manipulation of linguistic tools in the analysis of languages other than English.

2392.1(.2) Language, Culture and Society [LING 2392.1(.2)]

Prerequisite: three credit hours in either ANTH or LING

Survey of different approaches and concepts in linguistic anthropology (ethnoscience, ethnosemantics, ethnolinguistics). Exposure to main topics of interest in the field (the relationship between language, culture, and thought, for example). Characteristics of an anthropological perspective on language(s).

2401.1(.2) Anthropology of Work

Prerequisite: a social science course.

Anthropologies have long been interested in work as an aspect of economy (that is, how productive tasks get accomplished), as a determiner of general social structure (that is, a core institution), and as a theme in the ethos of various societies (that is, work as an ethic). As anthropologists turn their attention to industrial societies (and as other disciplines adopt ethno-geographic methods), the workplace itself is often treated as were small communities in the past. In this course, special attention will be given to methods of data collection in workplaces in complex societies. There will also be an examination of the application of these techniques by scholars, development agencies, commercial enterprises, and political movements.

3301.1(.2) Nature of Culture

Prerequisite: ANTH 1200.0, or SOC 1210.1(.2); or permission of instructor.

An introduction to the concept of culture as an essential aspect of human nature. Emphasis will be given to contemporary theories concerning society and culture.

3302.1(.2) Social Organization

Prerequisite: ANTH 1202

This course introduces the student to the basics of social structure and anti-structure. Emphasis is placed upon the importance of kinship, politics, economics, beliefs, and the arts for an understanding of human socio-cultural life.

3303.1(.2) Sex, Gender and Society [WMST 3303.1(.2)]

Prerequisite: ANTH 1202.1(.2), 1290.1(.2), or one (3) credit hour) social science credit.

This course introduces students to an anthropological perspective on the relationship between culture, biology, and social expectations of male and female behavior. Emphasis is given to examining how individuals and

societies imagine, negotiate, perform and contest dominant gender ideologies, roles, relations and identities.

3304.1(.2) Egalitarian Societies

Prerequisite: ANTH 1202.1(.2)

This course provides a survey of selected egalitarian societies including foragers, horticulturalists and pastoralists located in Africa, North and South America, Asia and Oceania. A number of theoretical issues are raised related to the cultural variations and similarities noted.

3305.1(.2) Chiefdoms

Prerequisite: ANTH 1202.1(.2)

Non-egalitarian societies (societies emphasizing inherited rank) are surveyed in this course. Consideration is given to explanations of cultural diversity and to theories of socio-cultural evolution.

3306.1(.2) Anthropology of Education

Prerequisite: ANTH 1202.1(.2), or consent of the instructor

This class will introduce students to issues and approaches relevant to the study of education within the field of anthropology. Emphasis is placed upon the exploration of education in its social, cultural and institutional contexts, with particular attention to the influence of cultures and subcultures on the learning process, and the role of educational institutions in community, regional or national development.

3309.1(.2) Peasant Society and Culture

Prerequisite: ANTH 1202

A number of substantive studies of peasant society and culture are examined. Examples are drawn from diverse regions including Mexico, India, China, Japan, Europe and Southeast Asia. Theories related to similar and contrasting features of peasant culture are considered.

3316.1 (.2) Anthropology of Religion [RELS 3316.1 (.2)]

Prerequisites: any one of ANTH 1202.1(.2), RELS 1210.1 (.2), 1211.1(.2), 1220.1(.2), 1221.1(.2), 1251.1(.2)

This course surveys major developments in the anthropological study of religions. The course will provide a solid theoretical foundation for the field study of contemporary religions.

3329.1(.2) The Arctic Culture Area

Prerequisite: six (6) credit hours in ANTH

This course focuses on the contemporary situation of people in the circumpolar regions of the world with an emphasis on northern Canada. Students are introduced to issues of modernity in the north, including environmental problems, health, culture, development, and power. Specific attention is paid to the evolution of political agreements and Aboriginal autonomy.

3334.1(.2) Warfare and Aggression: Anthropological Approaches to Human Conflict

Prerequisite: ANTH 1202.1(.2)

The course will examine the nature and structure of human conflict by evaluating anthropological theories of warfare and aggression in light of the case materials available on small-scale societies. In addition, particular attention will be devoted to: 1) the role of racism in human conflict, and 2) a critique of socio-biological theories of human aggression.

3338.1(.2) Medicine as Culture

Prerequisite: six (6) credit hours in social science.

This course examines medicine as culture. Because conceptions of health and illness differ around the world, questions of health and illness are complex issues. Light is shed on some of these complexities by exploring cross-cultural explanations of birth, disease, illness, and death; by tracing the rise of Western medicine; by investigating socio-cultural biases in treatment practices; by acquainting students with theoretical perspectives on health and illness; and by examining the body in medicine and culture.

3339.1(.2) Medicine in Culture

Prerequisite: six (6) credit hours in social science.

This course builds on ANTH 3338.1(.2) by investigating the organization and structures of medical systems, their relationships, their patients and healers, their technologies and their effects on and the responses of groups and individuals in cross-cultural contexts.

3366.1(.2) Worldview: Anthropological Approaches [RELS 3366.1(.2)/4466.1(.2)]

Prerequisite: ANTH 1202.1

This is an examination of anthropological theories pertaining to worldview (a people's perception of the world and how it works). While examples will be drawn from many societies, the course will concentrate upon the beliefs current in a single society.

3371.1(.2) Prehistory of Canada

Prerequisite: ANTH 1271.1(.2).

A survey of the development of prehistoric cultures in Canada. The course uses the archaeological record from the Arctic, sub-Arctic, far Northeast, Northern Plains and West Coast to examine cultural change.

3373.1(.2) Fieldwork in Archaeology

Prerequisite: ANTH 1271.1(.2)

This course offers detailed instruction with practical application of archaeological field techniques. This course is generally off-campus at an archaeological site. As such, the course is dependent upon external funds and has a limited enrollment. Please consult the Departmental Chairperson regarding availability.

3374.1.(2) Archaeology Laboratory

Prerequisite: ANTH 3373.1.(2)

The course offers training in the laboratory, analysis of materials recovered from an archaeological site. To maintain continuity of the learning experience, students must take ANTH 3373.1 (.2) in the same year this course is offered.

3375.1 (.2) World Prehistory

Prerequisite: ANTH 1271.1 (.2) or six (6) credit hours in a social science

This course investigates the earliest known tools and their associated activities. The development of technology is traced from the early stone age through the iron age in a world-wide setting.

3376.1.(2) Archaeology of Death

Prerequisite: ANTH 1271.1.(2).

This course will examine funerary customs within a global framework. Mortuary rituals afford not only insight into the death practices of past societies, they may also provide a basis from which to investigate a broad range of important social and anthropological questions, from social organizations, gender relations, and social inequality, to health and disease, diet, and biological affinity, to the ethical and legal aspects of exhumation and reburial of skeletal remains.

3377.1.(2) Urban Archaeology

Prerequisite: ANTH 1271.1.(2).

The development of the sub-discipline of urban archeology in eastern North America will be reviewed. Particular emphasis will be placed on the design and application of urban archeology management plans. Questions regarding the contribution of archeological methods, research and analysis to questions of urban archeological phenomenon will be addressed.

3381.1.(2) Anthropological Genetics

Prerequisite: ANTH 1280.1.(2).

A survey of human genetics, including Mendelian genetics, multifactorial genetics, cytogenetics, and population genetics, intended to enhance understanding of human biological variation.

3382.1.(2) Paleoanthropology

Prerequisite: ANTH 1280.1.(2).

A survey of primate and human evolution as revealed in the fossil record.

3395.1.(2) Language Use and Issues in Northern Canada [LING 3395.1.(2)]

Prerequisite: three (3) credit hours in either ANTH or LING

The main focus of the course is Inuktitut, the language spoken by the Inuit. The linguistic situations in Nunavut and Nunavik (northern Quebec) are compared. Topics

discussed include linguistic identity, language status, language maintenance and official languages of Canada. Although some exposure to Inuktitut is provided, this is not a language course.

3396.1.(2) Language Use and Issues in Southern Canada

Prerequisite: ANTH 1290 or three (3) credit hours in LING.

This course examines the two official languages of Canada, English and French, as well as Aboriginal and heritage languages. It will take a descriptive approach at the languages in Canada and their current status, as well as a critical look at the respective place of these languages in our society. Issues related to multilingualism at an individual and societal level are also examined.

3471.1.(2) Forensic Skeletal Identification

Prerequisite: 60 credit hours, including ANTH 2282.1.(.2)

A detailed examination of bones of the human skeleton for forensic purposes.

Note: It is recommended that students who complete ANTH 3471.1.(2) also complete ANTH 3472.1.(2).

3472.1.(2) Forensic Skeletal Analysis

Prerequisite: ANTH 3471.1.(2).

A detailed analysis of the human skeleton aimed at creating profiles of decedents and understanding circumstances surrounding their deaths.

3710.1.(2)—3719.1.(2) Field Study in Anthropology

Prerequisite: Twelve credit hours in Anthropology and permission of the instructor.

Students will deepen their understanding of a particular culture through first-hand interactions with people, places, and institutions. Students will travel to a particular field site (Japan, Arctic Canada, etc.) with a faculty member. On-site instruction will be provided. This course generally takes place between May and August and involves additional costs. Locations and foci will vary from year to year. Please consult Departmental Chairperson for availability.

3826.1.(2)-3849.1.(2)Special Topics/Seminars in Anthropology

Prerequisite: six (6) 2000-level university credits.

To be offered in response to expressed student desire for advanced instruction in anthropological topics not covered intensively in substantive course offerings; or to take advantage of expertise of visiting scholars. The format is usually that of a seminar.

3876.1.(2) - 3899.1.(2) Directed Independent Study in Anthropology

4306.1.(2) Foraging Adaptations

Prerequisite: ANTH 1202.1.(2).

Humans have spent more of the past as foragers than they have pursuing other subsistence strategies, and foraging has

supported a wide range of cultural traditions. This course provides a survey of selected foraging societies that have been described by ethnologists. Both egalitarian and non-egalitarian foragers are discussed, and examples are drawn from a wide range of environments and regions. Consideration is given to theories aimed at accounting for recurring cultural patterns as well as the diversity exhibited by foragers.

4365.1(.2) Myth: Anthropological Approaches

Prerequisite: any one of ANTH 1202.1(.2), ANTH 1290.1(.2), RELS 1210.1(2), RELS 1211.1(.2), or RELS 1201.0

The student will be exposed to a number of theoretical approaches employed by anthropologists in the study of myth. While examples may come from a number of societies, there will be a concentration upon the myth corpus of a single society.

4411.1(.2) Research Design in Socio-Cultural Anthropology

Prerequisite: ANTH 1202.1(.2) or SOCI 1210.1(.2)

This course introduces students to the design of socio-cultural research through examination of major philosophical, theoretical and ethical issues as well as hands-on experience with data collection techniques. Students are expected to conduct a sustained research project within the local community.

4412.1(.2) Qualitative Data Analysis

Prerequisite: ANTH 4411.1(.2)

This course examines strategies for the analysis of socio-cultural data in the form of textual and alternative formats. Emphasis is given to hands-on application of analytic techniques and interpretation of real data sets collected by the students. The course culminates in a final portfolio and presentation that articulates a well-defined intellectual issue.

4452.1(.2) Anthropological Theory After 1900

Prerequisite: ANTH 1202.1(.2), 1271.1(.2), 1280.1(.2), 1290.1(.2).

A history of anthropological theory in the twentieth and early twenty-first centuries.

4462.1(.2) Method and Theory in Historical Archaeology

Prerequisite: ANTH 1271

Concepts and methods of historical archeology, survey techniques, data collection, and laboratory analysis. Suggested for students who intend to take fieldwork courses in archeology.

4464.1(.2) Advanced Fieldwork in Archaeology

Prerequisite: ANTH 3373.1 (.2)

Students are expected to have knowledge of field techniques used in archaeology. They assist a senior

archaeologist in the excavation of an archaeological site, being responsible for all levels of recording. Please consult the Departmental Chairperson regarding availability.

4465.1(.2) Advanced Archaeology Laboratory

Prerequisite: ANTH 3374.1 (.2)

Students must have a knowledge of laboratory techniques used in archaeology. They use this knowledge to record, analyze, and report on archaeological specimens. This course may be twinned with ANTH 4464.1 (.2), should the site being excavated produce sufficient archaeological materials.

4466.1(.2) Researching Halifax Heritage

Prerequisite: ANTH 1271.1(.2).

An introduction to research techniques and resources, some off-campus, used to assess the historical and archaeological significance of properties in Halifax.

4467.1(.2) Cultural Resource Management (CRM) Archaeology

Prerequisite: ANTH 1271.1(.2) and 18 credit hours in 2000-level university courses, of which 9 credit hours must be Anthropology

Cultural Resource Management (CRM), as an applied form of archaeological research, is a rapidly expanding field of practice where many students and graduates of archaeological curricula develop their professional careers. Students will be introduced to its principles and learn about legislation, policy and protocols that impact CRM archaeology. Students will also be introduced to applications of geomatics technology, including geographic information systems (GIS), for CRM archaeology. Case studies will comprise a fundamental source of information in this course. The format is that of a seminar.

4473.1(.2) Palaeopathology

Prerequisite: ANTH 3471.1(.2), ANTH 3472.1(.2)

Palaeopathology is the study of diseases in past human populations. In this course you will learn how to diagnose simple bone pathologies, and in the process gain an understanding of bone physiology and pathology and how these processes work. The main part of the course will focus on the major categories of disease that affect the skeleton. We will also examine how certain diseases have affected human history.

4474.1(.2) Human Variation

Prerequisite: ANTH 3381.1(.2) and ANTH 3382.1(.2)

This class will introduce students to the history of the way people have viewed human variation, and will teach critical thinking skills necessary to analyze issues such as eugenics, The Bell Curve, racism, 'environmental racism', sexism, The Human Genome Project, and other difficult topics that affect our daily lives.

4491.1(.2) Ethnography of Communication**[LING 4491.1(.2)]**

Prerequisite: ANTH 1290.1(.2) or three credit hours in LING

Introduction to communication description as developed by Dell Hymes and John J. Gumperz. Observation and practical analysis (fieldwork) of communicative events in diverse situations. Cross-cultural comparison of communication activities.

4492.1(.2) Anthropological Analysis of Linguistic Communities [LING 4492.1(.2)]

Prerequisite: ANTH 1290.1(.2) or three (3) credit hours in LING.

Language as a criterion to delimit group boundaries. The relationships between cultural and linguistic norms. Comparative analysis of linguistic behavior. One case study or geographical area chosen at each offering of the course (either one language in different social contexts, or the interacting ethno-linguistic groups in one region).

4501.1(.2) Honours Thesis Research

Prerequisite: restricted to students who have been accepted by the department into the honours program.

The application of anthropological theory and methods to a well-defined area of study identified and communicated to the student's honours thesis committee prior to enrolment. Students will work closely with their principal advisors and two other committee members.

4502.1(.2) Honours Thesis Writing

Prerequisite: ANTH 4501.1(.2).

This course examines the communication of the results of anthropological inquiry to the scholarly community through the writing of an honours thesis essay. While students will work closely with their thesis committees, all faculty

members of the department will evaluate theses on the basis of content and style.

4701.0 Internship in Forensic Anthropology

Prerequisite: ANTH 3471.1(.2), ANTH 3472.1(.2)

This is a practical, hands-on course in forensic anthropology. Students will use their knowledge of forensic methodologies for the examination and identification of human remains as well as the writing of official 'police' reports through work in an official morgue.

4710.1(.2)—4719.1(.2) Advanced Field Study in Anthropology

Prerequisite: ANTH 3710—3719.1(.2).

Students will investigate and develop a response to a specific research questions in a particular field site (e.g. Japan, Arctic Canada, etc.), Students will travel to the field site with a faculty member. Students will apply anthropological theories and methods to complete a guided research project. This course generally takes place between May and August and involves additional costs. Locations and foci will vary from year to year. Please consult Departmental Chairperson for availability.

4826.1(.2)-4849.1(.2)Special Topics/Seminars in Anthropology

Prerequisite: six (6) 2000-level university credits.

To be offered in response to expressed student desire for advanced instruction in anthropological topics not covered intensively in substantive course offerings; or to take advantage of expertise of visiting scholars. The format is usually that of a seminar.

4850.0 – 4875.0; 4876.1(.2) - 4899.1(.2) Directed Independent Study in Anthropology

Arabic (ARBC)

Chairperson, Modern Languages and Classics
Associate Professor G. Nahrebecky

Courses in Arabic are offered by the Department of Modern Languages and Classics

1. Enrollment in some language courses involves the following formal placement procedures.

All students seeking entry into language courses who have not previously taken a language course at Saint Mary's University must complete and return the Language Profile Form to the Department of Modern Languages and Classics.

Based on the information provided in the Language Profile Form, students may receive notification from the Department to appear for an oral interview and/or a written placement test at a designated time.

The Department of Modern Languages determines the appropriate course placement for each student

- (i) Permission to register or remain in a particular language course can be refused if the Department judges that the student's knowledge exceeds the level for that course.
- (ii) Native speakers are not eligible to receive advanced credit for language courses.

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(iii) Completion of Advanced Standing (transfer) courses does not exempt a student from taking the placement test.

2. In order to ensure the academic integrity in language courses, especially at the lower levels of instruction, the Department of Modern Languages and Classics does not allow native or near-native speakers of a particular target language to enroll in courses at the 2000 level or lower.

Students who misrepresent their knowledge of any given language by providing inaccurate or incomplete information about their linguistic educational history will be subject to disciplinary action as laid out in Academic Regulation 19.

3. The Department of Modern Languages and Classics supports a policy of regular class attendance by students. Frequent, unexplained absences from class will result in a lowering of the final grade in a manner to be determined by each faculty member.

Asian Studies (ASNT)

Program Coordinator B. Sewell, History
Assistant Professors A. Avdulov, Modern Languages
C. Beaupré, Modern Languages

The Asian Studies degree program at Saint Mary's University has been in operation for over thirty years. In that time frame, the Arts and Commerce faculties have played a vital part in helping Saint Mary's students understand Canada's changing role in a global society and especially in defining its relationship with Asia. An informed knowledge of Asian languages and cultures is an essential component to this program and every effort is made to assist students of the program to travel to Asia and experience this vast continent themselves. Students are also encouraged to consider pursuing a double major in Asian Studies and a related discipline.

An academic background in Asian Studies will help to prepare students for careers in the diplomatic service, in international trade and industry and in the secondary and university teaching fields.

Saint Mary's University is the only institution in the Atlantic Provinces offering a comprehensive degree-granting program in Asian Studies. In addition to the programs of study described here, your attention is directed to the descriptions of the Certificate of Chinese Studies and the Certificate of Japanese Studies found in Section 5 of this *Calendar*.

Facility in an Asian language is central to the program and students are encouraged to consider participating in one or more of our cultural exchange programs overseas.

Regulations for Majors

To major in Asian Studies, students must complete forty-two (42) credit hours within the following constraints:

Course Descriptions

1100.0 Introduction to Arabic

An introductory language course for those beginning the study of Arabic language and culture. This course is designed to offer an initial competency in Arabic, and is not offered to those with an Arabic-speaking background.

2200.0 Intermediate Arabic

Prerequisite: ARBC 1100.0.

This course is intended as a continuation of Arabic 1100 for non-Arabic speaking students. It is designed to offer better competency in speaking, reading, and writing Arabic.

- a. twelve (12) consecutive Asian language credit hours (Introductory and Intermediate).
- b. six (6) credit hours in the following: HIST 1222.1(.2); HIST 1223.1(.2); RELS 1220.1(.2) or RELS 1221.1(.2).
- c. ASNT 3300.1(.2) and ASNT 4400.1(.2).
- d. eighteen (18) additional core credit hours from at least two different disciplines other than languages. The list of core courses is given below.
- e. Twenty-four (24) credit hours at the 2000 level or above.

Basic Arts Requirements

Students may find it useful to note that the following introductory courses available for credit towards degrees in Asian Studies also fulfill Basic Arts requirements:

Requirement 3b

ARBC 1100.0	Introductory Arabic
JPNS 1100.0	Introductory Japanese
CHNS 1100.0	Introductory Modern Chinese

Requirement 3c

ASNT 1105.1(.2)	Introduction to Chinese Culture
ASNT 1106.1(.2)	Introduction to Japanese Culture
HIST 1208.1(.2)	Global History: 1450 to the Present
HIST 1222.1(.2)	History of Asia: East Asia
HIST 1223.1(.2)	History of Asia: South and Southeast Asia
RELS 1220.1(.2)	Introduction to Comparative Religion I
RELS 1221.1(.2)	Introduction to Comparative Religion II

Requirement 3d

Six (6) credit hours from:

- ANTH 1202.1(.2) Introduction to Ethnology and Social Anthropology
 ANTH 1280.1(.2) Introduction to Biological Anthropology
 ANTH 1290.1(.2) Introduction to Human Communication
 ECON 1201.1(.2) Principles of Economics: Micro
 ECON 1202.1(.2) Principles of Economics: Macro
 GEOG 1203.1(.2) Physical Geography: Global Patterns
 GEOG 1204.1(.2) Demographics and Culture
 GEOG 1213.1(.2) Physical Geography: Local and Regional Patterns
 GEOG 2214.1(.2) Environment and Livelihood
 POLI 1200.0 Introductory Political Science
 SOCI 1210.1(.2) Introductory Sociology
 SOCI 1212.1(.2) Understanding Society

Regulations for Honours

1. Admission to and continuance in the honours program in Asian Studies follows the general regulations of the Faculty of Arts.
2. To obtain an honours or double honours program in Asian Studies, students must complete at least sixty (60) credit hours and satisfy the following requirements:
 - a. all of the requirements of the major listed above.
 - b. six (6) additional Asian language credit hours;
 - c. six (6) additional credit hours from Anthropology, Economics, Geography, Political Science, or Sociology in classes recognized by the Coordinator as relevant for Asian Studies;
 - d. an honours thesis (ASNT 4500.0), prepared during the final year of study in the program. The topic must be approved by the Asian Studies Committee and the thesis will be supervised and graded by three faculty members chosen by the Asian Studies Committee;
 - e. annual approval of their program of study by the Coordinator of the Asian Studies Committee.

Regulations for Minors

Students majoring in another academic discipline may obtain a minor in Asian Studies by completing the equivalent of twenty-four (24) credit hours approved for the program:

- (a) ARBC 1100.0; CHNS 1100.0; or JPNS 1100.0;
- (b) ASNT 3300.1(.2) and ASNT 4400.1(.2); and
- (c) twelve (12) credit hours from the Asian Studies Core Courses (below).

Minor in Chinese Studies

Students in the undergraduate Arts program who are not Asian Studies majors can complete a minor in Chinese Studies by completing the following courses: CHNS 1100.0; ASNT 3300.1(.2) and 4400.1(.2); and twelve (12) other credit hours on China in at least two different disciplines taken from the following list:

ANTH 2326.1(.2); ASNT 1105.1(.2), ASNT 2305.1(.2); ASNT 3310.1(.2); CHNS 2200.0; HIST 1222.1(.2); HIST 2372.1(.2); HIST 2381.1(.2); HIST 4511.0; RELS 2327.1(.2); RELS 2345.1(.2); RELS 3359.1(.2); RELS 3360.1(.2).

Transfer credits from other academic institutions may be recognized.

Minor in Japanese Studies

Students in the undergraduate Arts program who are not Asian Studies majors can complete a minor in Japanese Studies by completing the following courses: JPNS 1100.0; ASNT 3300.1(.2) and 4400.1(.2) and twelve (12) other credit hours on Japan in at least two different disciplines taken from the following list:

ANTH 2326.1(.2); ANTH 2327.1(.2); ASNT 1106.1(.2), ASNT 2303.1(.2); ASNT 3302.1(.2); ASNT 4410.1(.2); GEOG 3360.1(.2); HIST 1222.1(.2); HIST 2354.1(.2); HIST 2368.1(.2); HIST 4511.0; JPNS 2200.0; RELS 2327.1(.2); RELS 2340.1(.2).

Transfer credits from other academic institutions may be recognized.

Certificate Programs

Information concerning the requirements for the Certificate of Chinese Studies Program and the Certificate of Japanese Studies Program are found in Section 5 of this *Calendar* under Chinese and Japanese.

Regulation for Concentrations

To obtain concentrations in Asian Studies, Chinese Studies, or Japanese Studies in partial fulfillment of the B.A. General Degree (Double Arts Concentrations), a minimum of twenty-four (24) credit hours in one of these three subject areas is required; also a minimum grade point average of 2.00. Further details are available from the Coordinator.

Dual Degree Program

Since it is possible to obtain two undergraduate degrees from Saint Mary's University, for Commerce students it may be attractive to combine a degree in their field with a major in Asian Studies, especially in light of the interest which the Canadian federal and provincial governments and private industries have in developing trade with the Pacific Rim countries. It is relatively easy to combine Commerce and Asian Studies if Commerce students select their non-commerce and free electives carefully. The second degree can be obtained in a year or less in addition to the normal time requirement for a Commerce degree. For more information please contact the Dean of Arts, the Dean of the Sobey School of Business, or the Coordinator of Asian Studies, and also consult the material at the conclusion of the Faculty of Arts entry in Section 3 of this *Calendar*.

Asian Studies Core Courses

Note: With the Coordinator's permission, relevant courses not listed below may be acceptable for credit towards the Major or Minor in Asian, Chinese or Japanese Studies.

Anthropology (ANTH)

- 2326.1(.2) Ethnology: East Asia
- 2327.1(.2) Ethnology: Japan

Asian Studies (ASNT)

- 1105.1(.2) Introduction to Chinese Culture
- 1106.1(.2) Introduction to Japanese Culture
- 2303.1(.2) Contemporary Japan: Institutions and Culture
- 2305.1(.2) Contemporary China: Institutions and Culture
- 3300.1(.2) Multidisciplinary Study of Asia
- 3302.1(.2) Japan in Film and Literature
- 3310.1(.2) Chinese Film and Literature
- 3407.0 Study Abroad: Japan
- 3408.0 Study Abroad: China
- 3826.1(.2)-3849.1(.2) Selected Topics in Asian Studies
- 4400.1(.2) Seminar in Asian Studies
- 4410.1(.2) Special Topics on Japan
- 4500.0 Honours Thesis
- 4826.1(.2)-4849.1(.2) Selected Topics in Asian Studies
- 4876.1(.2)-4899.1(.2) Directed Study

Geography (GEOG)

- 3360.1(.2) Geography of Japan

History (HIST)

- 1222.1(.2) History of Asia: East Asia
- 1223.1(.2) History of Asia: South and Southeast Asia
- 2354.1(.2) Japan before 1800
- 2358.1(.2) Mughal to Modern India
- 2363.1(.2) Asian Crossroads: Southeast Asia 1500-1900
- 2364.1(.2) Modern Southeast Asia
- 2368.1(.2) Japan since 1800
- 2372.1(.2) China since 1800
- 2381.1 (.2) China before 1800
- 2394.1(.2) The Emergence of Modern Korea
- 4511.0 Seminar in East Asian History

Modern Languages and Classics – Arabic (ARBC)

- 1100.0 Introduction to Arabic
- 2200.0 Intermediate Arabic

Modern Languages and Classics – Chinese (CHNS)

- 1100.0 Introductory Modern Chinese
- 2200.0 Intermediate Modern Chinese
- 3300.1(.2) Advanced Chinese I
- 3301.1(.2) Advanced Chinese II

Modern Languages and Classics – Japanese (JPNS)

- 1100.0 Introductory Japanese
- 2200.0 Intermediate Japanese
- 3300.1(.2) Advanced Japanese I
- 3301.1(.2) Advanced Japanese II

Religious Studies (RELS)

- 1220.1(.2)/1221.1(.2) Introduction to Comparative Religion I & II
- 2323.1(.2) The Islamic Religious Tradition
- 2326.1(.2) The Hindu Religious Tradition

- 2327.1(.2) The Buddhist Religious Tradition
- 2340.1(.2) Japanese Religious Tradition
- 3341.1(.2) Violence and Non-Violence: East and West
- 2345.1(.2) Chinese Religious Traditions
- 2380.1(.2) Vietnamese Religious Traditions
- 3337.1(.2) Religions and Art: The East
- 3351.1(.2) Field Research on Religions
- 3358.1(.2) Religious Diversity in Canada
- 3359.1(.2) The Buddhist Path: Ritual, Meditation and Wisdom
- 3360.1(.2) Engaged Buddhism
- 3370.1(.2) Introduction to the Qur'an
- 3371.1(.2) Life of Muhammad
- 3372.1(.2) Islamic Cultures and Civilizations
- 4300.1(.2) Gender and Asian Religious Traditions
- 4387.1(.2) Religious Pluralism

Sociology (SOCI)

- 4447.1(.2) Work and the Empowerment of Women in India

Asian Studies Course Descriptions**1105.1(.2) Introduction to Chinese Culture**

This course surveys aspects of Chinese culture in their historical and social contexts. Topics will be selected by the instructor but may include folklore, literature, language and material culture. No previous study of China or the Chinese language is required.

1106.1(.2) Introduction to Japanese Culture

This course surveys aspects of Japanese culture in their historical and social contexts. Topics will be selected by the instructor but may include folklore, literature, language and material culture. No previous study of Japan or the Japanese language is required.

2303.1(.2) Contemporary Japan: Institutions and Culture

This course will introduce modern Japan, accentuating the institutions of family, school, and workplace. Emphasis will be placed on values, social participation, and the individual's position within the context of contemporary Japanese society. No knowledge of the Japanese language is required.

2305.1(.2) Contemporary China: Institutions and Culture

This course will introduce modern China, accentuating the institutions of family, school, and workplace. Emphasis will be placed on values, socio-cultural practices, and the individual's position within contemporary Chinese society. No knowledge of the Chinese language is required.

3300.1(.2) Multidisciplinary Study of Asia

This half course will introduce students to the study of Asia from a multidisciplinary perspective. Using various disciplines in the humanities, social science and commerce fields, students will review how various disciplines intersect to create a fuller understanding of Asia.

3302.1(.2) Japan in Film and Literature

This course will explore the cultural representation of traditional and modern Japanese culture through film and literature. Focus will be on major works of Japanese literature, ranging from pre-modern poetry to modern fiction, as well as their cinematic adaptations. All selected works of literature are in English translation. No knowledge of the Japanese language is required.

3310.1(.2) Chinese Film and Literature

This course will explore the rich Chinese culture through representative major works of modern literature, as well as new film and contemporary art in China and Taiwan. Major themes to be considered include the family, the changing role of women, Western influences, modernization, and national identity. All selected works of literature are in English translation. No knowledge of the Chinese language is required.

3407.0 Study Abroad: Japan

Prerequisite: JPNS 1100.0.

This course is available to all students who participate in Saint Mary's University's study abroad program in Japanese. Evaluation will be based on short-term cultural courses held in Japan and a written assignment to be submitted to the Asian Studies Coordinator upon completion of the overseas study.

3408.0 Study Abroad: China

Prerequisite: CHNS 1100.0.

This course is available to all students who participate in Saint Mary's University's study abroad program in China. Evaluation will be based on short-term cultural courses held in China and a written assignment to be submitted to the Asian Studies Coordinator upon completion of the overseas study.

3800.0 - 3825.0; 3826.1(.2) – 3849.1(.2) Selected Topics in Asian Studies

The subject matter of these courses will be announced from time to time. They will cover various aspects of Asian Studies and will be multi-disciplinary in nature. The topics to be examined will be determined by the instructor and/or Department.

4400.1(.2) Seminar in Asian Studies

Prerequisite: ASNT 3300.1(.2) and twelve (12) core credit hours in Asian Studies.

This half course will provide an opportunity for Asian Studies students to integrate their knowledge of Asia in a multidisciplinary fashion. This course may include case studies, specific area studies and comparative approaches to regions in Asia. Both students and faculty involved in the Asian Studies program will participate in this course.

4410.1(.2) Special Topics on Japan

Prerequisite: six (6) Asian Studies credit hours or permission of instructor.

Special Topics on Japan is a seminar to be taught by a Japanese specialist invited to Saint Mary's University.

4500.0 Honours Thesis

Prerequisite: admission to final year of the honours program.

Asian Studies students are required to submit and defend a thesis to be selected and prepared in conjunction with a faculty advisor.

4800.0 - 4825.0; 4826.1(.2) – 4849.1(.2) Selected Topics in Asian Studies

The subject matter of these courses will be announced from time to time. They will cover various aspects of Asian Studies and will be multi-disciplinary in nature. The topics to be examined will be determined by the instructor and/or Department.

4876.1(.2)-4899.1(.2) Directed Study

Prerequisite: permission of ASNT Coordinator and instructor.

Intended to supplement or provide an alternative to the regular courses in Asian Studies in order to meet the special needs and interests of students, the course provides an opportunity to study a particular subject in detail and requires from the student some measure of independence and initiative.

Astronomy (ASTR) and Astrophysics

Astronomy courses are offered by the Department of Astronomy and Physics (<http://www.ap.smu.ca>).

Chairperson	I. Short
Observatory Director	D. Turner
ICA Director	R. Deupree
Undergraduate Co-ordinator	A. Sarty
Graduate Co-ordinator	D. Guenther
Professors	D. Clarke, R. Deupree, D. Guenther, A. Sarty, D. Turner,
Associate Professor	I. Short, R. Thacker
Assistant Professors	R. Austin, L. Gallo, R. Kanungo, M. Sawicki
Adjunct Professors	K. Balaji, P. Bennett, P. Noerdlinger
Professors Emeriti	W. Lonc, G. Mitchell, G. Welch

Note: This segment lists undergraduate courses in astronomy and programs in astrophysics only. Course and program descriptions for physics may be found in the Physics (PHYS) segment of Section 5 in this *Calendar* while graduate course descriptions and programs in astronomy may be found in the *Graduate Academic Calendar*.

History

Astronomy is an ancient science, with some of its first practitioners among the Minoans, Aztecs, Egyptians, and early Chinese. Throughout its long history, the discipline has gone through many revolutions having benefited from some of the greatest minds who ever lived: Aristotle, Copernicus, Galileo, Newton, and Einstein. In the late 1800's, George Hale proclaimed astrophysics-the joining of traditional astronomical techniques with the mathematical rigour of physics-as "the new astronomy for the twentieth century" and, within a generation, few astronomers could complete their training without a full background in physics. Today, astronomers design highly engineered observatories and detectors, are cognizant of chemistry and biochemistry as more and more complex molecules such as amino acids are detected in the cosmos, and must be competent mathematicians, physicists, and computer scientists to understand and interpret what is being observed. Of all pure scientists, astrophysicists are among the best qualified to pursue a wide variety of careers in both science and education.

Formal introductory courses in Astronomy were introduced to the Saint Mary's curriculum by Father Michael J. Burke-Gaffney S.J. in 1957. Fifteen years later, Burke-Gaffney convinced the University to build a small observatory on the roof of the 23-story Loyola residence to be used for both class activities and public tours. In recognition of Burke-Gaffney's seminal role in establishing Saint Mary's as the regional centre for astronomy, the observatory was named in his honour.

Between 1971 and 1974, three astronomers joined the Department of Physics who, in 1974, formed a separate department and began offering an M.Sc. in Astronomy. This was the University's first Master's program in science as well as the first Astronomy program in the region. In 1989 and in cooperation with the Department of Physics, the Department of Astronomy began offering undergraduate programs in astrophysics to complement the M.Sc. in Astronomy and the B.Sc. in physics.

In 1993, the independent Departments of Physics and Astronomy were combined into a single department with eight faculty members and three staff. Given the University's status as the only institution in Atlantic Canada to offer full programs in Astronomy at either the undergraduate or graduate levels, the new department was called the Department of Astronomy and Physics. Building upon this strength, Saint Mary's made the strategic decision to allocate two of its six Canada Research Chairs to Astronomy and the Department used this opportunity to found the Institute for Computational Astrophysics (ICA) in 2001. With the addition of an NSERC University Research Fellow, the Department now has eleven full-time faculty and three faculty emeriti bringing more than \$350,000 annually to the University in external research funds.

In 2002, approval was granted to the University to offer a Ph.D. program in Astronomy, making it the first science Ph.D. program offered in Nova Scotia outside Dalhousie. With its emphasis on research as well as teaching, its status of offering the only full complement of university astronomy degrees east of Toronto, and its small, intimate, urban setting in one of the most charming cities on the continent, Saint Mary's University is truly a unique place to study astronomy and astrophysics at any level.

Degree Programs in Astrophysics

Because all modern-day astronomers are also physicists, no undergraduate degree in astronomy alone is offered. Instead, the Department offers two programs in *astrophysics*. The astrophysics major program is designed for those who want a solid foundation in modern physics and astronomy, but who are not necessarily planning to continue their education beyond the B.Sc. The astrophysics honours program is designed for those who intend to continue on to graduate school, and involves the preparation of an honours thesis (PHYS 4790) under the supervision of a faculty advisor in their fourth year. As listed below, these two programs are identical through the second year meaning students need not commit to the honours program until the third year of study. Note also, as listed, these programs conform to the requirements of the Science faculty as outlined in Section 3.

Note: The astrophysics programs demands a minimum grade of C in all physics and astronomy courses required for the degree. The program of study must be approved by the chairperson or the undergraduate coordinator. For

undergraduate courses and programs in physics, please refer to the Physics (PHYS) segment listed in Section 5 of this *Calendar*.

Astrophysics Major/Honours

Year 1

1. ASTR 1100.1(.2) and 1101.1(.2)
2. PHYS 1100.1(.2) and 1101.1(.2)
3. ENGL 1205.1(.2) and PHYS 1500.1(.2)
4. MATH 1210.1(.2) and 1211.1(.2)
5. six (6) credit hours in science electives [CHEM 1210.1(.2)/1211.1(.2) recommended]

Year 2

1. ASTR 2100.1(.2) and 2400.1(.2)
2. PHYS 2200.1(.2) and 2400.1(.2)
3. PHYS 2300.1(.2) and 2301.1(.2)
4. MATH 2310.1(.2) and 2311.1(.2) [six (6) credit hours in science electives]
5. three (3) credit hours in science electives [CSCI 1226.1(.2) recommended]; and three (3) credit hours in humanities

Year 3 (Major)

1. either ASTR 3400.1(.2) or 3500.1(.2); and three (3) credit hours in electives
2. PHYS 3200.1(.2) and 3201.1(.2)
3. PHYS 3300.1(.2) and either PHYS 3350.1(.2) or 3400.1(.2)
4. PHYS 3500.1(.2); and three (3) credit hours in electives
5. six (6) credit hours in arts/ECON electives

Year 3 (Honours)

1. either ASTR 3400.1(.2) or 3500.1(.2); and PHYS 3600.1(.2)
2. PHYS 3200.1(.2) and 3201.1(.2)
3. PHYS 3300.1(.2) and 3210.1(.2)
4. PHYS 3500.1(.2) and either PHYS 3350.1(.2) or 3400.1(.2)
5. six (6) credit hours in arts/ECON electives

Year 4 (Major)

1. either ASTR 3400.1(.2) or 3500.1(.2); and three (3) credit hours in science electives
2. PHYS 4500.1(.2) and either PHYS 3350.1(.2) or 3400.1(.2)
3. six (6) credit hours in science electives
4. six (6) credit hours in arts/ECON electives
5. six (6) credit hours in electives

Year 4 (Honours)

1. either ASTR 3400.1(.2) or 3500.1(.2); and three (3) credit hours in ASTR at the 5000 level
2. PHYS 4500.1(.2) and either PHYS 3350.1(.2) or 3400.1(.2)
3. three (3) additional credit hours in PHYS at the 4000 level and three (3) credit hours in science electives
4. PHYS 4790.0
5. six (6) credit hours in arts/ECON electives

Course Descriptions

The Department offers courses in astronomy, both undergraduate and graduate, to support its three degree programs in astronomy and astrophysics. Note that Astrophysics honours students are required to include at least one graduate level course in their program, and students should refer to the *Graduate Academic Calendar* for graduate course descriptions.

The Department also offers introductory astronomy courses for the non-specialist, and suitable for science electives for non-science majors, or for general electives for science majors. These include ASTR 1000, 1001, and 1010.

IMPORTANT NOTE ON COURSE NUMBERING

In the 2004-2005 academic year, courses were renumbered from three digits to four. A new digit was added to the front of the sequence to indicate the year of study in which a student would normally enrol in a course. The last three digits represent the "old" course number – for example, ASTR 1205.1(.2) was formerly AST 205.1(.2).

In the 2008-09 academic year, a "rationalised" four-digit course numbering scheme was introduced to replace the *ad hoc* four digit scheme created in 2004. The first digit still represents the year, the second digit indicates the subject area [0=general interest, 1=foundation, 2=techniques, 3=planets, 4=stars/ISM, 5=(extra)galactic], and the third and fourth digits number the course within a given subject area.

Students are urged to be extremely careful not to register again for a course for which they have already earned credit. Academic Regulation 17(b) is very clear on this matter:

"In the cases where courses have been renumbered, changed in level, or where a six (6) credit hour course (formerly referred to as a "full course") has been split into two three (3) credit hour courses (formerly referred to as "half courses") or *vice versa*, a student who received credit from the original course is not entitled to repeat the course in its new format or on its new level for additional credit recognition."

Course # -2003	Course # 2004-07	Course # 2008-
AST 205	ASTR 1205	ASTR 1100
AST 206	ASTR 1206	ASTR 1101
AST 215	ASTR 1215	ASTR 1000
AST 216	ASTR 1216	ASTR 1001
AST 217	ASTR 1217	ASTR 1010
AST 312	ASTR 2312	ASTR 2100
AST 313	ASTR 2313	ASTR 2400
AST 412	ASTR 3412	ASTR 3400
AST 413	ASTR 3413	ASTR 3500
AST 435	ASTR 4435	ASTR 5220*
AST 445	ASTR 4445	ASTR 5300*

*formerly undergraduate courses, now offered as graduate courses; see the *Graduate Academic Calendar* for descriptions.

1000.1(.2) The Sky and Planets

Prerequisite: none

This course provides an introduction to the Solar System for non-science students with little background in science and mathematics. Topics include: the celestial sphere and the night sky, locating astronomical objects, motions and phases of the moon, timekeeping and the calendar, history of astronomy, eclipses, telescopes and instruments, planets, asteroids, and comets. Homework consists of assignments and labs, some of which require the use of the Burke-Gaffney Observatory.

Classes 3 hrs. and lab/telescope observing 1 hr. per week; 1 semester.

1001.1(.2) Stars and Galaxies

Prerequisite: none

This course is an introduction to astronomy beyond the Solar System for non-science students with little background in science and mathematics. Topics include: the Sun as a star, stars and star clusters, stellar evolution, nebulae, the Milky Way, galaxies and galaxy clusters, quasars, active galaxies, cosmology. Homework consists of assignments and labs, some of which require the use of the Burke-Gaffney Observatory.

Classes 3 hrs. and lab/telescope observing 1 hr. per week; 1 semester.

Note: Please note that this course may not be used by B. Sc. Students to satisfy the requirement of a science elective under regulations 3.e., 6.e., 10.c., and 12.b. for B.Sc. degrees.

1010.1(.2) Life in the Universe

Prerequisite: none

The possibility that life might exist elsewhere in the universe has fascinated human beings ever since our ancestors first gazed into the starry skies. Is life on Earth unique, or could there be other civilisations in the cosmos? This course examines the possibility of extraterrestrial life from astronomical, biological and sociological perspectives. Topics include planets, stars and galaxies, our place in the universe, the origin and evolution of life on Earth, searches for extraterrestrial life, the Anthropic Principle, UFOs, and more.

Note: This course is currently offered exclusively as a web-based course.

1100.1(.2) General Astronomy I

Prerequisites: Nova Scotia grade 12 physics and Nova Scotia grade 12 math pre-calculus, or equivalent.

This course provides a mathematics-based and physics-based introduction to general and solar system astronomy for science students and astrophysics majors. Topics include: the celestial sphere and the night sky, development of astronomy as a science, orbits planets, time measurement, eclipses, telescopes and astronomical instruments, and the

solar system. Homework consists of assignments and labs, some of which require the use of the Burke-Gaffney Observatory.

Classes 3 hrs. and lab/telescope observing 1 hr. per week; 1 semester.

1101.1(.2) General Astronomy II

Prerequisite: ASTR 1100.1(.2).

This course is a continuation of ASTR 1100.1(.2) and provides a comprehensive introduction to astronomy for astrophysics majors. Topics include the origin of the solar system, the Sun as a star, stars and star clusters, nebulae, white dwarfs, stellar evolution, supernovae, pulsars, black holes, X-ray binaries, the Milky Way, galaxies and galaxy clusters, active galaxies, quasars, and cosmology. Homework consists of assignments and labs, some of which require the use of the Burke-Gaffney Observatory.

Classes 3 hrs. and lab/telescope observing 1 hr. per week; 1 semester.

2100.1(.2) Foundations of Astrophysics

Prerequisites: ASTR 1101.1(.2); PHYS 1101.1(.2); MATH 1211.1(.2)

The emphasis of this first course in *astrophysics* is on directly observable quantities such as the positions and motions of stars and the light they emit. Topics include a review of the celestial sphere, time in astronomy, astronomical catalogues, the two-body problem, dynamics of star clusters, stellar spectra including emission and absorption lines, and the operation of telescopes. Students are assigned observing projects and trained to use the Burke-Gaffney Observatory.

Classes 3 hrs. per week and telescope observing session

2400.1(.2) Properties of Stars

Prerequisite: ASTR 2100.1(.2).

One of the major scientific achievements of the 20th Century was the quantitative understanding of stars. This reviews these advances including the use of binary stars to determine stellar properties, spectral classification and the Boltzmann and Saha equations, radiative transfer and stellar atmospheres, the equations of stellar structure, and the interiors of hydrogen burning stars such as the Sun.

3400.1(.2) Interstellar Matter and Stellar Evolution

Prerequisite: ASTR 2400.1(.2).

This course examines the nature of neutral and ionised interstellar clouds and the onset of star formation. Concepts introduced in ASTR 2400.1(.2) are used to show how the initial mass of a “protostar” largely determines its place on the “main sequence” as a star, its internal structure and energy production, and the nature of its death, whether it be as a white dwarf, neutron star, or a black hole.

3500.1(.2) Galaxies and Cosmology

Prerequisite: ASTR 2400.1(.2).

This course deals with an extremely broad area of astrophysics covering seven or eight orders of magnitude in length scale. Topics include the kinematic properties of nearby stars, galactic rotation, spiral structure, and the formation of the Milky Way. Extragalactic topics include the classification of galaxies, galactic evolution and interaction, galaxy clusters, large scale structure of the universe, and modern cosmology including observational tests of various cosmological models.

Atlantic Canada Studies (ACST)

Program Coordinator A. MacLeod, English

P. Twohig Canada Research Chair in Atlantic
Canada Studies

J. Ried Professor, History

R. Field Adjunct Professor

Atlantic Canada Studies is an interdisciplinary major, minor, honours, concentration, and certificate option in the Arts Faculty which has developed out of an increasing demand by students, faculty and the community generally, for a more organized study of this region.

Students who complete a major, minor, honours, concentration, or certificate in Atlantic Canada Studies will have helped to prepare themselves for a fuller and more meaningful participation in the life of Atlantic Canada, and will have acquired a useful background for careers in teaching, trade and industry, and the various bureaus of the provincial and federal civil services. Their attention is particularly drawn to the advantages, from a career point of view, of taking Atlantic Canada Studies as part of a double major or honours.

Students are required to choose their courses in consultation with a member of the Atlantic Canada Studies Committee, and are strongly urged to select one of its members to advise them for the duration of the program, and to provide the necessary liaison with the Committee.

Canada Research Chair in Atlantic Canada Studies

Dr. Peter L. Twohig holds the Canada Research Chair in Atlantic Canada Studies. He has an active program of research focusing on health in Atlantic Canada, and is particularly interested in interdisciplinary approaches to health care research and historical analyses of health and medicine. Undergraduate students interested in interview-based projects are encouraged to contact Dr. Twohig or visit the Gorsebrook Centre for New Media Qualitative Research.

Graduate Studies

For detailed information on the Master of Arts in Atlantic Canada Studies, refer to the *Graduate Academic Calendar*.

Major, Minor, Honours, Concentration, and Certificate programs.

The following are the regulations for the major, minor, concentration, and honours programs. Details concerning the Master of Arts in Atlantic Canada Studies degree are found in Section 3 of this *Calendar*.

Majors

To complete a major in Atlantic Canada Studies, a student must meet the usual University requirements for the Bachelor of Arts degree, and in particular, obtain forty-eight (48) credit hours from the courses listed below. At least twenty-four (24) of the forty-eight (48) credit hours must be at the 2000 level or above. Students are required to select courses in accordance with the following criteria:

1. The courses must include at least six (6) credit hours from each of three of Groups A, B, C, D and E.
2. The courses must include at least six (6) credit hours from each of three different academic disciplines. Interdisciplinary ACST courses do not count as a discipline for this purpose.
3. ACST 4411.1(.2) and 4412.1(.2) must be among the courses selected.
4. No more than eighteen (18) credit hours may be selected from Group E.
5. It is the responsibility of the student to ensure that all prerequisites have been fulfilled for the courses chosen.

Minors

A minor in Atlantic Canada Studies consists of twenty-four (24) credit hours chosen from the courses listed below and completed with a quality point average of at least 2.00. At least twelve (12) credit hours must be at the 2000 level or above, and the courses selected must include ACST 4411.1(.2) and 4412.1(.2). The courses must also include six (6) credit hours from each of three different academic disciplines, and no more than twelve (12) credit hours may be selected from Group E.

Honours

To complete an honours program in Atlantic Canada Studies, a student must meet the usual University

requirements for the Bachelor of Arts (Honours) degree, and in particular, obtain sixty (60) credit hours from the courses listed below. At least forty-eight (48) of the sixty (60) credit hours must be at the 2000 level or above. Students are required to select courses in accordance with the following criteria:

1. The courses must include at least six (6) credit hours from each of four of Groups A, B, C, D, and E.
2. The courses must include at least six (6) credit hours from each of three different academic disciplines. Interdisciplinary ACST courses do not count as a discipline for this purpose.
3. Either ACST 4500.0 or ACST 4511.1(.2) and 4512.1(.2) must be among the courses selected.
4. No more than eighteen (18) credit hours may be selected from Group E.
5. It is the responsibility of the student to ensure that all prerequisites have been fulfilled for the courses chosen.

Concentrations

A concentration in Atlantic Canada Studies consists of twenty-four (24) credit hours chosen from the courses below and completed with a quality point average of at least 2.00 (C). At least eighteen (18) credit hours must be at the 2000 level or above, and the courses selected must include:

- a) one of ACST 2311.1(2) and ACST 3312.1(2);
- b) one of ACST 4411.1(2) and ACST 4412.1(2); and
- c) at least three (3) credit hours chosen from the other courses in Group A.

The remaining fifteen (15) credit hours must include courses from at least two separate disciplines chosen from the courses listed in Groups B, C, D, and E, and must also include courses from at least two of these groups.

Certificate in Atlantic Canada Studies

The Certificate in Atlantic Canada Studies is designed to meet the needs of students who wish to develop a more nuanced understanding of the region. It will be attractive for students from within Atlantic Canada who wish to improve their knowledge of the local culture that shapes and surrounds them. As well, it provides a valuable educational option for international students travelling abroad who may wish to follow an intense, but carefully planned curriculum that combines a variety of different academic opportunities into a one-year program of study. By creating a classroom environment where local and international students share their different perspectives on the region, the certificate stimulates a useful exchange of ideas and fully integrates the study of Atlantic Canada into a broader national and global analytical framework.

To fulfill the requirements of the certificate in Atlantic Canada Studies, students must complete twenty-four (24) credit hours of instruction. Fifteen (15) of those credit hours must be selected from the interdisciplinary ACST courses listed below in Group A, while nine (9) credit hours must be drawn from the list of closely related Canadian content courses offered by various departments and listed below in Groups B, C, D and E. By striking this balance between courses that are tightly focused on the study of the region, and supplementary classes designed to provide a broader Canadian context, the certificate provides students with a more nuanced and comprehensive understanding of Atlantic Canada's historical, political, economic and cultural life, as well as the region's natural environment.

Admission requirements for the Certificate in Atlantic Canada Studies

The Certificate in Atlantic Canada Studies requires a formal application for admission and the official approval of the Undergraduate Coordinator for Atlantic Canada Studies. Students applying for admission to the program must have completed thirty (30) credit hours of undergraduate study at an accredited university or must show a demonstrated interest in the field. Students majoring in Atlantic Canada Studies at Saint Mary's University are not eligible for this program.

Students admitted to the program must complete at least eighteen (18) credit hours at Saint Mary's University. The official approval of the Undergraduate Coordinator for Atlantic Canada Studies is required for credit hours completed at another institution to be included in the certificate program.

Group A: Interdisciplinary Courses in Atlantic Canada Studies

ACST 1000.1(.2) ACST 2301.1(.2); ACST 2311.1(.2); ACST 2313.1(.2); ACST 2400.1(.2); ACST 3302.1(.2); ACST 3303.1(.2); ACST 3305.1(.2); ACST 3310.0; ACST 3312.1(.2); ACST 3321.1(.2); ACST 4401.1(.2) to 4405.1(.2); ACST 4411.1(.2); ACST 4412.1(.2); ACST 4500.0; ACST 4511.1(.2); ACST 4512.1(.2).

Group B: Culture and History

ANTH 2323.1(.2); ANTH 2324.1(.2); ANTH 4466.1(.2); ENGL 2380.0; ENGL 3312.1(.2); FREN 3305.1(.2); FREN 4405.1(.2); GEOG 2339.0; HIST 2320.0; HIST 2340.0; HIST 2346.1(.2); HIST 2373.1(.2); HIST 4535.0; HIST 4560.0; IRST 1203.1(.2); IRST 1204.1(.2); IRST 2307.0; LING 2305.1(.2); LING 3305.1 (.2); LING 3312.1(.2).

Group C: Social and Political Economy

CISY 4491.1 (.2); ECON 3324.1(.2); ECON 3325.1(.2); ECON 3361.1(.2); ECON 4475.1 (.2); MGSC 4491.1 (.2); POLI 2307.0; SOCI 3320.0; SOCI 3332.0; SOCI 4468.1(.2); WMST 3320.0; WMST 4468.1(.2).

Group D: Ecology and Environment

BIOL 4448.1 (.2); ECON 3362.1(.2); ENV5 3310.1 (.2); GEOG 3340.1(.2); GEOG 3454.1(.2); GEOL 1202.1(.2); GEOL 1203.1(.2); GEOL 1208.1(.2); GEOL 2335.1 (.2); SOCI 3310.1(.2).

Group E: Cognate Courses

ANTH 2316.1(.2); ANTH 2317.1(.2); ANTH 3329.1(.2); ANTH 3371.1(.2); ANTH 3395.1(.2); ANTH 3396.1(.2); ANTH 4463.1(.2); BIOL 1203.0; BIOL 2324.1(.2); BIOL 3331.1(.2); CRIM 3312.0; CRIM 4414.1 (.2); ECON 3306.1(.2); ECON 3307.1 (.2); ECON 3322.1(.2); ECON 3349.1(.2); ECON 3363.1(.2); ECON 3366.1(.2); ECON 4406.1(.2); ECON 4430.1(.2); ENGL 2344.1(.2); ENGL 2345.1(.2); ENGL 3343.1(.2); ENGL 3367.1(.2); ENGL 3437.1(.2); ENGL 4462.1(.2); ENGL 4463.1(.2); ENGL 4471.1(.2); ENGL 4472.1(.2); ENGL 4475.0; ENV5 1203.1(.2); ENV5 4440.1 (.2); FINA 3364.1 (.2); FINA 4466.1 (.2); FINA 4471.1 (.2); FREN 3312.1(.2); FREN 3340.1 (.2); FREN 4412.1(.2); FREN 4434.1(.2); FREN 4440.1(.2); FREN 4451.1(.2); FREN 4452.1(.2); FREN 4455.1 (.2); GEOG 2200.1 (.2); GEOG 2339.0; GEOG 3300.0; GEOG 4449.1(.2); GEOL 3518.1 (.2); HIST 1252.1(.2); HIST 1253.1(.2); HIST 2319.0; HIST 2327.1(.2); HIST 3403.1(.2); HIST 4525.0; IRST 2308.0; IRST 2327.1(.2); IRST 2328.1(.2); IRST 3400.0; IRST 4525.0; LING 2339.1 (.2); LING 3341.1 (.2); LING 3395.1(.2); LING 3396.1 (.2); LING 4440.1(.2); MGMT 4493.1 (.2); MGMT 4498.1 (.2); MKTG 4495.1 (.2); POLI 1240.1(.2); POLI 2304.0; POLI 2307.1 (.2); POLI 2310.0; POLI 2315.0; POLI 2330.0; POLI 2348.1 (.2); POLI 2450.1 (.2); POLI 3440.0; POLI 3447.1(.2); POLI 3454.1 (.2); POLI 4551.0; RELS 1220.1(.2); RELS 1221.1(.2); RELS 3354.1 (.2); RELS 3355.1(.2); RELS 3358.1(.2); RELS 3387.1; RELS 3387.1 (.2); SOCI 3306.0; SOCI 3321.0; SOCI 3339.1 (.2); SOCI 3339.1 (.2); SOCI 3340.0; SOCI 3352.1 (.2); SOCI 3359.0; SOCI 4448.0; SOCI 4480.0; SOCI 4481.0; WMST 3349.1(.2); WMST 4434.1(.2); WMST 4448.0; WMST 4481.0.

Course Descriptions**1000.1(.2) Making Sense of Atlantic Canada**

This course provides an introduction to the Atlantic Provinces. It will examine specific content areas from multiple perspectives, including cultural industries, health and social services, environmental issues, economic development, and representations of the region. This course is intended as an introduction to Atlantic Canada Studies and to interdisciplinary inquiry.

2311.1(.2) The Culture of Atlantic Canada I

Prerequisite: a minimum of four (4.0) university credits.

This course provides an introduction to the cultural traditions and institutions of the various regions and ethnic groups of each of the three Maritime Provinces and Newfoundland and Labrador. Lectures will cover a wide variety of architectural, artistic, ecclesiastical, educational, ethnic, linguistic, media, and policy topics. Students will engage in both individual and group projects.

2313.1(.2) Researching Atlantic Canada

Prerequisite: a minimum of twenty-four (24) credit hours.

There are many ways of interpreting the Atlantic Canadian experience. Individual disciplines (such as history, sociology, anthropology, economics, and biology) take different approaches, utilize different data, and present their research in different ways. All research, however, must be read with a critical eye. This course will expose students to a variety of ways of analyzing Atlantic Canada, focusing largely on qualitative research approaches and the human experience in the region.

2400.1(.2) Health and Social Policy in Atlantic Canada

This course will explore the development of health and social policy in Atlantic Canada. It will examine the evolution of the welfare state, hospitals, training for health care workers, and contemporary health issues. This intermediate course is intended for students with some knowledge of or interest in Atlantic Canada.

2826.1(.2) – 2849.1(.2) Selected Topics in Atlantic Canada Studies I

This semester course will provide the student with an opportunity to take courses on specific Atlantic Canada topics which do not fit in with the standard offerings of other departments of the University.

3303.1(.2) Higher Education in Atlantic Canada

This course will examine the student with an opportunity to take courses on specific Atlantic Canada topics which do not fit in with the standard offerings of the other departments of the University.

3305.1(.2) Moving Images of Atlantic Canada

This course examines the evolution of film and television in the Atlantic region in the 20th century. Various genres and technologies will be studied, including critical examination of productions by the National Film Board, by the Canadian Broadcasting Corporation, by private television, by independent film-makers, by producers from “away”, and by non-commercial film/video makers. The course will consider

the extent to which distinctive ways of making moving images were or were not developed in Atlantic Canada, and the manner in which moving images have reflected, distorted, or shaped the culture of the Region.

3310.0 The Atlantic Fisheries

A study of the relationship between the material basis and political economy of the Atlantic fisheries since 1945. Stress will be placed on the scientific facts underlying the fisheries, and in particular, the qualities and quantities in the marine ecosystem that support them. A detailed study will also be made on the methods of fisheries science which are the basis of fish stock assessments by government scientists. Roughly the last third of the course will examine the effects of the livelihood of fishermen, of government policies respecting the fisheries, and the regional, national and international political forces which are behind federal government fisheries regulations.

3312.1(.2) The Culture of Atlantic Canada II

This course is designed to lead students into a more focused study of Atlantic Canadian culture. Particular emphasis may be placed on Atlantic Canada's contributions to film, visual art, drama, dance, music, literature and mixed-media. Students will also be asked to consider "culture" in its broader context. Intensive research on topics such as regionalism, religion, gender, community, social class, and ethnicity will be encouraged.

3321.1(.2) African Nova Scotian Culture

This course provides a basic understanding of African Nova Scotian culture. It introduces students to the history and cultural heritage of African Nova Scotian communities, their experience of life today, and the various forms of artistic expression produced by the culture. It also offers insight into the problems and concerns of African Nova Scotian communities and their historical and cultural connections with the Black Diaspora.

3826.1(.2) – 3849.1(.2) Selected Topics in Atlantic Canada Studies II

This semester course will provide the student with an opportunity to take courses on specific Atlantic Canada topics which do not fit in with the standard offerings of other departments of the University.

4411.1(.2) Atlantic Canada Seminar I

Prerequisite: a minimum of thirty (30) credit hours.

This course will provide an opportunity for students to integrate their knowledge of Atlantic Canada in an interdisciplinary fashion. Drawing upon the expertise of a number of guest speakers familiar with various aspects of Atlantic Provinces life, the course will deal with such topics as the Atlantic fishery, agriculture, industry and labour, business enterprise, regional protest and cultural ethnicity.

4412.1(.2) Atlantic Canada Seminar II

Prerequisite: ACST 4411.1(.2)

This course will continue the work of ACST 4411.1(.2). In addition, students will be afforded an opportunity to use the vast quantity of primary source material at the Public Archives of Nova Scotia and other local repositories.

4500.0; 4511.1(.2) - 4512.1(.2) Honours Seminar

Prerequisite: a minimum of sixty (60) credit hours.

These courses will provide an opportunity for honours students to integrate their knowledge in an interdisciplinary fashion.

4876.1(.2) - 4899.1(.2) Directed Readings

Prerequisite: permission of ACST Coordinator.

These courses provide opportunities to study a particular subject in detail. They will normally require a considerable amount of independent, though supervised, study.

Biology (BIOL)

Chairperson, Associate Professor	H. Broders,
Professors	D. Cone, T. Rand, D. Strongman, K. Vessey
Associate Professors	C. Barber, S. Bjornson, Z. Dong, J. Lundholm, R. Russell, G. Sun
Adjunct Professors	M. Agbeti, M. Foellmer, K. Harper, M. Jones, F. Jonsyn-Ellis, G. Kernaghan, K. MacKenzie, H. Murray, B. Pardy
Professor Emeritus	A. Rojo
Dean Emeritus	D. Richardson

Department website:

<http://www.smu.ca/academic/science/biology>

The Department offers a concentration, major, honours, and minor in biology. The major in Biology has two recommended tracks: Pre-Health Sciences and Ecology and Evolution. It is possible to complete a Biology program by selecting courses from both tracks. A double major or double honours in Biology and another science can be done. Students may pursue a cooperative education option. See the Co-operative Education Office for details.

The Department trains graduate students through the MSc in Applied Science program. Consult the Graduate Academic Calendar for details.

Major in Biology

For a major in Biology, students must complete the following, which include courses that apply to the general requirements for the Bachelor of Science (see Section 3 for details on the requirements for BSc with major):

- MATH 1210.1(.2) Intro Calculus I
- MATH 1211.1(.2) Intro Calculus II
or 1216.1(.2) Intro to Mathematical Statistics
- BIOL 1201.1(.2) Molecular and Cell Biology
- BIOL 1202.1(.2) Organismal and Ecological Biology
- CHEM 1210.1(.2) General Chemistry I
- One of CHEM 1211.1(.2), 1212.1(.2) or 1213.1(.2) General Chemistry II
- BIOL 2307.1(.2) Genetics
- BIOL 2308.1(.2) Biostatistics
or PSYC 2350.1(.2) Psychological Statistics
- BIOL 2321.1(.2) Cell Biology I
- BIOL 2324.1(.2) Ecology
- BIOL 2423.1(.2) Evolution
- CHEM 2344.1(.2) Organic Chemistry I
- 27 credit hours of Biology electives with at least 9 credit hours at the 3000-level and 18 credit hours at the 4000-level and no more than 2 credit hours at the 2000-level.

Up to six (6) credit hours of BIOL electives may be substituted with any of the following:

ANTH 3471.1(.2)	Forensic Skeletal Identification
ANTH 3472.1(.2)	Forensic Skeletal Analysis
CHEM 3451.1(.2)	Introductory Biochemistry
CHEM 4452.1(.2)	Biochemistry: Metabolism
GEOL 2335.1(.2)	Paleobotany
PSYC 2350.1(.2)	Psychology Statistics (Group C)
PSYC 4407.1(.2)	Introduction to Ethnology
PSYC 4408.1(.2)	Comparative Ethnology

Note that these courses cannot count simultaneously as Biology electives and “other Science electives” (Regulation 6e) or Arts electives (Regulation 6c) for the Bachelor of Science with major.

Recommended Tracks for Biology Majors

Note that the prerequisites required for courses listed in the two tracks may not appear in each of the lists below. Students will not be able to enroll in a course without the prerequisites.

1) Pre-Health Sciences Track

The Pre-Health Sciences Track is for students interested in pursuing careers in Medicine, Dentistry, Pharmacy, Optometry, Veterinary Medicine, Chiropractic, Genetic Counseling, Hospital Administration, Medical Technology and Diagnostics, Nursing, Paramedical Services, Physiotherapy and Podiatry. It provides all of the foundation courses usually required for admission to these programs. The track also accommodates interests in specialty topics such as Anatomy, Cell and Molecular Biology, Genetics, Histology, Microbiology and Physiology. Students are encouraged to enroll in health related electives in Arts and Business that complement this track. Details on the admission requirements to health profession programs can be obtained from the Science Academic Advisor.

Recommended Pre-Health Biology courses:

BIOL 2002.1(.2)	Biology of Human Health
BIOL 2003.1(.2)	Biological Techniques
BIOL 2004.1(.2)	Human Cell Physiology and Metabolism
BIOL 2005.1(.2)	Human Organ Systems
BIOL 2006.1(.2)	Animal Ecophysiology
BIOL 2398.1(.2)	Introduction to Microbiology
BIOL 3001.1(.2)	Introduction to Pharmacology and Toxicology
BIOL 3411.1(.2)	Medical and Veterinary Parasitology
BIOL 3414.1(.2)	Environmental Microbiology
BIOL 3420.1(.2)	Cell Biology II
BIOL 3426.1(.2)	Animal Tissues
BIOL 4002.1(.2)	Medical Mycology
BIOL 4004.1(.2)	Advanced Biostatistics
BIOL 4007.1(.2)	Introduction to Bioinformatics and Genomics

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BIOL 4331.1(.2)	Ecosystems
BIOL 4408.1(.2)	Animal Developmental Biology
BIOL 4419.1(.2)	Molecular Biology
BIOL 4432.1(.2)	Medical and Veterinary Entomology
BIOL 4433.1(.2)	Ecotoxicology

PHYS 1000.1(.2) or 1001.1(.2) may be required for some health profession programs. Students are encouraged to take CHEM 2345.1(.2) or 2346.1(.2)

2) Ecology and Evolution Track

This track is intended for students wishing to pursue careers as biologists with government or private labs, teachers, or those pursuing graduate study.

BIOL 2001.1(.2)	Introduction to Animal Form and Function
BIOL 2003.1(.2)	Biological Techniques
BIOL 2006.1(.2)	Animal Ecophysiology
BIOL 2303.1(.2)	Introduction to Plant Form and Function
BIOL 3002.1(.2)	Insect Ecology
BIOL 3328.1(.2)	Plant Identification
BIOL 3329.1(.2)	Systematics
BIOL 3402.1(.2)	Population Genetics
BIOL 3416.1(.2)	Mycology
BIOL 3420.1(.2)	Cell Biology II
BIOL 3421.1(.2)	Applied Plant Biology
BIOL 3424.1(.2)	Diversity and Ecology in Fishes
BIOL 4003.1(.2)	Molecular Ecology
BIOL 4004.1(.2)	Advanced Biostatistics
BIOL 4005.1(.2)	Advanced Population and Community Ecology
BIOL 4006.1(.2)	Plant-microbe Interactions
BIOL 4007.1(.2)	Introduction to Bioinformatics and Genomics
BIOL 4331.1(.2)	Ecosystems
BIOL 4404.1(.2)	Behavioural Ecology
BIOL 4410.1(.2)	Plant Ecology
BIOL 4412.1(.2)	Ecology of Animal Parasites
BIOL 4418.1(.2)	Plant Physiology
BIOL 4419.1(.2)	Molecular Biology
BIOL 4422.1(.2)	Conservation Biology
BIOL 4430.1(.2)	Ornithology
BIOL 4431.1(.2)	Herpetology
BIOL 4433.1(.2)	Ecotoxicology
BIOL 4434.1(.2)	Communication and Defense in Biological Systems
BIOL 4448.1(.2)	Biology Field Course
BIOL 4449.1(.2)	Aquatic Parasitology
BIOL 4450.1(.2)	Diversity in Forest Ecosystems
BIOL 4451.1(.2)	Ecology in the Tropics

Suggested Schedule

The following Schedule is suggested for students taking the Biology major program:

Year 1:

- ENGL 1205.1(.2) Introduction to Literature
- BIOL 1201.1(.2) Molecular and Cell Biology
- BIOL 1202.1(.2) Organismal and Ecological Biology

- CHEM 1210.1(.2) General Chemistry I
- One of CHEM 1211.1(.2), 1212.1(.2) or 1213.1(.2) General Chemistry II
- MATH 1210.1(.2) Intro Calculus I
- MATH 1211.1(.2) Intro Calculus II or 1216.1(.2) Intro to Mathematical Statistics
- Nine (9) credit hours from Arts

Year 2:

- BIOL 2003.1(.2) Biological Techniques
- BIOL 2307.1(.2) Genetics
- BIOL 2308.1(.2) Biostatistics or PSYC 2350.1(.2) Psychological Statistics
- BIOL 2321.1(.2) Cell Biology I
- BIOL 2324.1(.2) Ecology
- BIOL 2423.1(.2) Evolution
- CHEM 2344.1(.2) Organic Chemistry I
- Six (6) credit hours non-Biology science
- Three (3) credit hours from ENGL 2300 through 2393

Year 3:

- Twelve (12) credit hours BIOL at the 3000 level or above
- Nine (9) credit hours non-Biology science
- Three (3) credit hours from Arts
- Six (6) credit hours of electives

Year 4:

- Twelve (12) credit hours BIOL at the 4000 level or above
- Eighteen (18) credit hours of electives

Double Major in Biology

To complete a double major in Biology and another science, students must complete all of the major requirements above, except that they need only complete six (6) credit hours of BIOL at the 4000 level, rather than twelve (12).

Honours in Biology

Students with a cumulative GPA of 3.00 or above are encouraged to apply for admission to the honours program. It is the student's responsibility to secure a supervisor for the honours thesis (BIOL 4500.0) before enrolling in the honours program. Check the Department website for research interests of the faculty. For honours in Biology, students must fulfill the major requirements plus

BIOL 4549.0 Honours Seminar
BIOL 4500.0 Honours Thesis
Six (6) additional credit hours in Biology

Students must achieve a Degree GPA of 3.00 or above on all courses presented in fulfillment of the Bachelor of Science with Honours in Biology requirements.

Double Honours in Biology

The requirements for Double Honours in Biology and another science are the same as those for the major, plus BIOL 4549.0 Honours Seminar

BIOL 4500.0 Honours Thesis

Students must achieve a Degree GPA of 3.00 or above on those courses presented in fulfillment of the Bachelor of Science with Honours in Biology requirements.

Concentration in Biology:

Students interested in a career in the health professions are advised not to pursue a 3 year BSc with concentration in Biology as a 4 year degree is required for admission to most programs.

Requirements for a 3 year BSc with concentration in Biology are as follows (in addition to the normal requirements for the Bachelor of Science):

- MATH 1210.1(.2) Intro Calculus I
- MATH 1211.1(.2) Intro Calculus II or 1216.1(.2) Intro to Mathematical Statistics
- CHEM 1210.1(.2) General Chemistry I
- One of CHEM 1211.1(.2), 1212.1(.2) or 1213.1(.2) General Chemistry II
- CHEM 2344.1(.2) Organic Chemistry I
- BIOL 1201.1(.2) Molecular and Cell Biology
- BIOL 1202.1(.2) Organismal and Ecological Biology
- BIOL 2307.1(.2) Genetics
- BIOL 2308.1(.2) Biostatistics or PSYC 2350.1(.2) Psychological Statistics
- BIOL 2321.1(.2) Cell Biology I
- BIOL 2324.1(.2) Ecology
- BIOL 2423.1(.2) Evolution

Nine (9) credit hours of BIOL at the 2000 level or above

Minor in Biology:

Requirements for a minor in Biology are:

- BIOL 1201.1(.2) Molecular and Cell Biology
- BIOL 1202.1(.2) Organismal and Ecological Biology
- BIOL 2307.1(.2) Genetics
- BIOL 2308.1(.2) Biostatistics or PSYC 2350.1(.2) Psychological Statistics
- BIOL 2321.1(.2) Cell Biology I
- BIOL 2324.1(.2) Ecology
- BIOL 2423.1(.2) Evolution

Nine (9) other credit hours in BIOL with at least 6 at the 3000-level or above.

All of the following courses have a 3 hour per week lab component unless otherwise noted. Students must pass both the laboratory and the lecture components of a course to pass the course. Majors must achieve a minimum grade of C in all BIOL courses applied to their degree.

Course Descriptions**1201.1(.2) Molecular and Cell Biology**

Prerequisite: Nova Scotia Grade 12 BIO or equivalent.

An introductory study of the principles and organization of life including molecular, cell biology and heredity.

1202.1(.2) Organismal and Ecological Biology

Prerequisite: Nova Scotia Grade 12 BIO or equivalent.

An introductory study of the principles and organization of life including anatomy, form and function, physiology, life history and ecology.

1203.0 Cross Listed as ENVS 1203.0, Biology and the Human Environment (for non-science students)

This course has no lab component.

Note: Please note that this course may not be used by B. Sc. Students to satisfy the requirement of a science elective under regulations 3.e., 6.e., 10.c., and 12.b. for B.Sc. degrees.

1204.1(.2) Biology and the Human Environment I

This course explores core concepts in Biology with emphasis on understanding the nature of scientific enquiry and current issues in society. Topics covered will include ecology and the environment; diversity and evolution; inheritance; genetics and biotechnology.

Note: This course is for students who do not intend to major in BIOL or do not have the prerequisite for BIOL 1201.1.2 and BIOL 1202.1(.2). This course can not be used toward a BIOL major and credit will not be given for this course if taken after completion of BIOL 1201 and/or BIOL 1202.

1205.1(.2) Biology and the Human Environment 2

Prerequisite: BIOL 1204.1(.2).

An introduction to the biological basis of human interactions with other species including the biology of domesticated plants and animals; food production systems from hunter-gatherer to modern agriculture; fisheries and aquaculture; and the human-companion animal bond.

Note: This course is for students who do not intend to major in BIOL or do not have the prerequisite for BIOL 1201.1.2 and BIOL 1202.1(.2). This course can not be used toward a BIOL major and credit will not be given for this course if taken after completion of BIOL 1201.1(.2) and/or BIOL 1202.1(.2).

2001.1(.2) Introduction to Animal Form and Function

Prerequisite: BIOL 1201.1(.2) and 1202.1(.2).

This course will introduce students to the taxonomic treatment of major animal phyla with reference to anatomy, function and ecological significance.

2002.1(.2) Biology of Human Health

Prerequisite: Nova Scotia Grade 12 BIO or equivalent.

This course will provide students with scientific knowledge of the human body and factors that affect the health and wellness of humans. Specific topics will include: (1) Body organization, (2) Human development, maturity and aging and the effects of external factors on these processes, (3) General mechanisms of homeostasis and examples of clinical conditions that may occur when the body is out of homeostasis, (4) Human disease and transmission/tracking of human pathogens, and (5) Effects of fitness and nutrition on human health. Students will develop critical thinking skills as well as scientific writing and presentation skills. This course will be a valuable introduction for students interested in pursuing a career related to human health or veterinary medicine.

2003.1(.2) Biological Techniques

Prerequisite: BIOL 1201.1(.2) and 1202.1(.2).

This course examines fundamental concepts and field and laboratory methods in Biology. Students will get exposure to basic biological techniques including: use and calibration of microscopes; use of dichotomous keys for identification of organisms; separation and quantitation techniques; sterile technique; safety and quality control procedures; as well as basic ecological sampling methods.

2004.1(.2) Human Cell Physiology and Metabolism

Prerequisite: BIOL 1201.1(.2)

This course is designed to provide students interested in the health profession with a thorough understanding of the life-sustaining physiological and biophysical concepts associated with human cell and tissue processes. Topics covered include membrane structure and function, enzymes and enzyme kinetics, bioenergetics, signal transduction, regulation and homeostasis.

2005.1(.2) Human Organ Systems

Prerequisite: BIOL 1201.1(.2) and 1202.1(.2).

This course is designed to provide the student with an understanding of the organ and system levels of the human body. Unifying themes of anatomy and physiology including the interrelationships of body organ systems, homeostasis and complementarities of structure and function will be emphasized. Topics covered in this course will include integumentary, skeletal, nervous, endocrine and muscular systems. Problem-based learning tutorials will allow students to apply their knowledge to clinical situations.

2006.1(.2) Animal Ecophysiology

Prerequisite: BIOL 1201.1(.2) and 1202.1(.2)

This course addresses the diversity of physiological adaptations of vertebrates to their environment. Topics covered include the interrelationship between physiology and ecology, and the effects of environmental factors such as temperature, pH, salinity and oxygen debt on animal activity.

2303.1(.2) Introduction to Plant Form and Function

Prerequisite: BIOL 1201.1(.2) and 1202.1(.2).

Taxonomic treatment of major plant phyla (including nonvascular and vascular plants) with reference to anatomy, function and ecological significance.

2307.1(.2) Genetics

Prerequisite: BIOL 1201.1(.2).

Principles and history of heredity. Gene interactions, association of genes on eukaryotic chromosomes. Autosomal and sex-linked genetic inheritance and sex determination. Statistical test of genetic hypotheses. Laboratory study includes genetic experiments and problem solving.

2308.1(.2) Biostatistics

Prerequisite: BIOL 1202.1(.2).

Introduction to the methods of analyzing quantitative data in the biological sciences. The emphasis will be on practical applications of statistics in biology and its graphical presentation. Descriptive statistics, distributions, regression, correlation, analysis of variance, and sampling methods will be covered. This course is recommended for biology majors.

NOTE: Students will not receive credit for both BIOL 2308.1(.2) and PSYC 2350.1(.2).

2321.1(.2) Cell Biology I

Prerequisite: BIOL 1201.1(.2)

An introduction to the eukaryotic cell with emphasis on the chemical and genetic basis of cellular activities and the division of the cell into membrane-bound and biochemically specialized compartments. The plasma membrane, cytosol, nucleus, cytoskeleton, Golgi apparatus, mitochondrion, chloroplasts and endoplasmic reticulum will be considered.

2324.1(.2) Ecology

Prerequisite: BIOL 1202.1(.2).

A study of modern ecology including energy flow, biogeochemical cycles, population biology and community structure. Field trips are an important part of the laboratory component.

2398.1(.2) Introduction to Microbiology

Prerequisite: BIOL 1201.1(.2).and BIOL 1202.1(.2)

This course is designed to introduce students to the world of microorganisms. Topics covered include morphology, classification, taxonomy, and metabolism of bacteria, fungi, and viruses.

2423.1(.2) Evolution

Prerequisite: BIOL 1201.1(.2).and BIOL 1202.1(.2)

The Darwinian natural selection hypothesis. History of biological evolution from the 16th century. The modern synthesis of genetics and natural selection. Laboratory data analysis and problem solving.

3001.1(.2) Principles of Pharmacology and Toxicology (not available until 2010/11)

Prerequisite: BIOL2004.1(.2) and BIOL 2005.1(.2).

This course is designed to provide students with a working knowledge of the fundamental principles of pharmacology and toxicology. This course will emphasize the basic concepts required to understand drug/toxin action and disposition. The second unit will cover topics that are related to the pharmacological management of pathologies associated with selected body systems and will include antimicrobial agents. In addition, the effect of environmental toxicants on selected body systems will be studied.

3002.1(.2) Insect Ecology (not available until 2010/11)

Prerequisite: BIOL 2001.1(.2)

An introduction to the fascinating world of insects, their anatomy, physiology, taxonomy and ecology. Topics covered include: the impact of insects on human activities; adaptations in insects that suit their habitat; biological control agents used for insect control; and insects used to control other pest species.

3328.1(.2) Plant Identification

Prerequisite: BIOL 2303.1(.2) Plant Diversity

3329.1(.2) Systematics

Prerequisite: BIOL 1201.1(.2) and BIOL 1202.1(.2).

This course examines the fundamentals of animal and plant systematics including rules of nomenclature, the basis of classification, and the theory of phylogenetics.

3402.1(.2) Population Genetics

Prerequisite: BIOL 2307.1(.2).

The measurement of gene frequencies in a population and the factors which affect these frequencies (including mutation, genetic drift, migration, and natural selection) will be considered conceptually and mathematically.

3411.1(.2) Medical and Veterinary Parasitology

Prerequisite: BIOL 2326.1(.2)

The study of animal parasites of humans and domesticated animals. The taxonomy, life cycle and epidemiology of protists and helminthes are emphasized. Laboratory work involves microscopic diagnostics of the important parasite species.

3414.1(.2) Environmental Microbiology

Prerequisite: BIOL 2398.1(.2).

A course in the biology of microorganisms highlighting molecular biology (physiology and genetics), ecology, and the exploitation of microorganisms by humans (biotechnology and industrial microbiology).

3416.1(.2) Mycology

Prerequisites: BIOL 1202.1(.2)

Introduction to the fungi. Students will become familiar with the members of this diverse group of organisms by studying the morphology and ecology of representatives from each of the major taxonomic groups. Important physiological processes, growth and metabolism will also be discussed.

3420.1(.2) Cell Biology II

Prerequisite: BIOL 3321.1(.2).

An investigation of specific functions of the eukaryotic cell, particularly those that are important in multicellular organisms. Topics include cell division, cell signaling, neurons, cells of the immune system, the extracellular matrix, cellular differentiation and cancer.

3421.1(.2) Applied Plant Biology

Prerequisite: BIOL 2303.1(.2).

The application of botany, plant physiology and anatomy and plant ecology to the problems of human societies. An introduction to the study of plants used by people, their origin, domestication, botany, cultivation, harvesting, uses, diseases, breeding, and their role in the modern world economy. Plants and plant products of industrial importance, medicinal plants, food plants, psychoactive plants, and food additives will be examined in detail.

3424.1(.2) Diversity and Ecology of Fishes

Prerequisite: BIOL 2324.1(.2).

The study of ecology of fishes, their classification, life history and global distribution. The laboratory portion of the course emphasizes study of representatives of world taxa and the fishes of Nova Scotia.

3426.2(.2) Animal Tissues

Prerequisite: BIOL 3327.1(.2)

An introduction to the structure and function of animal tissues. Laboratory work will involve the interpretation of histological preparations of representative vertebrate tissues.

4002.1(.2) Medical Mycology (not available until 2010/11)

Prerequisite: BIOL 3416.1(.2)

This course examines the impact of fungi on human health. Topics include pathogens, allergens, dermatophytes and the impact of toxin-producing species on humans and food safety.

4003.1(.2) Molecular Ecology (not available until 2010/11)

Prerequisite: BIOL 2324.1(.2) and BIOL 4419.1(.2)

This course introduces students to current molecular biology techniques and associated analyses that are most frequently used in ecological research will be covered. Specific applications of molecular ecology in natural

populations of animals, microbes and plants will be discussed. This course will give students conceptual understanding of molecular techniques and their application in natural populations.

4004.1(.2) Advanced Biostatistics

Prerequisite: BIOL 2308.1(.2) or PSYC 2350.1(.2)

This course will provide students with the basic tools to design and conduct biological experiments. Topics will include analysis of variance, regression, multivariate analysis, nonparametric methods, and model selection.

4006.1(.2) Plant-microbe Interactions (not available until 2009/10)

Prerequisite: BIOL 2303.1(.2), BIOL 2398.1(.2) and BIOL 3416.1(.2)

This course will cover some of the practical aspects of plant microbial relationships such as viruses, bacteria, fungi and some protists..

4007.1(.2) Introduction to Bioinformatics and Genomics

Prerequisite: BIOL 4419.1(.2)

This course provides an introduction and overview to the fields of bioinformatics and genomics, covering genomics technologies, bioinformatics technologies and their use in analysis and interpretation of genomics data. The aim is to provide practical descriptions of the topics, tools and current trends instead of the theoretical and computational aspects of the field.

4331.1(.2) Ecosystems

Prerequisite: BIOL 2324.1(.2).

Development of the ecosystem concept in modern Biology. Specific topics include energy and material flow, food webs, ecosystem engineers, directionality and succession and ecosystem health.

4404.1(.2) Behavioral Ecology

Prerequisite: BIOL 2324.1(.2) and BIOL 2308 or PSYC 2350.1(.2) or MATH 1216

Study of animals and how they interact in their environment with emphasis on the adaptive value of behavior. Students will conduct independent research in labs.

4408.1(.2) Animal Developmental Biology

Prerequisite: BIOL 2322.1(.2)

Early developmental processes involved in the transformation of the fertilized egg into a new individual.

4410.1(.2) Plant Ecology

Prerequisite: BIOL 2303.1(.2) and BIOL 2324.1(.2)

This is a hands-on course on the identification and ecology of plants in the important vegetation types of Nova Scotia. In the first half of the course, students will learn plant-sampling techniques during field trips to various natural

habitats around Halifax. The second half will involve the preparation and identification of plant specimens and ecological comparisons between habitat types. Students will also learn conservation biology and applied ecology of key habitat types. This course will provide valuable preparation for employment in natural resource management, ecological restoration or research.

4412.1(.2) Ecology of Animal Parasites

Prerequisite: BIOL 2324.1(.2).

This course is concerned with the ecological significance of animal parasites. Topics include host behaviour, fitness, and population biology, the development of parasite communities, and the importance of zoonotic and epidemic diseases to wild hosts.

4418.1(.2) Plant Physiology

Prerequisite: BIOL 2303.1(.2).

The physiology of higher plants. Topics include photosynthesis, water and resource allocation, transpiration, photohormones, differential growth, photomorphogenesis, photoperiodism, and flowering.

4419.1(.2) Molecular Biology

Prerequisite: BIOL 2307.1(.2) and CHEM 2344.1(.2).

Chemistry of genes and history of molecular biology. Structure of DNA, RNA, and proteins. Transcription, translation, and replication of DNA and RNA. Organization of genes and genomes. Laboratory study of DNA preparation and analysis, and gene isolation.

4422.1(.2) Conservation Biology

Prerequisite: BIOL 2324.1(.2).

This course introduces how principles of evolutionary-ecology can be applied to help us understand how human exploitation of natural resources affects biodiversity. The course will characterize biodiversity and explore topics such as the biology of small populations, conservation genetics, ecological economics, and landscape ecology. In the lab students explore current topics in Conservation Biology through critiques, population modeling and independent research.

4430.1(.2) Ornithology

Prerequisite: BIOL 2324.1(.2).

Introduction to bird biology that covers morphology, classification, life history, and behavior. Labs provide hands-on experience and complement lectures.

4431.1(.2) Herpetology

Prerequisite: BIOL 2324.1(.2)

Herpetology is the study of amphibians and reptiles. Topics include ecology, natural history, form and function of amphibians and reptiles with emphasis on Nova Scotia herpetofauna.

4432.1(2) Medical and Veterinary Entomology

Prerequisite: BIOL 2427.1(2)

This course presents an introduction to the biology of insects and arthropods that cause disease in humans and domestic animals. Topics include the biology and behaviour of disease vectors and external parasites, the role of vectors in the transmission of disease organisms, life cycles of vectorborne pathogens, and the mechanisms of vector and disease control.

4433.1(2) Ecotoxicology

Prerequisite: BIOL 2324.1(2) and CHEM 1212.1(2).

Ecotoxicology is the study of anthropogenic contaminants in the natural environment. This course will provide an introduction to the study of the fate and effects of toxic chemicals on the structure and function of ecological systems.

4434.1(2) Communication and Defense in Biological Systems

Prerequisites: BIOL 2303.1(2) and BIOL 2324.1(2)

This course explores the ecological interrelationships between plants and animals and the ways in which they use chemicals to communicate, attract mates, and protect themselves from predators. Topics include the chemical and morphological adaptations of insect defense, plant toxins and their effects on animals, insect and animal venoms, plant and fungal hallucinogens, hormonal and chemical interactions between plants and animals, animal pheromones, and plant allelopathy and its ecological importance.

4448.1(2) Biology Field Course

Prerequisite: BIOL 2324.1(2), and BIOL 2308.1(2) or PSYC 2350.1(2) or MATH 1216.1(2).

The design and practice of biological study of communities under field conditions at selected sites in Nova Scotia. The main emphasis is on how ecologists document the abundance of organisms and quantify the structure of a community.

Note: Enrolment in this course is limited. Normally this course is held over 10-12 consecutive days and nights at an off-campus site.

4449.1(2) Aquatic Parasitology

Prerequisite: BIOL 3411.1(2) and BIOL 4412.1(2).

A field course on selected protozoan as well as metazoan parasites of aquatic animals. Students will learn to recognize common parasitic Protozoa, Turbellaria, Monogenea, Digenea, Cestoda, Nematoda, and Crustacea found in the aquatic hosts as well as to understand their ecology and host/parasite relationships.

4450.1(2) Diversity in Forest Ecosystems

Prerequisite: BIOL 2324.1(2), and BIOL 2308.1(2) or MATH 1216.1(2).

This course introduces students to field research in forest ecosystems of Nova Scotia. This field course covers issues such as the need to protect natural ecosystems, the effects of management practices on all components of the ecosystem and the evaluation of biodiversity. The students will use field techniques such as capture - recapture, soil analysis and vegetation survey to evaluate diversity and measure species responses to environmental changes. This course will give the students a unique opportunity to work in collaboration with wildlife and forest managers. The field work will be conducted outside Halifax, in protected and managed forest ecosystems of Nova Scotia.

4451.1(2) Ecology in the Tropics

Prerequisites: BIOL 2324.1(2), BIOL 2308.1(2) or PSYC 2350.1(2) and application to the department.

This course will provide students with an opportunity to study ecology of a tropical environment, the highlight of which will be a field trip to a tropical location where students will be able to immerse themselves into a tropical environment. Prior to departure students will present and attend seminars on subjects pertinent to the ecology of the tropical field site to be visited. Further, students will design a research project on some aspect of tropical ecology prior to departure to the tropical site, collect data for the project while in the tropics and write a report on the research upon return to Saint Mary's University.

Note: Students are responsible for travel and living costs associated with the course, as well as tuition. Enrolment is limited and admission is by application to the Biology Department, contact the chair for details. This course occurs over a period of 10-12 days and nights at an off-campus location.

4500.0 Research Thesis

Prerequisite: honours standing.

Research project carried out by the student under the supervision of a member of the Department. The student will submit a thesis and present it orally.

Lab 6 hrs. a week. 2 semesters.

4549.0 Honours Seminar

Prerequisite: honours standing.

Seminars followed by discussions based on recent advances in biology. In consultation with the honours advisor, the honours students will select and prepare the topics for presentation to biology faculty and students.

4876.1(2) - 4899.1(2) Directed Study in Biology

Prerequisite: Permission of instructor on a directed studies form available from the Chairperson of Biology.

These courses are intended to supplement the course offerings in biology and allow students to delve deeper into a subject of particular interest to them. Students must show some initiative and be willing to work independently.

Chemistry (CHEM)

Chairperson, Associate Professor	M. Lamoureux,
Professors	C. Elson, R. Singer, K. Vaughan
Associate Professors	J. Clyburne (cross appointed with ENVS), A. Piorko, C. Pye
Assistant Professors	J. Masuda, K. Singfield
Adjunct Professors	D. Gamble, W. Jones
Professors Emeriti	J. Murphy, J. Young
Dean Emeritus	W. Bridgeo
Canadian Research Chair	J. Clyburne

Department website:

<http://www.smu.ca/academic/science/chemist/>

The program offerings of the Department of Chemistry are designed to meet two main objectives:

- to provide a rigorous core education in the theory and practice of chemistry for students pursuing a Bachelor of Science degree with Honours, Major, or Concentration in Chemistry;
- to provide students in other disciplines an introduction to the principles and practices of this central science, contributing to their fundamental understanding and appreciation of the physical world.

The Bachelor of Science with Major or Honours in Chemistry degree at Saint Mary's University is recognized as a nationally accredited program by the Canadian Society for Chemistry (CSC) governing board, ensuring that the program has the potential to prepare graduates to practice their profession in a competent scientific manner. Honours graduates from the program are well prepared to continue their education at the graduate level in related fields of study. Majors graduates are also well equipped to further their education or to enter into the scientific work force, contributing to such areas as research, education, government, and industry at various levels of responsibility.

In addition to a strong commitment to teaching, the Chemistry Department Faculty members are committed to engaging undergraduate students in their research activities. Opportunities exist for motivated and capable students to enrich their program by contributing to the research work and dissemination of research results through employment as research assistants and participation in research conferences.

Major in Chemistry:

Students must successfully complete forty-two (42) credit hours in Chemistry as follows:

- CHEM 1210.1 General Chemistry I
- one of CHEM 1211.2, 1212.2 or 1213.2 General Chemistry II
- CHEM 2312.1 Physical Chemistry I
- CHEM 2313.2 Physical Chemistry II
- CHEM 2332.1 Intro Analytic Chemistry: Wet Methods
- CHEM 2333.2 Intro Analytical Chemistry: Instrument Methods
- CHEM 2344.1 Organic Chemistry I

- CHEM 2345.2 Organic Chemistry IIA
- CHEM 3322.1 Inorganic Chemistry I
- CHEM 3324.2 Inorganic Chemistry II
- CHEM 3451.1(.2) Intro Biochemistry or CHEM 4452..1(.2) Biochemistry: Metabolism
- Nine (9) credit hours in Chemistry at the 3400 level or above;
- MATH 1210 and MATH 1211;
- PHYS 1100 and PHYS 1101
- Three (3) credit hours in Mathematics or Computer Science.

Suggested Program

The following program is recommended by the Department of for students taking the Chemistry major program:

Year 1:

- CHEM 1210.1(.2) General Chemistry I
- One of CHEM 1211.1(.2), 1212.1(.2) or 1213.1(.2) General Chemistry II
- MATH 1210.1(.2) Intro Calculus I
- MATH 1211.1(.2) Intro Calculus II
- PHYS 1100.1(.2) University Physics I
- PHYS 1101.1(.2) University Physics II
- ENGL 1205.1(.2) Introduction to Literature
- Three (3) credit hours in Humanities
- Six (6) credit hours from Arts

Year 2:

- CHEM 2312.1 Physical Chemistry I
- CHEM 2313.2 Physical Chemistry II
- CHEM 2332.1 Intro Analytic Chemistry: Wet Methods
- CHEM 2333.2 Intro Analytical Chemistry: Instrument Methods
- CHEM 2344.1 Organic Chemistry I
- CHEM 2345.2 Organic Chemistry IIA
- Three (3) credit hours in Mathematics or Computing Science
- Three (3) credit hours in non-chemistry science electives
- Six (6) credit hours in electives

Year 3:

- CHEM 3322.1 Inorganic Chemistry I
- CHEM 3324.2 Inorganic Chemistry II
- CHEM 3451.1(.2) Intro Biochemistry or CHEM 4452..1(.2) Biochemistry: Metabolism
- Six (6) credit hours from Arts
- Six (6) credit hours in non-chemistry science electives
- Nine (9) credit hours electives

Year 4:

- Nine (9) credit hours at the 3400 level or above
- Twelve (12) credit hours non-chemistry electives
- Nine (9) credit hours electives

Double Major in Chemistry and Other Science:

Students must successfully complete thirty-six (36) credit hours in chemistry as follows:

- CHEM 1210.1 General Chemistry I
- one of CHEM 1211.2, 1212.2 or 1213.2 General Chemistry II
- Eighteen (18) credit hours from the following:
 - CHEM 2312.1 Physical Chemistry I and CHEM 2313.2 Physical Chemistry II
 - CHEM 2332.1 Intro Analytic Chemistry: Wet Methods and CHEM 2333.2 Intro Analytical Chemistry: Instrument Methods
 - CHEM 2344.1 Organic Chemistry I and CHEM 2345.2 Organic Chemistry IIA
 - CHEM 2373.1 Environmental Chemistry I and CHEM 2374.2 Environmental Chemistry II
 - CHEM 3322.1 Inorganic Chemistry I and CHEM 3324.2 Inorganic Chemistry II
- Twelve (12) credit hours in Chemistry at the 3400 level or above.

Honours in Chemistry

Students must successfully complete sixty (60) credit hours in Chemistry as follows:

- CHEM 1210.1 General Chemistry I
- one of CHEM 1211.2, 1212.2 or 1213.2 General Chemistry II
- CHEM 2312.1 Physical Chemistry I
- CHEM 2313.2 Physical Chemistry II
- CHEM 2332.1 Intro Analytic Chemistry: Wet Methods
- CHEM 2333.2 Intro Analytical Chemistry: Instrument Methods
- CHEM 2344.1 Organic Chemistry I
- CHEM 2345.2 Organic Chemistry IIA
- CHEM 3322.1 Inorganic Chemistry I
- CHEM 3324.2 Inorganic Chemistry II
- CHEM 3432.1(.2) Instrument Analysis I or CHEM 4433.1(.2) Instrument Analysis II
- CHEM 3443.1(.2) Organic Reaction Mechanisms or CHEM 4444.1(.2) Synthesis in Organic Chem
- One of CHEM 3445.1(.2) Organic Spectroscopy, CHEM 4421.1(.2) Organometallic Chemistry or CHEM 4422.1(.2) Adv Topics in Organic Chem
- CHEM 3451.1(.2) Intro Biochemistry or CHEM 4452.1(.2) Biochemistry: Metabolism
- CHEM 4412.1(.2) Quantum Chemistry
- CHEM 4498.0 Selected Research Topics
- CHEM 4500.0 Research Thesis
- Three (3) credit hours in Chemistry at the 3400 level or above;
- MATH 1210 and MATH 1211
- MATH 2310 and MATH 2311
- PHYS 1100 and PHYS 1101

Double Honours in Chemistry and Other Science:

Students must successfully complete forty-two (42) or forty-eight (48) credit hours in chemistry as follows:

- CHEM 1210.1 General Chemistry I
- one of CHEM 1211.2, 1212.2 or 1213.2 General Chemistry II
- Eighteen (18) credit hours from the following:
 - CHEM 2312.1 Physical Chemistry I and CHEM 2313.2 Physical Chemistry II
 - CHEM 2332.1 Intro Analytic Chemistry: Wet Methods and CHEM 2333.2 Intro Analytical Chemistry: Instrument Methods
 - CHEM 2344.1 Organic Chemistry I and CHEM 2345.2 Organic Chemistry IIA
 - CHEM 3322.1 Inorganic Chemistry I and CHEM 3324.2 Inorganic Chemistry II
- Twelve (12) credit hours in Chemistry at the 3400 level or above
- CHEM 4498.0 Selected Research Topics In Chemistry and CHEM 4500.0 Research Thesis if the honours research thesis is in Chemistry, otherwise, six (6) credit hours at any level in Chemistry.

It is strongly recommended (or necessary, depending on course choice prerequisites) that students complete the following non-chemistry courses:

MATH 1210 and MATH 1211 (normally in year 1);
PHYS 1100 and PHYS 1101 (normally in year 1).

90 Credit Hour (3 year) B.Sc. with a Concentration in Chemistry

Students must successfully complete thirty (30) credit hours in Chemistry as follows:

- CHEM 1210.1 General Chemistry I
- one of CHEM 1211.2, 1212.2 or 1213.2 General Chemistry II
- Twelve (12) credit hours from the following:
 - CHEM 2312.1 Physical Chemistry I and CHEM 2313.2 Physical Chemistry II
 - CHEM 2332.1 Intro Analytic Chemistry: Wet Methods and CHEM 2333.2 Intro Analytical Chemistry: Instrument Methods
 - CHEM 2344.1 Organic Chemistry I and either CHEM 2345.2 Organic Chemistry IIA or CHEM 2346.2 Organic Chemistry IIB
 - CHEM 3322.1 Inorganic Chemistry I and CHEM 3324.2 Inorganic Chemistry II
- Twelve (12) credit hours in Chemistry at the 3400 level or above

SPECIAL NOTE

Students must achieve a passing grade in the lab component of a chemistry course in order to be eligible to receive credit for the course. All of the Chemistry courses listed on these pages have a 3-hour per week lab period except the following courses: CHEM 1220, CHEM 1221, CHEM 2380, and CHEM 4498.

Graduate-Level Courses

The Department offers instruction in Chemistry at the graduate level. For details on graduate courses, see the *Graduate Academic Calendar*.

Course Descriptions

0010.0 Introduction to Chemistry

The fundamental laws and principles of chemistry are explored and applied in the study of selected non-metals, metals and their compounds.

Note: This is a preparatory course. It does not carry a credit value; therefore, it cannot be counted in the number of credits required for a degree, diploma or certificate.

1210.1(.2) General Chemistry I

Prerequisite: The equivalent of Nova Scotia Chemistry 12 Academic or equivalent; and either MATH 1210.1(.2), MATH 1190.1(.2) or CSCI 1226.1(.2) which may be taken concurrently.

An introduction to general topics in chemistry including composition and properties of matter, reaction stoichiometry, chemical reactions, atomic structure, the periodic table, chemical bonding, molecular geometry and gases. The course is intended for students interested in the physical sciences, life sciences and for students in the engineering program.

Note: Students intending to enrol in CHEM 1211.1(.2) or CHEM 1213.1(.2) in the second semester are advised to take MATH 1210.1(.2) and not CSCI 1226.1(.2).

Note: Credit is given for one of CHEM 1211.1(.2), CHEM 1212.1(.2), or CHEM 1213.1(.2).

1211.1(.2) General Chemistry II for Physical Sciences

Prerequisite: CHEM 1210.1(.2) and either MATH 1210.1(.2) or 1211.1(.2) which may be taken concurrently.

A continuation of the introduction to general topics in chemistry including chemical equilibrium and applications to aqueous systems, physical equilibrium, thermodynamics, reaction kinetics, molecular structure, electrochemistry and organic chemistry. Emphasis is placed on applications to the physical sciences, including chemistry, geology and physics.

Note: This course is intended for students in the physical sciences.

1212.1(.2) General Chemistry II for Life Sciences

Prerequisite: CHEM 1210.1(.2) and either MATH 1210.1(.2), 1211.1(.2), CSCI 1226.1(.2) or 1227.1(.2) which may be taken concurrently.

A continuation of the introduction to general topics in chemistry including chemical equilibrium and applications to aqueous systems, physical equilibrium, thermodynamics, reaction kinetics, molecular structure, electrochemistry and organic chemistry. Emphasis is placed on applications to the life sciences, including biology.

Note: This course is intended for students in the life sciences.

This course satisfies the requirement for the Chemistry Major or Honours only if MATH 1210.1(.2)/1211.1(.2) is completed successfully

1213.1(.2) General Chemistry II for Engineering

Prerequisite: CHEM 1210.1(.2); and MATH 1210.1(.2) or 1211.1(.2) which may be taken concurrently.

A continuation of the introduction to general topics in chemistry including chemical equilibrium and applications to aqueous systems, physical equilibrium, thermodynamics, reaction kinetics, molecular structure, electrochemistry and organic chemistry. Emphasis is placed on applications to the related field of engineering.

Note: This course is intended for students in the engineering programs.

1220.1(.2) Chemistry and Industry

This course is intended as an introduction to general chemistry for students who have little background in science and mathematics. The course focuses on commercially important industries and technologies and the role and importance of chemistry in these industries. Particular emphasis is placed on the role of chemistry in innovative technologies. Topics may include chemistry and the industrial world, or chemistry and material science, and/or chemistry and high technology.

Note: Please note that this course may not be used by B. Sc. Students to satisfy the requirement of a science elective under regulations 3.e., 6.e., 10.c., and 12.b. for B.Sc. degrees.

1221.1(.2) Chemistry of Life

This course is an introduction to the chemistry of everyday life for non-science major students who have an interest in improving their scientific literacy and understanding of the world around them. Theory is presented on a need-to-know basis as real-world subjects ranging from the chemistry of global warming to designer drugs are encountered.

Note: Please note that this course may not be used by B. Sc. Students to satisfy the requirement of a science elective under regulations 3.e., 6.e., 10.c., and 12.b. for B.Sc. degrees. There is no lab component for this course.

2100.1(.2) Green Chemistry [ENVS 2100.1(.2)]

Prerequisite: six (6) credit hours in CHEM at the 1000 level.

Green chemistry, or environmentally benign chemistry, is the design of chemical products and processes that reduce or eliminate the use and generation of hazardous substances. This course will examine the chemical principles and processes in the development of technology and in the effects that this technology has on the environment. The course will avoid traditional approaches that only consider the treatment of pollution after it was created, and will focus on alternative routes that limit the production of waste.

Classes 3 hrs and lab 3 hrs a week. 1 semester.

2312.1(.2) Physical Chemistry I

Prerequisite: CHEM 1211.1(.2) or 1212.1(.2) or 1213.1(.2), and MATH 1210.1(.2)/1211.1(.2) or 1212.1 (.2).

In this introduction to Physical Chemistry, a study of the underlying physical principles that govern the properties and behaviour of chemical systems from a *macroscopic* viewpoint will be undertaken. Topics covered will include: Laws of Thermodynamics; Temperature; Work, Heat, Enthalpy; Entropy; Carnot Cycle; Free Energy, Colligative Properties of Solutions; Phase Equilibrium; Phase Diagrams of Pure Substances and Simple Mixtures; Chemical Potentials and Chemical Equilibrium.

2313.1(.2) Physical Chemistry II

Prerequisite: CHEM 1211.1(.2) or 1212.1(.2) or 1213.1(.2), and MATH 1210.1(.2)/1211.1(.2).

In this second course in Physical Chemistry, the focus will be on processes by which change occurs in chemical systems and the rates of these changes. The first part of the course examines molecular motion in gases and liquids and the mobility of ions in solution. In the second part, the focus will be on the branch of Physical Chemistry called Kinetics. The rates and mechanisms of simple and complex chemical reactions will be examined, including polymerization and reactions at surfaces. Topics may include catalysis and kinetics of crystallization.

2332.1(.2) Introductory Analytical Chemistry: Wet Methods [GEOL 2332.1(.2)]

Prerequisite: CHEM 1211.1(.2) or 1212.1(.2) or 1213.1(.2).

An integrated lecture-laboratory course with emphasis on basic analytical methods. The practical application of analytical methods will be stressed by analyzing geological and environmental samples. Lecture topics will include treatment of data, theory of gravimetric and titrimetric analyses and chemical equilibria.

2333.1(.2) Introductory Analytical Chemistry: Instrumental Methods [GEOL 2333.1(.2)]

Prerequisite: CHEM 2332.1(.2).

An integrated lecture-laboratory course with emphasis on basic analytical methods. The practical application of analytical methods will be stressed by analyzing geological and environmental samples. Lecture topics will include an introduction to electrochemistry, spectroscopy, chromatography and extractions.

2344.1(.2) Organic Chemistry I

Prerequisite: CHEM 1211.1(.2) or 1212.1(.2) or 1213.1(.2).

An introduction to organic chemistry designed for all students in life science, physical science, general science, engineering or non-science. Topics covered include the structure, nomenclature, physical properties, synthesis, reactions and spectroscopic properties of all classes of hydrocarbons: alkanes, alkenes, alkynes, arenes, alicyclic compounds, polyenes, as well as the principle heterocyclic compounds. The course emphasizes the mechanistic approach to the reactivity of organic compounds and

provides a thorough introduction to stereochemistry and nuclear magnetic resonance.

2345.1(.2) Organic Chemistry IIA

Prerequisite: CHEM 2344.1(.2).

A course for chemistry majors and other physical science students intending to go on to more advanced organic chemistry. Introduction to the mechanisms of the reactions of monofunctional organic compounds. Introduction to stereochemistry. Simple spectroscopy. Macromolecules. Introduction to synthesis design.

2346.1(.2) Organic Chemistry IIB

Prerequisite: CHEM 2344.1(.2).

A course for students in the life sciences. The course covers the chemistry of the principle functional groups in organic molecules with special emphasis on the relevance of organic functional group chemistry to molecules of biological importance. The functional group classes include: alcohols, thiols, phenols, ethers, epoxides, aldehydes, ketones, carboxylic acids, esters, amides, anhydrides, acid chlorides, nitriles, amines, amino acids, proteins, and carbohydrates. The course emphasizes the mechanistic approach to functional group reactivity and makes the connection to biochemistry at every opportunity. The stereochemical features of molecules of biological interest are emphasized.

2373.1(.2) Environmental Chemistry I

Prerequisite: CHEM 1211.1(.2) or 1212.1(.2) or 1213.1(.2).

A first course in those aspects of chemistry useful for studying environmental science and engineering. The topics include: a review of selected concepts from the general chemistry course; thermodynamic concepts of enthalpy and free energy; vapour pressure of liquids; surface tension; binary mixtures; osmosis; dialysis; solvent extraction, electrochemical cells; first and second order kinetics, catalysis; absorption; degradation of aliphatic, aromatic and polycyclic organic compounds including trace organics, detergents, soaps and pesticides.

2374.1(.2) Environmental Chemistry II

Prerequisite: CHEM 2373.1(.2).

The course attempts to bring into focus the chemistry which is particularly valuable to environmental science and engineering. The topics include: applications of equilibrium chemistry; colloids in liquid and gas phases; enzymes and their reactions with carbohydrates, proteins, fats and oils; nuclear fission; nuclear fusion; and the effect of radiation on man.

2380.1(.2) Communication in Chemistry

Prerequisite: ENGL 1205.1(.2) and CHEM 1210.1(.2)

This course will provide the skills necessary to communicate scientific information in a logical, clear manner. Emphasis will be on written communication; students will learn proper format for reports, manuals, lab assignments, and scientific journal articles. Students will learn how to perform background research using the Library and electronic

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resources, and will present technical documents during the term

Note: This course is intended primarily for chemistry students but is open to students in other disciplines. This course may not be used by B. Sc. Students to satisfy the requirement of a science elective under regulations 3.e., 6.e., 10.c., and 12.b. for B.Sc. degrees.

3322.1(.2) Inorganic Chemistry I

Prerequisite: CHEM 1211.1(.2) or 1212.1(.2) or 1213.1(.2).

This course will examine the structure and bonding of the main group elements. Topics covered will include electronic structure of atoms, bonding theories, ionic solids, and an introduction to point group symmetry and group theory; descriptive chemistry of the main group elements and their compounds.

3324.1(.2) Inorganic Chemistry II

Prerequisite: CHEM 3322.1(.2).

This course examines the structure, bonding, and reactivity of transition metal complexes. Topics will include crystal field theory, ligand field theory, magnetism and electronic structure of coordination compounds; oxidation and reduction and substitution reactions of square planar and octahedral complexes. Ligands and an introduction to organometallic chemistry will also be covered.

3432.1(.2) Instrumental Analysis I

Prerequisite: CHEM 2333.1(.2).

Emphasis will be placed on i) separation techniques including high performance and gas chromatography; ii) modern electro-chemical techniques including differential pulse voltammetry and stripping analysis; iii) analogue circuits and devices and digital electronics.

3443.1(.2) Organic Reaction Mechanisms

Prerequisite: CHEM 2345.1(.2).

A study of the more important mechanisms of reactions of organic molecules and the methods by which they are elucidated: applications of kinetic data, isotope effects, linear free energy relationships, orbital symmetry control and acid and base catalysis.

3445.1(.2) Organic Spectroscopy

Prerequisite: CHEM 2345.1(.2).

An introduction to the interpretation of ^1H and ^{13}C nuclear magnetic resonance spectra. Infrared spectroscopy, mass spectrometry, and ultra-violet spectrophotometry will also be applied to the problems of organic and organometallic structural determination.

3451.1(.2) Introductory Biochemistry

Prerequisite: CHEM 2345.1(.2) or 2346.1(.2).

This course reviews and/or presents an introduction to the chemistry and biochemistry of macromolecules such as proteins, enzymes, simple and complex carbohydrates, lipids, nucleic acids, and coenzymes. A relationship

between the molecular structure of a given macromolecule, its properties, and its function in the living system is explored. The laboratory work concentrates on the isolation, purification, and analysis of naturally occurring macromolecules and includes study of their properties, using micro chemical measurements.

4412.1(.2) Quantum Chemistry

Prerequisite: CHEM 2312.1(.2) and 2313.1(.2), MATH 310.1(.2) and 311.1(.2).

The basic principles of quantum physics are used to develop an understanding of atomic and molecular structure.

4413.1(.2) Physical Chemistry

Prerequisite: CHEM 2312.1(.2) and 2313.1(.2), MATH 2310.1(.2) and 2311.1(.2).

An introduction to statistical thermodynamics and the study of chemical reaction rates and mechanisms.

4414.1(.2) Symmetry and Chemical Applications of Group Theory

Prerequisite: CHEM 4412.1(.2) or permission of Instructor.

An introduction to symmetry and group theory for the experimental chemist. Applications of point groups and space groups in organic chemistry, inorganic chemistry, molecular spectroscopy, atomic and molecular structure and crystallography.

4421.1(.2) Organometallic Chemistry

Prerequisite: CHEM 3324.1(.2) or permission of the Instructor.

This course will deal with synthesis, structure, and reactivity or organotransition metal complexes. Topics will include transition metal-alkyls, -carbonyls, -alkenes, -alkynes and -bonded complexes, fundamental reactions and applications to organic synthesis and catalysis. Characterization of organometallic complexes using spectroscopic techniques (IR, Raman, NMR, and ESR) and X-ray crystallography will also be covered.

4422.1(.2) Advanced Topics in Inorganic Chemistry

Prerequisite: CHEM 3324.1(.2) or permission of the Instructor.

Current topics and applications of inorganic chemistry will be covered, and may include the following: cluster chemistry, chemistry of the lanthanides and actinides, inorganic and organometallic materials, bioinorganic chemistry and inorganic photochemistry.

4433.1(.2) Instrumental Analysis II

Prerequisite: CHEM 2333.1(.2).

Emphasis will be placed on (i) atomic spectroscopy including atomic absorption and emission; (ii) x-ray fluorescence; (iii) neutron activation analysis; (iv) mass spectrometry.

4444.1(.2) Synthesis in Organic Chemistry

Prerequisite: CHEM 2345.1(.2).

A study of the principles involved in the planning and execution of the synthesis of organic molecules. Laboratory experiments are designed so that students learn to identify their products by the use of spectroscopic and other techniques.

4452.1(.2) Biochemistry: Metabolism I

Prerequisite: CHEM 2345.1(.2) or 2346.1(.2).

A course presenting principles of metabolism of biomolecules involved in energy production, formation of biosynthetic substrates and metabolism of nucleic acids. Both catabolic and anabolic processes as well as transport of biomolecules within cells and organs are considered.

4453.1(.2) Biochemistry: Metabolism II

Prerequisite: CHEM 3451.1(.2). or CHEM 4452.1(.2)

A course presenting principles of metabolism of molecules commonly referred to as the secondary metabolites, i.e. involved neither in energy nor in biosynthetic substrates formation. Thus biosynthetic pathways leading to formation of major secondary metabolite (or natural products) classes, i.e. fatty acids derivatives, polyketides, isoprenoids including sterols, alkaloids, and shikimic acid pathway products such as phenols, lignans, and flavonoids, will be presented. Some major enzymes involved in formation of these biomolecules as well as the methods of pathway and structure elucidation will be presented along with biological activity, ecological and taxonomic significance of metabolites. The laboratory component will provide an

opportunity to complete an individual research project, including literature search, experimental work, analysis of results, and writing a comprehensive report.

4498.0 Selected Research Topics in Chemistry

Prerequisite: this is a final year course for honours students and a recommended additional Chemistry credit for majors in Chemistry in their final year.

A weekly seminar course that covers a broad range of research topics that are of current relevance, including ethics in science. Speakers include faculty from within and outside Saint Mary's University and students will normally be expected to present two seminars.

4500.0 Research Thesis

Prerequisite: restricted to final year students in the honours program.

Students will carry out a research project under the direction of one of the members of the Department and will prepare a thesis on their work. The thesis is presented orally.

4876.1(.2) – 4899.1(.2) Directed Study in Chemistry

Prerequisite: Permission of instructor.

These courses cover advanced topics in chemistry chosen according to the needs and interests of the students and instructor. These courses provide an opportunity to study a particular subject in detail and require some measure of independence and initiative from the student.

Chinese (CHNS)

Chairperson, Modern Languages and Classics

Associate Professor G. Nahrebecky

Assistant Professor C. Beaupre

Courses in Chinese are offered by the Department of Modern Languages and Classics

1. Enrollment in some language courses involves the following formal placement procedures.

All students seeking entry into language courses who have not previously taken a language course at Saint Mary's University must complete and return the Language Profile Form to the Department of Modern Languages and Classics.

Based on the information provided in the Language Profile Form, students may receive notification from the Department to appear for an oral interview and/or a written placement test at a designated time.

The Department of Modern Languages determines the appropriate course placement for each student

- (i) Permission to register or remain in a particular language course can be refused if the Department judges that the student's knowledge exceeds the level for that course.
- (ii) Native speakers are not eligible to receive advanced credit for language courses.
- (iii) Completion of Advanced Standing (transfer) courses does not exempt a student from taking the placement test.

2. In order to ensure the academic integrity in language courses, especially at the lower levels of instruction, the Department of Modern Languages and Classics does not allow native or near-native speakers of a particular target language to enroll in courses at the 2000 level or lower.

Students who misrepresent their knowledge of any given language by providing inaccurate or incomplete information about their linguistic educational history will be subject to disciplinary action as laid out in Academic Regulation 19.

3. The Department of Modern Languages and Classics supports a policy of regular class attendance by students.

Frequent, unexplained absences from class will result in a lowering of the final grade in a manner to be determined by each faculty member.

Certificate of Chinese Studies (Cert. C.S.)

This certificate program in Chinese Studies is designed to provide linguistic, cultural and practical knowledge to persons interested in studying about or working in China. The program consists of twenty-four (24) credit hours. It is intended for undergraduate students, persons already holding degrees in any discipline, and mature students with relevant work experience.

Admission

The Certificate of Chinese Studies requires a formal application for admission. The official approval of the Asian Studies Coordinator is a prerequisite for admission to the program. Students majoring in Asian Studies at Saint Mary's University are not eligible for this program.

A student of the program must complete at least eighteen (18) credit hours at Saint Mary's University. Relevant academic courses, work experience and linguistic capability may be considered for credit recognition. Applicants should submit a resume of relevant work experience, official university transcripts and any other relevant documentation.

Program Courses

This program consists of twelve (12) required credit hours and a number of optional credit hours. All students are required to take Chinese 1100.0 (Introductory Modern Chinese) and Chinese 2200.0 (Intermediate Modern Chinese). Students must also select twelve (12) optional credit hours in at least two different disciplines from the following courses:

magazines, and modern short stories will be used, especially in the second semester, to help students acquire the ability to read and write.

3300.1(.2) Advanced Oral and Written Chinese I Prerequisite: CHNS 2200.0

This course offers an opportunity to build and refine students' ability to comprehend and to communicate effectively in Chinese.

ANTH 2326.1(.2); ASNT 3300.1(.2); ASNT 3310.1(.2); GEOG 3380.1(.2); HIST 1222.1(.2); HIST 1223.1(.2); HIST 2381.1(.2); HIST 2382.1(.2) HIST 2383.1(.2); HIST 4511.0; RELS 2327.1(.2); RELS 2345.1(.2).

At least twelve (12) credit hours must be at the 3000 level or above. Detailed descriptions are found under Departmental listing. These courses may not be offered every year.

Requirements for Graduation

Students are encouraged to complete the program within five years. A minimum cumulative grade point average of 2.00 in the Certificate of Chinese Studies is required. Students who have completed all the courses without being officially admitted to the program will not be accredited.

Course Descriptions

1100.0 Introductory Modern Chinese

An introduction to spoken and written modern Chinese (Mandarin). Conversational drill and comprehension exercises in the classroom and laboratory provide practice in pronunciation and in the use of the basic patterns of speech. Chinese ideographs are introduced and studied in combinations. Reading progresses from prepared materials to selections from contemporary writings.

2200.0 Intermediate Modern Chinese

Prerequisite: CHNS 1100.0.

A continuation of CHNS 1100.0, this course is intended to develop proficiency in both oral and written Chinese with emphasis on comprehension. Textbooks, newspapers,

3301.1(.2) Advanced Oral and Written Chinese II

Prerequisite: CHNS 3300.1(.2)

This course is a continuation of CHNS 3300.1(.2).

Classics (CLAS)

Ancient History (CLAS) - Classical Literature and Civilization (CLAS) - Greek (GREK) - Latin (LATN)

Chairperson, Modern Languages and Classics
Associate Professor G. Nahrebecky

Classics

Assistant Professors A.E. Barclay, M. McCallum
Adjunct Professor G. Thomas

Courses and programs in Classics are offered by the Department of Modern Languages and Classics

Note that Classics courses (CLAS) satisfy the BA humanities requirement 3(c), but courses in Latin and Greek do not.

Programs in Classics

The Classics Program encompasses ancient languages, literature, history and culture in Greek, Roman, and Near Eastern societies. **One of the language courses may be used to satisfy the 3(b) requirement of the Faculty of Arts, while the other courses in Classics may be used to satisfy the 3(c) requirement.**

Students majoring in Classics must study at least one of the ancient languages. Entry to a graduate program in Classics normally means the successful completion of at least eighteen (18) credit hours at the undergraduate level in one ancient language (Latin or Greek) and twelve (12) credit hours in the other. Latin is a valuable asset for students majoring in French, German or Spanish.

Major in Classics

A major in Classics comprises forty-two (42) credit hours, twenty-four (24) credit hours of which must be at the 3000 level or above. Six (6) credit hours are required in an ancient language, e.g., Greek, or Latin. Students in Arts must maintain a minimum grade point average of 2.00 (an average grade of C) in order to achieve the Classics major.

Concentration in Classics

To obtain a concentration in Classics in partial fulfillment of the B.A. General Degree (i.e. one with a Double Arts Concentration and a minimum of ninety (90) credit hours), a minimum of twenty-four (24) credit hours Classics is required. At most 6 credit hours can be at the 1000 level. Also, the minimum grade point average is 2.00.

Minor in Classics

A minor in Classics consists of at least twenty-four (24) credit hours, twelve (12) of which must be at the 3000 level or above. To obtain a minor students must achieve a minimum grade point average of 2.00 (an average grade of C or better) in the courses of the minor.

Introductory Courses (CLAS)

1001.1.(2) Ancient Civilization of the Near East and Egypt

Prerequisite: none

An introduction to the civilization and cultural contributions of the ancient Near East and Egypt. Aided by illustrated lectures and the study of ancient literature, students will explore the history, political organizations, art and monuments of these early civilizations. The course is not open to students with credit in CLAS 2200.0

1002.1.(2) The Ancient Civilization of Greece and Rome

Prerequisite: none

A general introduction to the civilizations of ancient Greece and Rome with particular regard to history, political organization, material culture, and contributions to western cultural development. Students will examine primary sources relevant to the history, social, and political organization of Greek and Roman society, and be introduced to the art, architecture, and material culture of these two ancient cultures

2000.1.(2) An Introduction to Greek Art and Archaeology

Prerequisite: 3 credit hours in Classics, Anthropology 1271, or a 2000-level course in HIST

This course is a survey of the art and archaeology of the ancient Greek world from the Late Bronze Age through the Hellenistic period. Aided by slides and other visual media student will become acquainted with the "major arts" (painting, sculpture, architecture) and other material remains of the ancient Greeks. Through the application of art historical and archaeological method and theory, students will also explore the origins and development of pivotal examples of ancient Greek art, artifacts and movements within their broader social, historical and religious contexts (e.g. Corinthian and Athenian vase-painting, the Parthenon, Praxiteles' Aphrodite of Knidos). This course is not open to students who have received credit in CLAS 3311, "Art in Greece and/or the Ancient Near East".

2100.1.(2) A Survey of Roman Art and Archaeology

Prerequisite: 3 credit hours in Classics, Anthropology 1271, or a 2000-level course in History.

This course investigates important issues and current problems in the art and archaeology of the ancient Roman world. Students will focus on a careful examination of the material record of the ancient Romans, including architecture, works of art, and artifacts, and through the lens of art historical and archaeological method and theory, be asked to understand complex cultural phenomena such as imperialism, urbanism, gender definitions, ethnicity, economic behaviour, cultural interaction, and culture change. Aided by slides and other visual media, students

will be presented with the images of the great works of art and architecture of the Roman world, such as the Pantheon and the Augustus Prima Port, and will examine the great sites of the Roman world, a list that may include Pompeii, Ostia, Rome, Ephesus, and Constantinople. Students who have taken CLAS 3312. "Art of the Hellenistic World and/or Rome," are not eligible to receive credit for this course

2200.0 The Ancient Civilizations of the Mediterranean and the Near East

A general introduction to the civilizations of the ancient Near East, Egypt, Greece and Rome with particular regard to history, political organization and cultural contributions.

2201.1.(2) The Mythology of Greece and Rome I

The course deals with the nature of mythology and the subject matter of the principal myths of Greece and Rome, with particular attention on the Greek and Roman gods. Students will be exposed to the works of Classical literature in which these myths are presented. Where possible the students are also encouraged to look at later versions and adaptations of the ancient tales.

2202.1.(2) The Mythology of Greece and Rome II

The course deals with the nature of mythology and the subject matter of some of the principal myths of Greece and Rome. Emphasis is on the concept of the hero in Greek and Roman literature and culture. As such, students will read works of Classical literature that touch on this and related themes.

2203.1.(2) Ancient Civilization of the Near East and Egypt

Prerequisite: none

An introduction to the civilization and cultural contributions of the ancient Near East and Egypt. Aided by illustrated lectures and the study of ancient literature, students will explore the history, political organizations, art and monuments of these early civilizations. The course is not open to students with credit in CLAS 2200.0

2204.1.(2) The Ancient Civilization of Greece and Rome

Prerequisite: none

A general introduction to the civilizations of ancient Greece and Rome with particular regard to history, political organization, material culture, and contributions to western cultural development. Students will examine primary sources relevant to the history, social, and political organization of Greek and Roman society, and be introduced to the art, architecture, and material culture of these two ancient cultures

Ancient History (CLAS)

2451.1.(2) Greek History I: From Minos to the Medes [HIST 2451.1.(2)]

Prerequisite: 3.0 credit hours in Classics or History

An introduction to the history and culture of the ancient Greeks from the Bronze Age through the Persian Wars. Students will explore Minoan and Mycenaean civilizations

and the social, historical and cultural development of the Archaic period including the origins of the Greek and the evolution of the polis and early political systems. Among the topics students will examine the evaluation of the Spartan military state, Athenian democracy, pre-Classical Greek religion, art, architecture and literature. Students will be asked to read the works of various ancient authors and to consider the archaeological and epigraphical evidence for this period of Greek history.

2452.1.(2) Greek History II: The Golden Age of Greece [HIST 2452.1.(2)]

Prerequisite: 3.0 credit hours in Classics or History

An introduction to the history of the Greeks from the Persian Wars through the death of Alexander the Great. Students will study the historical, political and cultural developments of the Greeks in the 5th and 4th centuries BC, including the rise and fall of Athens, democracy in action and the cultural achievements of Athens in her "Golden Age" (e.g. religion, theatre, philosophy, art and architecture). Students will also explore the activities of other Greek states (e.g. Sparta, Boeotia, Syracuse), the roles of men and women in Greek society, the causes and aftermath of the Peloponnesian wars, the conquest of Greece by Phillip II of Macedon and of the Persian Empire by his son, Alexander. Students will be asked to read various works of ancient authors and to consider archaeological and epigraphical evidence relevant to this period of Greek history.

2453.1.(2) Republic and Revolution: Roman History I [HIST 2453.1.(2)]

Prerequisites: 3.0 credit hours in Classics or History or permission of the instructor.

An introduction to the history of Italy and the city of Rome from the Iron Age through the end of the Roman republican system of government. This course will explore the origins and evolution of the Roman Republic, including the interaction between Romans, their Italian neighbours such as the Etruscans, and the Greek and Phoenician peoples of the eastern Mediterranean. Among the topics students will examine are the political and military history of the period as well as the social and cultural context that encapsulate and inform this history, and the period as well as the social and cultural context that encapsulate and inform this history, and the eventual decline of the republican system amidst the political turmoil and revolution of the first century BC/BCE. Students will be asked to read the works of various ancient authors and to consider archaeological and epigraphic evidence for this history of the roman republic. Content will vary from year to year.

2454.1.(2) Bloody Ceasars: Roman History II [HIST 2454.1.(2)]

An introduction to the history of the Roman world from the establishment of the Principate under Octavian/Augustus to the decline of the Roman empire in the western Mediterranean and Europe. This course will explore the evolution of the Principate and its eventual replacement by the Dominate, the nature of Roman imperialism, the role of the emperor as a political and religious figure, the interaction between the Romans and their neighbours in central Europe and the Near East, and the eventual political and economic

disintegration of the imperial system. Students will be asked to consider such topics as different models of Roman economic, social, and political organization, the role and status of women in the Roman world, the codification of the Roman legal system, and the intellectual and religious developments that laid the foundations for subsequent historical periods in western Europe and the Mediterranean. Students will be asked to read the works of various ancient authors and to consider archaeological and epigraphic evidence relevant to the history of the Roman imperial period. Content may vary from year to year.

3000.1(.2) Topics in Greek Art and Archaeology

Prerequisite: 6.0 credit hours in Classics or 3.0 credit hours in Classics and ANTH 1271.1(.2) or one of :HIST 2451.1(.2); HIST 2452.1(.2); HIST 2453.1(.2); HIST 2454.1(.2) or by permission of instructor

This course addresses a specific topic, theme, period, or geographical region related to the study of Greek Archaeology. Specific topic and course content will be different each time the course is offered, so the students should check with the program coordinator for Classics about the specific topic on offer for the current semester. Topics may include art and architecture of the Aegean Bronze Age (Minoans and Mycenaean), urban life in the Greek city-state, art and politics in Archaic and Classical Greece, cultural interaction between Greece, the Near East and Egypt or Greek iconography. This course is intended to follow CLAS 2000.1(.2), "Introduction to Greek art and Archaeology", but students with a background in archaeology, history, Classics, or art history are also encouraged to enroll.

3100.1(.2) Topics in Roman Archaeology

Prerequisite: 6.0 credit hours in Classics or 3.0 credit hours in Classics and ANTH 1271.1(.2) or one of :HIST 2451.1(.2); HIST 2452.1(.2); HIST 2453.1(.2); HIST 2454.1(.2) or by permission of instructor.

This course addresses a specific topic, theme, period, or geographical region related to the study of Roman Archaeology. Specific topic and course content will be different each time the course is offered, so students should check with the Program coordinator for Classics about the specific topic on offer for the current semester. Topics may include art and architecture of the Augustan Age, Etruscan art and archeology, the art and archaeology of the Roman provinces, or the art and architecture of empire. This course is intended to follow CLAS 2100, "Introduction to Roman Art and Archaeology," but student with a background in archaeology, history, Classics, or art history are also encouraged to enroll.

3303.0 History of Greece [HIST 2350.0]

Prerequisite: six (6) credit hours in Classics or History or the permission of instructor.

An intensive study of ancient Greek history from the time of the early Minoan and Mycenaean societies to the end of the classical polis about 400 B.C. Students will learn something of Greek religion, social history, and government, and in

particular study the development of Athenian democracy. This course may also be used as credit hours in History.

3304.0 History of Rome [HIST 2351.0]

Prerequisite: six (6) credit hours in Classics or History or the permission of instructor.

Ancient Roman and Italian history from the early Paleolithic and Neolithic finds known to archaeology, a study of the Etruscans, the Republic in glory and decline, and the advent of the Principate under Augustus. Subject matter and emphasis can vary in different years. This course may also be used as credit hours in History.

3317.1(.2) Greek Sanctuaries [RELS 3314.1(.2)]

Prerequisite: 3 credit hours in Classics, and 3 credit hours in one of the following: Classics, History, Anthropology or Religious Studies

This course explores ancient Greek religion and the role of the sanctuary in Greek culture. Students will study the archaeological remains and documentary evidence for the role and function of domestic, civic, and panhellenic sanctuaries (e.g., household cults, the Athenian Acropolis, Olympia, Delphi). Students will also consider sites which provide examples of specialty cults (healing, oracular, mystery religions) or which illustrate particular social, political or archaeological issues.

3318.1(.2) Classical Archaeology

Prerequisite: 3 credit hours in Classics, and 3 credit hours in one of the following: Classics, History, Anthropology or Religious Studies. For students majoring in Anthropology, the prerequisite is ANTH 1271.1(.2)

A study of the civilizations of ancient Greece and Rome based on the material remains (e.g., artifacts, architecture, epigraphy). Students will learn how archaeology has helped shape our understanding of these ancient cultures through an exploration of the pioneer days of Classical archaeology, modern methods of interpretation, and of the sites, artifacts and monuments in their cultural contexts.

3600.1(.2) Fieldwork in Archaeology

Cross listed: ANTH 3373.1(.2)

Prerequisite: ANTH 1271(.2) or at least three (3) credit hours in classics

This course offers detailed instruction with practical application of archaeological field techniques. This course is generally taught off-campus at an archaeological site. As such, the course is dependent upon external funds and has a limited enrollment. Please consult the Department Chairperson regarding availability

3610.1(.2) Field Study in Roman Archaeology

Prerequisite: 3.0 credit hours in Classics or ANTH 1271.1(.2)

The practical application of archaeological field techniques and method as it pertains to the study of Classical Roman sites in the Mediterranean and Europe. This course is always taught off-campus at one or more ancient Roman sites in Europe, most frequently Italy. Consequently, the

course is dependent upon external funds and has a limited enrollment. Please consult the Program Coordinator of Classics regarding availability.

3826.1(2) – 3849.1(2) Thematic Selected Topics in Classics

Prerequisite: 6.0 credit hours in Classics or permission of the instructor

A series of courses on selected topics that will be determined by the course instructor. Each course will focus on particular themes in Classical culture (history, archaeology, art and/or literature) and/or specific chronological periods. The subject matter of these courses will be announced occasionally.

4405.0 Advanced Reading and Tutorial

Prerequisite: permission of instructor.

A course based on directed readings and research. The contents of the course will be determined by the specific interests of the professor and the students involved. Students will have the opportunity to pursue in depth their individual interests in the field of Classics, and will meet regularly with a member of the Department to discuss their research. To register in this course students must demonstrate a satisfactory background in Classics or the Ancient World of the Near East and an ability to do independent research.

Classical Literature and Civilization (CLAS)

3311.1(2) Art in Greece and/or the Ancient Near East

Aided by slides, films and reproductions of artistic pieces in addition to lectures and readings, the class will examine the origins, developments and particular interests of artists in Mesopotamia, Egypt and/or Greece.

3312.1(2) Art of the Hellenistic World and/or of Rome

Aided by slides, films and reproductions of artistic pieces in addition to lectures and readings, the class will examine the origins, developments and particular interests of artists in the Hellenistic World and/or Rome.

3313.1(2) Art in Late Antiquity and Europe to the 14th Century [RELS 3313.1(2)]

Christian art borrowed themes and motifs from the pagan past and created new, particularly Christian subjects. This course will study catacomb paintings, Byzantine icons, art in the Carolingian Renaissance, the art of Vikings and conclude with a study of the magnificent Romanesque and Gothic cathedrals.

3352.1(2) Women in Antiquity I [RELS 3306.1(2); WMST 3352.1(2)]

Medea's passion, Aspasia's intellect, and the famous Cleopatra's tragic brilliance are all present in the women of antiquity. This course will examine the ways in which women of different social classes lived in the ancient Near East, including Ancient Israel, and Greece. The development of women's roles and relationships between men and women will be considered in the context of history, religion, myth, and literature.

3353.1(2) Women in Antiquity II [RELS 3307.1(2); WMST 3353.1(2)]

Roman women were doctors, artists, large landowners, beloved wives and mothers. Some, like Dido and Lesbia, were subject matter for famous poets. In this course we will also examine how the development of Christianity in the Roman Empire both softened some abuses against women and aggravated others. From archaeology, literature, and religion, this course examines women's lives from Hellenistic times until the end of the Roman Empire

4876.1(2) – 4899.1(2) Directed Study

Prerequisite: At least twelve (12) credit hours in Classics or permission of instructor.

A three (3) credit hour course open to students who wish to pursue a special topic or topics in Classics through tutorials, independent study, and research. The availability of this course depends upon the agreement of a particular faculty member who is prepared to direct the tutorial and study program.

Classics - Greek (GREK)

1100.0 Introductory Ancient Greek

An introductory course covering the major grammatical points of the ancient Greek language. This course will be followed in succeeding years by more advanced courses in the reading and interpretation of classical authors.

2200.0 Second Year Ancient Greek

Prerequisite: GREK 1100.0.

An application of the major grammatical points of the ancient Greek language through the reading of selected works of classical authors:

- i. Homer, Iliad
- ii. Xenophon, Anabasis
- iii. the dramatists
- iv. lyric poetry

Classics - Latin (LATN)

1100.0 Introduction to Latin

A course in the essentials of Latin grammar for students beginning their study of this ancient language. Since Latin is an inflected language with many changes in endings, students should be prepared to work hard at understanding and learning its basic structures.

2201.0 Intermediate Latin

Prerequisite: LATN 1100.0 or equivalent.

This course aims to enhance the development of good techniques of Latin-English translation and of rendering English into idiomatic Classical Latin. A variety of Latin authors and the continued study of Latin grammar will be utilized to achieve those objectives.

Commercial Law (CMLW)

Associate Professor B. Anderson

These courses are administered by the Department of Accounting.

2201.1(.2) Legal Aspects of Business - Part I

Prerequisite: ECON1201.1 (.2) and 1202.1(.2) or appropriate work experience, determined in advance of registration by the Chairperson of the Department of Accounting.

An introduction to the essential legal aspects of commerce, in particular, the law of contract. The essential elements of a contract will be discussed along with the requirements for enforcing a contract, the discharge of contracts, the assignment of contractual rights and breach of contract. The workings of the legal system will be explored. In particular,

the student will be introduced to the Charter of Rights and Freedoms, the sources of law in the Canadian legal system, and the important role played by the courts in the administration of justice. In addition, the student will be introduced to the law of torts with particular attention paid to the law of negligence.

3202.1(.2) Legal Aspects of Business - Part II

Prerequisite: CMLW 2201.1(.2).

A further examination of some of the legal aspects of commerce. Topics covered include agency, bailment, insurance, real estate, bankruptcy, creditor's rights and contracts for the sale of goods. In addition, there will be an examination of the different forms of business organizations and the methods of payment used by those organizations

Communications (COMM)

Associate Professor H. Ogden
Assistant Professors V. Creelman, K. Grandy

These courses are administered by the Department of Marketing.

For information on graduate courses, see the *Graduate Academic Calendar*.

2293.1(.2) Communications

Prerequisite: ENGL 1201.1(.2) or both MGMT 1281.1(.2) and CISY 1225.1(.2).

This course emphasizes professional writing skills and prepares students to communicate effectively. Students learn to write clear, concise memoranda, letters, reports, resumes, and other documents. The course focuses mainly on written communication skills and strategies.

3394.1(.2) Oral Communications and Presentation Techniques

Prerequisite: COMM 2293.1(.2).

This course focuses on oral communication in a business setting. The course will give students the opportunity to learn techniques and strategies related to the development, organization, and delivery of oral communications with an emphasis on business presentations. Topics will include topic selection and refinement, development of support material, and presentation polishing and delivery. Students will participate in and evaluate presentations.

Computing and Information Systems (CISY)

Chairperson, Professor D. Jutla,
Associate Professors J. Gregory, K. Kimery, S.
Sivakumar, H. Wang

Computing and Information Systems courses are offered by the Department of Finance, Information Systems, and Management Science.

Over the past few decades, computerized information systems have helped transform the business and social landscape in North America and around the world. To be successful today, companies require individuals who possess in-depth understanding of the technologies and processes underlying the new environment, and, at the same time, understand the strategic information needs of businesses and consumers. The Bachelor of Commerce degree with a major in Computing and Information Systems is designed to prepare students to fill this important role in modern organizations.

A major in Computing and Information Systems may be completed within the Bachelor of Commerce program, either alone or as part of a dual major. In either case a major in Computing and Information Systems requires the completion of the core B. Comm. requirements plus a set of core CIS courses. Course requirements for a Computing and Information Systems major, beyond the B. Comm. Core, are described below and in Section 3 of the *Calendar*. While the CIS core courses are normally taken during Year 3 and Year 4, students pursuing a major in Computing and Information Systems are encouraged to enrol in CISY 2320 during Year 2.

A concentration in Information Systems is also offered within the MBA program. Details are described in the Graduate Studies Academic Calendar.

Upon completion of 45 credit hours, Commerce students with a cumulative grade point average of 2.0 may elect to declare a major in Computing and Information Systems. (In exceptional circumstances, students can also be admitted to the major by permission of the Chairperson.)

To assist students, the Year 3 and Year 4 course requirements for a Computing and Information Systems major and the core BComm degree program requirements are listed below. Course descriptions follow.

To complete a major in Computing and Information Systems, students must attain a minimum grade point average of 2.2 in ACCT 3323 and all Computing and Information Systems courses taken at the 2000 level and above (as indicated below by *).

Year 3

- *ACCT 3323.1(.2) Management Information Systems
- *CISY 2320.1(.2) Business Applications Programming
- *CISY 3326.1(.2) Database Programming
- *CISY 3327.1(.2) Web Information Systems
- *CISY 3328.1(.2) Computer Organization

- FINA 2360.1(.2) Business Finance I
 - FINA 3361.1(.2) Business Finance II
 - MGMT 3480.1(.2) Ethical Responsibilities of Organizations
- Six (6) credit hours in non-Commerce electives

Year 4

- *CISY 4425.1(.2) Systems Analysis and Design
 - *CISY 4435.1(.2) Information Systems Projects and Practice
 - *CISY 4436.1(.2) Communication, Networks and Security
 - MGMT 4489.1(.2) Strategic Management
- Six (6) credit hours in non-Commerce electives
Twelve (12) credit hours in free electives

Course Descriptions

1225.1(.2) Introduction to Computer Applications

This course is an introduction to computers and their use in a number of different environments. The emphasis is placed on learning the use of common business software packages and programming. Other topics will include computer hardware and software, data processing and information systems.

2320.1(.2) Business Applications Programming

Prerequisite: CISY 1225.1(.2) or CSCI 1226.1(.2)

This is a foundation programming language course that presents fundamental principles used in writing business applications. Primitive data types, objects, controls, basic data structure, flow control constructs, reusable modules, and debugging techniques are covered. Further topics include parameter passing methods, arrays, error handling, and file processing. The implementation language, such as Visual Basic, will utilize object-oriented programming concepts. This course is a foundation course for the CISY program.

3326.1(.2) Database Programming

Prerequisite: CISY 2320.1(.2).

This course covers topics in modeling data to meet organizational requirements, programming business applications on a current database management platform, the SQL command language, and managing data security and database administration. Also included are topics on hierarchical, distributed, and object oriented databases.

3327.1(.2) Web Information Systems

Prerequisite: CISY 2320.1(.2).

This course introduces students to web information systems, a sub-area of CISY that focuses on those systems that interact with the World Wide Web. Course content includes a survey of WIS applications, conceptual foundations for the design and integration of WIS applications, as well as hands-on experience designing and building WIS applications. Specific topics may include the design, implementation, management and evaluation of web pages, web-enabled applications, and web-integrated databases.

3328.1(.2) Computer Organization

Prerequisite: CISY 2320.1(.2)

This course focuses on an introduction to the computer hardware and software needed to run standard business applications in small, medium and large enterprises. Topics include hardware and software in personal computers, main frame centric environments, and client-server architectures. The course also covers local area network architectures and technologies.

4425.1(.2) Systems Analysis and Design

Prerequisite: COMM 2293.1 (.2), ACCT 3323.1(.2), CISY 3326.1(.2) and CISY 3328.1(.2) (or concurrent)

The intent of this course is to provide the student with the necessary skills to successfully apply state-of-the-art information systems methodologies to the planning, analysis, design, and implementation phases of information systems projects. These skills include, but are not limited to, information systems strategy development, requirements analysis for business processes, business process modeling techniques, data and architectural modeling techniques, and project management skills and techniques. Students work in teams to perform a real-life systems analysis and design exercise for a business organization.

4435.1(.2) Information Systems Projects and Practice

Prerequisite: CISY 4425.1(.2) and COMM 2293.1 (.2).

This course focuses on the design and development of information systems (IS) to support business decision-making. Students explore different types of decision support systems (DSS), including expert systems, simulation, and data mining. IS project management techniques are reinforced via a team-based DSS design project. Expectations of new entrants into IS careers, including required technical and business competencies, ethical obligations, and professional conduct, are also addressed.

4436.1(.2) Communication Networks and Security

Prerequisite: CISY 3328.1(.2) and COMM 2293.1 (.2).

This course is an introduction to data communications and computer network systems from a business application perspective. Topics covered include fundamental concepts of data communications, types of communication links, wireless networks, TCP/IP networks, telecommunication and wide area networks. Security topics such as identifying networked enterprise threats, and security technologies for networks for the purposes of secure data transmission and access control, including encryption, authentication, and non-repudiation technologies, are also covered.

4490.1(.2) Seminar in Computing and Information Systems

Prerequisite: COMM 2293.1 (.2) and permission of Chairperson.

This course deals with selected topics in computing and information systems. It is offered when in sufficient demand, and specific topics covered may vary depending on the interest of the students and instructor.

4491.1(.2) Small Business Consultancy

Prerequisite: COMM 2293.1 (.2) and permission of Chairperson.

This course allows students to gain hands-on business experience by working with clients of the Saint Mary's University Business Development Centre. Student groups receive a project proposal outlining the requirements, information needs and services they will provide the client during the semester. Projects generally take the form of a business plan, market study, or other business-related function and often involve financial projections. Each project provides students an opportunity to use skills learned in business courses and to understand the interrelationship between marketing, accounting, finance, and management in a practical business setting. Under supervision, students prepare a professional report and final presentation that communicate the project's results for the client.

Work groups often include students from different business disciplines and are assigned based upon the needs of the project. Groups schedule their preferred meeting times but are required to meet a minimum of three hours each week. For more information, see <http://www.smu.ca/smubdc>.

Internship. 1 semester.

4876.1(.2) – 4899.1(.2) Directed Study

Prerequisite: COMM 2293.1 (.2) and permission of Chairperson.

Intended to supplement or provide an alternative to the regular computing and information systems courses in order to meet the special needs and interests of students, the course provides an opportunity to study a particular subject in detail and requires from the student some measure of independence and initiative.

Computing Science (CSCI)

Chairperson, Associate Professor	S. Konstantinidis,
Professors	R. Dawson, A. Finbow, B. Hartnell, P. Lingras, P. Muir
Associate Professors	W. Finden, B. Khan, S. Oore, P. Scobey
Assistant Professors	W. Finbow-Singh, J. Irving, N. Linney,
Adjunct Professors	R. Haynes, P. Keast, J. MacInnes, L. Oliver
Computing Science Advisor:	N. Linney
Co-op Advisor:	B. Khan

Department website:

<http://www.smu.ca/academic/science/compsci/>

Students can obtain a Bachelor of Science in Computing Science in one of two possible ways. A traditional degree in Computing Science involving an emphasis in Mathematics is offered as a minor, concentration, major, or honours. Alternatively, students interested in applying the technical aspects of Computing Science to business can obtain a major in Computing Science and Business Administration. Both of these Computing Science options have a Co-op option.

The major and honours programs in computing science are accredited by the Computer Science Accreditation Council of the Canadian Information Processing Society (CIPS). Not only is this an assurance of program quality, but it also allows students to earn the Information Systems Professional (ISP) designation in less time.

Co-operative Education Program (Co-op)

This program is designed for students in the honours or major programs who wish to gain relevant work experience while attending university. The general requirements for the Co-operative Education program can be found in the Faculty of Science regulations, Co-operative Education Section, of this *Calendar*. Interested students should contact the Department of Mathematics and Computing Science Co-op advisor before the end of their first year.

Credit for Duplicate Courses

No student who has received credit for an advanced mathematics or computing science course may later receive credit for a mathematics or computing science prerequisite to the course without permission of the Department. With renumbered or restructured courses, students are advised that they are not eligible to take a course for credit if they already have a credit for a comparable course, even if that course was taken at a different level or under a different number.

Important Notes:

- i. CSCI 1226.1(.2)/CSCI 1227.1(.2) or CSCI 1228.1(.2) are intended to be the courses (or single course in the

case of CSCI 1228.1(.2)) for all students who intend to pursue further studies in computing science.

- ii. Students taking a concentration, major, or honours in computing science are permitted credit for at most one of MATH 1207, BIOL 2308, MGSC 2207, or PSYC 2350, and shall not be permitted credit for any of these courses simultaneously with or subsequent to MATH 1216.
- iii. Related courses to a maximum of nine (9) credit hours offered by other Departments may be allowed for CSCI credit, with approval of the Department of Mathematics and Computing Science.
- iv. Students pursuing a major or honours in Computing Science can also complete a minor in Mathematics by taking 30 credit hours in MATH, including MATH 2310, MATH 2311, MATH 2321 and three (3) additional credit hours in MATH, in addition to the MATH courses specified for the major or honours.
- v. MATH 2309, 4408 and 4409 can be used as a MATH course or CSCI course, but not both.

Major in Computing Science

For a major in Computing Science, students must complete the following 39 credit hours in Computing Science and 21 credit hours in Mathematics, in addition to the general requirements for the Bachelor of Science (see Section 3 for details on the requirements for BSc with major):

1. CSCI 1226.1(.2) Introduction to Computing Science and Programming (see note below)
2. CSCI 1227.1(.2) Computer Programming and Problem Solving or CSCI 1228.1(.2) Accelerated Programming and Problem Solving
3. CSCI 2307.1(.2) Theoretical Foundations of Computing Science
4. CSCI 2327.1(.2) Digital Logic and Computer Architecture
5. CSCI 2328.1(.2) Assembly Level Machine Organization and Language
6. CSCI 2341.1(.2) Data Structures and Algorithms I
7. CSCI 2342.1(.2) Data Structures and Algorithms II
8. CSCI 3428.1(.2) Software Engineering
9. CSCI 3430.1(.2) Principles of Programming Languages
10. CSCI 3431.1(.2) Operating Systems
11. MATH 1210.1(.2) Introductory Calculus I
12. MATH 1211.1(.2) Introductory Calculus II
13. MATH 1216.1(.2) Introduction to Mathematical Statistics
14. MATH 2305.1(.2) Survey of Discrete Mathematics
15. MATH 2308.1(.2) Introduction to Numerical Analysis
16. MATH 2320.1(.2) Linear Algebra I
17. Three (3) credit hours in CSCI numbered 2306 or above
18. Six (6) credit hours in CSCI numbered 3000 or above
19. Three (3) credit hours in MATH numbered 2306 or above

Note: Students passing the challenge test for CSCI 1228 may substitute three (3) additional credit hours in CSCI for CSCI 1226.

Suggested Program

The following program is recommended by the Department of Mathematics and Computing Science for students taking the Computing Science major program:

Year 1:

- ENGL 1205.1(.2) Introduction to Literature
- CSCI 1226.1(.2) Introduction to Computing Science
- CSCI 1227.1(.2) Computer Programming and Problem Solving or CSCI 1228.1(.2) Accelerated Programming and Problem Solving
- MATH 1210.1(.2) Introductory Calculus I
- MATH 1211.1(.2) Introductory Calculus II
- Six (6) credit hours in Science (not MATH or CSCI)
- Three (3) credit hours in Humanities
- Six (6) credit hours from Arts or Economics

Year 2:

- CSCI 2307.1(.2) Theoretical Foundations of Computing Science
- CSCI 2327.1(.2) Digital Logic and Computer Architecture
- CSCI 2328.1(.2) Assembly Level Machine Organization and Language
- CSCI 2341.1(.2) Data Structures and Algorithms I
- CSCI 2342.1(.2) Data Structures and Algorithms II
- MATH 2305.1(.2) Survey of Discrete Mathematics
- MATH 2308.1(.2) Introduction to Numerical Analysis
- Six (6) credit hours in Science (not MATH or CSCI)
- Three (3) credit hours in Arts or Economics

Year 3:

- CSCI 3428.1(.2) Software Engineering
- CSCI 3430.1(.2) Principles of Programming Languages
- CSCI 3431.1(.2) Operating Systems
- MATH 1216.1(.2) Introduction to Mathematical Statistics
- MATH 2320.1(.2) Linear Algebra I
- Six (6) credit hours in Science (not MATH or CSCI)
- Nine (9) credit hours of electives

Year 4:

- Three (3) credit hours in CSCI numbered 2306 or above
- Six (6) credit hours in CSCI numbered 3000 or above
- Three (3) credit hours in MATH numbered 2306 or above
- Three (3) credit hours in Arts or Economics
- Fifteen (15) credit hours of electives

Double Major in Computing Science and Mathematics

For a double major in Computing Science and Mathematics, students must complete the following 39 credit hours in Computing Science, 33 credit hours in Mathematics and 6 credit hours in either Mathematics or Computing Science, in addition to the general requirements for the Bachelor of Science (see Section 3 for details on the requirements for BSc with major):

1. CSCI 1226.1(.2) Introduction to Computing Science and Programming (see note below)
2. CSCI 1227.1(.2) Computer Programming and Problem Solving or CSCI 1228.1(.2) Accelerated Programming and Problem Solving
3. CSCI 2307.1(.2) Theoretical Foundations of Computing Science
4. CSCI 2327.1(.2) Digital Logic and Computer Architecture
5. CSCI 2328.1(.2) Assembly Level Machine Organization and language
6. CSCI 2341.1(.2) Data Structures and Algorithms I
7. CSCI 2342.1(.2) Data Structures and Algorithms II
8. CSCI 3428.1(.2) Software Engineering
9. CSCI 3430.1(.2) Principles of Programming Languages
10. CSCI 3431.1(.2) Operating Systems
11. MATH 1210.1(.2) Introductory Calculus I
12. MATH 1211.1(.2) Introductory Calculus II
13. MATH 1216.1(.2) Introduction to Mathematical Statistics
14. MATH 2305.1(.2) Survey of Discrete Mathematics
15. MATH 2308.1(.2) Introduction to Numerical Analysis
16. MATH 2310.1(.2) Intermediate Calculus I
17. MATH 2311.1(.2) Intermediate Calculus II
18. MATH 2320.1(.2) Linear Algebra I
19. MATH 2321.1(.2) Linear Algebra II
20. Six (6) credit hours in MATH numbered 3000 or above
21. Three (3) credit hours in CSCI numbered 2306 or above
22. Six (6) credit hours in CSCI numbered 3000 or above
23. Six (6) credit hours in MATH or CSCI numbered 2306 or above

Note: Students passing the challenge test for CSCI 1228 may substitute three (3) additional credit hours in CSCI for CSCI 1226.

Double Major in Computing Science and another Science

For a double major in Computing Science and another Science other than Mathematics, students must fulfill all of the specified required courses in CSCI and MATH for the major (requirements 1 – 16) above, plus an additional three (3) credit hours in CSCI numbered 2306 and above and an additional three (3) credit hours in MATH numbered 2306 and above.

Honours in Computing Science

Students with a cumulative GPA of 3.00 or above are encouraged to apply for admission to the honours program. For honours in Computing Science, students must fulfill the major requirements plus

1. CSCI 3451.1(.2) Theory of Computation
2. Nine (9) additional credit hours in CSCI numbered 2306 or above
3. Six (6) additional credit hours in CSCI numbered 3000 or above
4. Six (6) additional credit hours in MATH numbered 2306 or above

resulting in a total of 57 credit hours in CSCI and 27 credit hours in MATH

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Students must achieve a Degree GPA of 3.00 or above on those courses presented in fulfillment of the Bachelor of Science with Honours in Computing Science requirements.

Double Honours in Computing Science and Mathematics

For double honours in Computing Science and Mathematics, students must fulfill all of the specified required courses in CSCI and MATH for the double major (requirements 1 – 19), plus:

1. CSCI 3451.1(.2) Theory of Computation
2. MATH 4420.1(.2) Abstract Algebra I
3. MATH 4441.1(.2) Real Analysis I
4. Three (3) additional credit hours in CSCI numbered 2306 or above
5. Six (6) additional credit hours in CSCI numbered 3000 or above
6. Six (6) additional credit hours in MATH numbered 2306 or above
7. Six (6) additional credit hours in MATH numbered 3000 or above

resulting in a total of 51 credit hours in CSCI and 45 credit hours in MATH

Students must achieve a Degree GPA of 3.00 or above on those courses presented in fulfillment of the Bachelor of Science with Honours in Computing Science requirements.

Double Honours in Computing Science and another Science

For double honours in Computing Science and Mathematics, students must fulfill all of the specified required courses in CSCI and MATH for honours, plus:

- Three (3) additional credit hours in MATH courses numbered 2306 or above.
- Six (6) additional credit hours in CSCI courses numbered 2306 or above.

Concentration in Computing Science

Students may complete a 3 year (90 credit hour) Bachelor of Science with a concentration in computing science. See Section 3 for details on the requirements for general BSc with concentration. The Computing Science concentration requires 36 credit hours in Computing Science and Mathematics as follows:

1. CSCI 1226.1(.2) Introduction to Computing Science and Programming (see note below)
2. CSCI 1227.1(.2) Computer Programming and Problem Solving or CSCI 1228.1(.2) Accelerated Programming and Problem Solving
3. CSCI 2327.1(.2) Digital Logic and Computer Architecture
4. CSCI 2328.1(.2) Assembly Level Machine Organization and language
5. CSCI 2341.1(.2) Data Structures and Algorithms I
6. CSCI 2342.1(.2) Data Structures and Algorithms II
7. Twelve (12) credit hours in CSCI numbered 2306 or above
8. MATH 1210.1(.2) Introductory Calculus I

9. MATH 1211.1(.2) Introductory Calculus II

Note: Students passing the challenge test for CSCI 1228 may substitute three (3) additional credit hours in CSCI for CSCI 1226.

Requirements for a Minor in Computing Science

It is possible to obtain a minor in Computing Science by completing 30 credit hours in Computing Science as follows:

1. CSCI 1226.1(.2) Introduction to Computing Science and Programming (see note below)
2. CSCI 1227.1(.2) Computer Programming and Problem Solving or CSCI 1228.1(.2) Accelerated Programming and Problem Solving
3. CSCI 2327.1(.2) Digital Logic and Computer Architecture
4. CSCI 2328.1(.2) Assembly Level Machine Organization and language
5. CSCI 2341.1(.2) Data Structures and Algorithms I
6. CSCI 2342.1(.2) Data Structures and Algorithms II
7. Twelve (12) credit hours in CSCI numbered 2306 or above

Note: Students passing the challenge test for CSCI 1228 may substitute three (3) additional credit hours in CSCI for CSCI 1226.

Major in Computing Science and Business Administration

This is an interdisciplinary four year degree combining Computing Science courses, taught in the Department of Mathematics and Computing Science, with a selection of courses taught in the Sobey School of Business. This program is designed to meet the increasing demand for people with a solid technical knowledge of Computing Science who also understand the application of this technology to business problems.

To declare this program as a major, students should consult with the Co-ordinator of Computing Science in the Department of Mathematics and Computing Science. Due to restrictions associated with the prerequisite structure, students are strongly suggested to take courses in the sequence shown below.

Year 1:

- ENGL 1205.1(.2) Introduction to Literature
- CSCI 1226.1(.2) Introduction to Computing Science
- CSCI 1227.1(.2) Computer Programming and Problem Solving or CSCI 1228.1(.2) Accelerated Programming and Problem Solving
- MATH 1210.1(.2) Introductory Calculus I
- MATH 1211.1(.2) Introductory Calculus II
- MGMT 1281.1(.2) Introduction to Business Management
- ECON 1201.1(.2) Principles of Economics: Micro
- ECON 1202.1(.2) Principles of Economics: Macro
- Six (6) credit hours in Science (not MATH or CSCI)

Year 2:

- CSCI 2327.1(.2) Digital Logic and Computer Architecture
- CSCI 2328.1(.2) Assembly Level Machine Organization and Language
- CSCI 2341.1(.2) Data Structures and Algorithms I
- CSCI 2342.1(.2) Data Structures and Algorithms II
- ACCT 2241.1(.2) Introductory Financial Accounting
- ACCT 2242.1(.2) Introductory Managerial Accounting
- MKTG 2270.1(.2) Introduction to Marketing
- MGMT 2383.1(.2) Micro Organizational Behaviour
- MGMT 2384.1(.2) Macro Organizational Behaviour
- MGSC 2207.1(.2) Introductory Statistics or MATH 1216.1(.2) Introduction to Mathematical Statistics

Year 3:

- Six (6) credit hours in CSCI numbered 2306 or above
- MATH 2305.1(.2) Survey of Discrete Mathematics
- MATH 2320.1(.2) Linear Algebra I
- ACCT 3332.1(.2) Planning and Control
- FINA 2360.1(.2) Business Finance I
- FINA 3361.1(.2) Business Finance II
- Six (6) credit hours in Science (not MATH or CSCI)
- Three (3) credit hours in Humanities

Year 4:

- Twelve (12) credit hours in CSCI numbered 3000 or above
- MGMT 4489.1(.2) Strategic Management
- ACCT 3323.1(.2) Management Information Systems
- Cisy 4425.1(.2) Systems Analysis and Design
- Six (6) credit hours in Arts
- Three (3) credit hours of electives

Notes:

- Students passing the challenge test for CSCI 1228 may substitute three (3) additional credit hours in CSCI for CSCI 1226.
- For students in this program, MATH 1210 can replace MGSC 1205 or MGSC 1206 as a prerequisite for other business courses.
- For students in this program, CSCI 1228 can replace Cisy 1225 as a prerequisite for other business courses. However, a knowledge of the topics covered in Cisy 1225 will be assumed in other courses.
- Students may not receive credit for Cisy 1225 if taken concurrently with or subsequent to CSCI 1226 or CSCI 1228.
- Cisy 2320 will be acceptable as a CSCI elective above 2306 and below 3000 level.
- Cisy 3327 will be acceptable in lieu of CSCI 2355. Students cannot receive credits for both Cisy 3327 and CSCI 2355.
- Cisy 4425 will be acceptable in lieu of CSCI 3428. Students cannot receive credit for both Cisy 4425 and CSCI 3428
- Cisy 3326 will be acceptable in lieu of CSCI 3461. Students cannot receive credits for both Cisy 3326 and CSCI 3461.
- Cisy 4436 will be acceptable in lieu of CSCI 3421. Students cannot receive credits for both Cisy 4436 and CSCI 3421.

Course Descriptions**1226.1(.2) Introduction to Computing Science and Programming**

Prerequisite: There is no formal prerequisite for this course; however, some prior experience with analytical thinking is highly recommended.

This course is designed to introduce the student to some of the key concepts in computing science and simultaneously provide introductory hands-on experience using a modern programming language. General topics will include a brief history of computing; the place of hardware, software, and policies in any computing environment; a high-level view of the components of a computing system; and the tools one can expect to find in any programming environment. Programming language topics will include input/output; simple data types; operators and expressions; looping and decision-making control constructs; subprograms and parameter passing; overall program structure and programming style considerations. Problem-solving and program-design strategies will include divide-and-conquer and top-down design with step-wise refinement. Students will design algorithms with data input and output to solve particular problems, and later implement those solutions as computer programs in the current programming language of choice.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

1227.1(.2) Computer Programming and Problem Solving

Prerequisite: CSCI 1226.1(.2).

This course is designed to extend the student's knowledge of, and provide additional hands-on experience with, the programming language encountered in CSCI 1226, in the context of the structured data types provided by that language, and within the larger contexts of object-oriented programming and more complex problem-solving situations. Techniques for managing file input and output in the current language will also be studied. A number of classical algorithms and data structures for the storage and manipulation of information of various kinds in a computer's internal memory will be studied. The student will acquire the knowledge that comes from actually implementing a non-trivial abstract data type and the experience that comes from having to make use, as a client program, of an abstract type that has already been implemented.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

1228.1(.2) Accelerated Programming and Problem Solving

Prerequisite(s): None.

This course is intended for students who have programming experience from high school, and who have achieved the required grade on a challenge test administered at the beginning of the term. It begins with a quick review of the topics normally treated in CSCI 1226.1(.2) followed by enhanced coverage of the current material from CSCI 1227.1(.2).

Note: Students who receive credit for CSCI 1228.1(.2) will not receive credit for CSCI 1227.1(.2).

2301.1(.2) Data Structures and Numerical Methods for Engineers

Prerequisites: CSCI 1226.1(.2) or EGNE 1204.1(.2)

This class introduces students to system analysis and software techniques. Topics covered include data structures such as stacks, queues, multiple linked lists, searching and sorting algorithms, and their implementation in an object-oriented programming language. Students use linear algebra and numerical methods in engineering examples, while learning to implement properly structured solutions.

Note: This course is intended only for Engineering students. Computing Science students (CPSC or CSCI) should take CSCI 2341.1(.2) and CSCI 2342.1(.2) instead. No credit will be given for this course simultaneously with or subsequent to CSCI 2341.1(.2).

Classes 3 hrs. and recitation 1 1/2 hrs. a week. 1 semester.

2307.1 (.2) Theoretical Foundations of Computing Science

Prerequisites: CSCI 1227.1(.2) or CSCI 1228.1(.2), and MATH 2305.1(.2)

This course complements CSCI 2341. It uses various mathematical concepts to define tools and address problems of fundamental status in Computing Science. Topics will involve notions related to graphs, formal languages and computability. Moreover, depending on the focus, other fundamental tools will be considered, which are utilized in topics such as database modeling, information coding, complexity, knowledge modeling, program correctness and automated reasoning.

2327.1(.2) Digital Logic and Computer Architecture

Prerequisite: CSCI 1227.1(.2) or CSCI 1228.1(.2).

This course considers data representation, digital logic and computer organization at the assembly language level. The student will be introduced to the concept of computation at the digital logic level by studying devices for storing data, transferring data, and making decisions based on data patterns (e.g. flip-flops, registers, tri-states, bus structures, multiplexers, comparators, and adders). Computer organization includes the fetch—execute cycle of a processor, addressing modes of the machine, the data path, the memory hierarchy, and the input/output subsystem.

Classes 3 hrs. and recitation 1 1/2 hrs. a week. 1 semester.

2328.1(.2) Assembly Level Machine Organization and Language

Prerequisite: CSCI 2327.1(.2).

This course builds on the experience obtained in CSCI 2327 by examining some topics in more detail and applying them to a particular processor. The students will also learn assembly language programming for the processor.

Classes 3 hrs. and recitation 1 1/2 hrs. a week. 1 semester.

2341.1(.2) Data Structures and Algorithms I

Prerequisite: CSCI 1227.1(.2) or CSCI 1228.1(.2).

This course provides an introduction to some of the fundamental theoretical concepts in computing science. These theoretical concepts will be applied to some programming problems. The course will introduce the basis for evaluating algorithms. This basis will be used to analyze various searching and sorting algorithms. Students will be introduced to the concept of lower-bound time requirements for specific problems. Examples of various problem solving strategies such as greedy algorithms, divide-and-conquer, and backtracking will be discussed.

Classes 3 hrs. and recitation 1 1/2 hrs. a week. 1 semester.

2342.1(.2) Data Structures and Algorithms II

Prerequisite: CSCI 2341.1(.2).

This course provides an introduction to data structures and associated algorithms. Students will build on the theoretical and programming skills developed in CSCI 1226/1227/1228 and CSCI 2341 through a systematic study of some of the fundamental computing science concepts. The course will use the basis for evaluating algorithms, established in CSCI 2341, to study various data structures and related operations. The data structures that will be studied in this course include lists, stacks, queues, hash tables, binary trees, and binary search trees. The operations on these data structures include creation, destruction, insertions, deletions, searching, and sorting. Contiguous and linked designs and corresponding implementations of these data structures will be studied. Students will be expected to create some of the data structures. The advantages and disadvantages of using these data structures will be studied.

Classes 3 hrs. and recitation 1 1/2 hrs. a week. 1 semester.

2355.1(.2) Internet Technologies and Web Programming

Prerequisite: CSCI 1227.1(.2) or CSCI 1228.1(.2).

This course will discuss a number of fundamental architectures, protocols and scripting languages for displaying and transferring data of various kinds in the context of the Internet and the World Wide Web. Students will gain experience with web programming concepts and techniques.

Classes 3 hrs. and recitation 1 1/2 hrs. a week. 1 semester.

3421.1(.2) Data Communications and Networking

3428.1(.2) Software Engineering

Prerequisite: CSCI 2342.1(.2).

In this course, students will obtain experience in the development of large scale software systems. The software life-cycle will be studied in detail. Issues of software documentation, reliability, and maintenance will be discussed. Several strategies for specification (formal and informal), design (functional, top-down, object-oriented,

etc.), implementation, and verification and validation will be considered. The course will involve a major project that will expose students to the stages of the software life-cycle. Students should expect to work in teams.

3430.1(.2) Principles of Programming Languages

Prerequisite: CSCI 2342.1(.2) and MATH 2305.1(.2).

This course is designed to introduce the student to some of the key concepts underlying all programming languages by comparing and contrasting major programming language paradigms such as procedural, functional, logic, object-oriented, and parallel. Topics may include history and evolution of programming languages; programming language design goals, the place of programming languages in the programming environment; virtual machines; data representation, manipulation and sharing; type checking; storage management; control structures; language mechanisms that support modularity; syntax and semantics. The laboratory component will provide hands-on experience with several different languages from different paradigms.

Classes 3 hrs. and recitation 1 1/2 hrs. a week. 1 semester.

3431.1(.2) Operating Systems

Prerequisite: CSCI 2328.1(.2).

Students will study various aspects of operating systems with emphasis on the following topics: history, evolution, and philosophies; tasking and processes; process coordination and synchronization; scheduling and dispatch; physical and virtual memory organization; device management; file systems and naming; security and protection; communications and networking; distributed operating systems; and real-time concerns. Examples of two or more operating systems will be used to gain some systems programming experience.

Classes 3 hrs. and recitation 1 1/2 hrs. a week. 1 semester.

3451.1(.2) Theory of Computation

Prerequisite: CSCI 2342.1(.2) and MATH 2305.1(.2).

This course provides an introduction to some of the fundamental theoretical concepts in computing science. Students will be introduced to the concepts of decidable, P, NP, NP-complete, and NP-hard problems. Two classes of languages of interest to computing scientists, namely, regular and context free languages, and corresponding automata for recognizing these languages, will also be studied. A brief discussion on the semantics of programming languages will be included. The concept of automata will be further extended using Turing machines. Turing machines will be used to explore the concept of decidability along with examples of decidable and undecidable problems.

3461.1(.2) Database Systems

Prerequisite: CSCI 2342.1(.2) and MATH 2305.1(.2).

This course provides an introduction to the design, implementation, use and maintenance of databases. Topics will include: data models such as the entity-relationship model, the relational model, and the object-oriented model;

relational languages such as relational algebra, relational calculus, and SQL; the theory of normal forms of database design; use of indexes for efficient data retrieval; and database implementation using a commercial database management system. Other topics may be included, such as query optimization, database control, and distributed database systems.

3462.1(.2) File Structures

Prerequisite: CSCI 2342.1(.2) and MATH 2305.1(.2).

This course provides the student with the tools and techniques required to organize and efficiently maintain data on a secondary storage devices. The course will consider the implementation and performance of structures such as fields, records and buffers; primary and secondary indexes; multi-level indexes and B-trees; indexed sequential files; and hash structures. Also included will be some discussion of advanced sort and merge algorithms for secondary storage.

3465.1(.2) Object-Oriented Programming

Prerequisite: CSCI 2342.1(.2) and MATH 2305.1(.2).

This course provides an introduction to object-oriented analysis, design, and programming. Emphasis will be on the creation of reusable software. The object-oriented approach to software development will be compared and contrasted with other approaches, such as the classical "structured" approach. Students will gain hands-on experience by programming in a suitable object-oriented programming language.

Classes 3 hrs. and recitation 1 1/2 hrs. a week. 1 semester.

3475.1(.2) Human Computer Interaction

Prerequisite: CSCI 1227.1(.2) or CSCI 1228.1(.2) or CISCY 2320.1(.2), or permission of the instructor.

The objective of this course is to teach students how to design, prototype, and evaluate user interfaces using a variety of methods. Topics covered include the following: human capabilities; interface technology; interface design methods; and interface evaluation.

Classes 3 hrs. and recitation 1 1/2 hrs. a week. 1 semester.

3482.1(.2) Artificial Intelligence

Prerequisite: CSCI 2342.1(.2), MATH 1216.1(.2), and MATH 2305.1(.2).

This course provides a general introduction to artificial intelligence (AI). The course will consider philosophical, mathematical, experimental, and implementation aspects of such topics as problem solving, searching, game playing, genetic algorithms, learning, neural networks, natural language processing, vision, knowledge representation, logic, expert systems, reasoning under uncertainty, fuzzy sets, planning, and robotics. In addition to a theoretical introduction, students will also gain experience using one or more of the popular AI tools.

4423.1(.2) Cryptography

Prerequisite: CSCI 2342.1(.2), MATH 2305.1(.2), and MATH 2320.1(.2).

This course provides an introduction to various aspects of data security. Possible topics: classical encryption methods such as Vignere and Vernan ciphers; the Data Encryption Standard; key distribution methods and public key encryption; and authentication using digital signatures. Applications of these methods in the design of protocols for data privacy and security will also be studied.

4452.1(.2) Algorithm Analysis

Prerequisite: CSCI 2342.1(.2) and MATH 2305.1(.2).

This course will build on the concepts of algorithm analysis introduced in CSCI 2341. Some of the key techniques of efficient algorithm design that will be discussed: divide and conquer; greedy methods; dynamic programming; graph traversal; and change of representation. Measuring algorithm performance and lower bounds for various problems will be studied. An introduction to complexity theory-P, NP, polynomial time reducibility, and NP-completeness- will also be provided

4471.1(.2) Computer Graphics

Prerequisite: MATH 2310.1(.2) and 2320.1(.2); and CSCI 2342.1(.2).

This course provides an overview of the principles and methodologies of computer graphics, including the representation, manipulation, and display of two- and three-dimensional objects. Subtopics may include characteristics of display devices (i.e., raster, vector); representing primitive objects (lines, curves, and surfaces) and composite objects; two- and three-dimensional transformations (translation, rotation, scaling); hidden lines and surfaces; shading and colouring; interactive graphics and the user interface; animation techniques.

Classes 3 hrs. and recitations 1 1/2 hrs. a week. 1 semester.

4474.1(.2) Information Retrieval

Prerequisite: CSCI 2342.1(.2)

This course considers manipulations on a bibliographic database. Topics to be covered include an introduction and basic definitions, inverted file structures, automatic

indexing, prototype systems, retrieval and refinements and natural language processing.

4476.1(.2) Computer Vision and Digital Image Processing

Prerequisite: CSCI 2342.1(.2).

This course provides an introduction to the concepts used in computer vision and digital image processing. Computer vision techniques extract information from an image, while image processing techniques modifies the image for viewing by the human eye. Topics covered include the following: sampling and resolution, image processing, edge detection, segmentation, discrete image transforms, restoration and enhancement, and image compression.

4477.1(.2) Data Mining

Prerequisite: CSCI 2342.1(.2).

Data mining refers to a family of techniques used to detect interesting knowledge in data. With the availability of large databases to store, manage and assimilate data, the new thrust of data mining lies at the intersection of database systems, artificial intelligence and algorithms that efficiently analyze data. The course will use concepts from pattern recognitions, statistics, data analysis and machine learning. The size of databases and high complexity of techniques present many interesting computational challenges.

4500.0 Research Thesis

Prerequisite: honours standing and permission of the thesis committee.

Research project in computing science carried out by the student under the supervision of any member of the Department. The student will submit a thesis and present it orally.

4826.1(.2) to 4849.1(.2) Special Topics in Computing Science

Prerequisite: permission of instructor.

This course covers advanced topics in computing science chosen according to the interests of the students and instructor, and requires some measure of independence and initiative from the student.

Seminar 3 hrs. a week. 1 semester.

Criminology (CRIM)

Chairperson, Professor	E. Tastsoglou
Professors	G. Barrett, L. Christiansen-Ruffman, J. McMullan, H. Veltmeyer
Associate Professors	S. Bell, M. Byers, D. Crocker, V. Johnson, D. Perrier, S. Schneider, A. Schulte-Bockholt, M. VanderPlaat
Assistant Professors	K. Bonnycastle, M. Ighodaro, A. MacNevin, M. Rajiva, R. Westhaver,
Coordinator of Criminology: Graduate Studies	D. Crocker
Adjunct Professors	R. Cosper, B. Cottrell, S. Perrott

Department website:

<http://www.smu.ca/academic/arts/sociology/>

Department Mission

The Department of Sociology and Criminology offers programs of study that are designed to provide students with a strong undergraduate experience in both sociology and criminology. Majors and honours programs are offered in each field. Students are particularly encouraged to complete a double major program in sociology and criminology. The Department also offers a Master's degree. Courses are also mounted that support such other academic programs as those in Asian Studies, Atlantic Canada Studies, International Development Studies, Linguistics, and Women and Gender Studies. For details on graduate programs, refer to the Graduate Academic Calendar.

The purpose of a Bachelor of Arts degree in criminology, including the honours program, is to provide students with an opportunity for focused critical study of various forms of regulation, policing, punishment, justice, law, delinquency and misbehaviour. The development of a coherent program at the undergraduate level enables students to obtain a solid foundation in criminology for further study at the graduate level; for the pursuit of criminology-related disciplines; and for careers in the related professions. A structured honours program is included for outstanding undergraduate students.

Major Program

For admission to the program, students must have completed SOCI 1210.1(.2) and 1211.1(.2) with a minimum grade of C in each course; and six (6) additional credit hours with a minimum grade of C in each course from the following courses: ANTH 1200.0; ANTH 1202.1(.2), ANTH 1280.1(.2), ECON 1201.1(.2); ECON 1202.1(.2); POLI 1200.0; POLI 1230.1(.2); PSYC 1200.1(.2); PSYC 1250.1(.2); or PSYC 1260.1(.2).

To major in criminology, students must complete forty-two (42) credit hours as follows:

- a. CRIM 2300.1(.2) Classical Criminological Theory
- CRIM 2301.1(.2) Contemporary Criminological Theory
- CRIM 2302.1(.2) Criminal Statistics
- CRIM 2303.1(.2) Crime and Society
- CRIM 2304.1(.2) Canadian Criminal Justice System

CRIM 2364.1(.2)/SOCI 2364.1(.2) Research Methods

- b. Twelve (12) credit hours in CRIM at the 3000 level
- c. Six (6) credit hours in CRIM at the 4000 level or PSYC 3320.1(.2); PSYC 3335.1(.2); PHIL 2332.1(.2) and PHIL 2333.1(.2).
- d. six (6) credit hours at the 3000 or 4000 level not listed as above in one of the following social sciences: Anthropology, Economics, Geography, Political Science, Psychology and Sociology.

Because of the significant interest in Criminology, the number of qualified students permitted to declare Criminology as their major or subject of honours may have to be limited.

FOR STUDENTS COMPLETING A DOUBLE MAJOR IN SOCIOLOGY AND CRIMINOLOGY, ONLY TWELVE (12) CREDIT HOURS CAN BE DOUBLE COUNTED FOR CROSS-LISTED COURSES.

Suggested Schedule

The following program is recommended by the Department of Sociology and Criminology for students majoring in Criminology:

Year 1:

- ENGL 1205.1(.2) Introduction to Literature
- 9 credit hours of introductory courses in the following humanities (except PHIL 1200): Classics; History; Religious Studies; Modern Languages courses on literature and culture (a maximum of 6 credit hours can be counted from any one area).
- SOCI 1210.1(.2) Introductory Sociology with a minimum grade of C.
- SOCI 1211.1(.2) Critical Issues in Social Analysis with a minimum grade of C.
- Six (6) credit hours from ANTH 1200.0; ANTH 1202.1(.2), ANTH 1280.1(.2), ECON 1201.1(.2); ECON 1202.1(.2); HIST1240.0; POLI 1200.0; POLI 1230.1(.2); PSYC 1200.1(.2); PSYC 1250.1(.2); or PSYC 1260.1(.2) with a minimum grade of C.
- Six (6) credit hours of from one or two of the following: PHIL 1200.0 Critical Thinking, Mathematics, a language other than English, or a natural science other than Psychology.

Year 2:

- CRIM 2300.1(.2) Classical Criminological Theory
- CRIM 2301.1(.2) Contemporary Criminological Theory
- CRIM 2302.1(.2) Criminal Statistics
- CRIM 2303.1(.2) Crime and Society
- CRIM 2304.1(.2) Canadian Criminal Justice System
- CRIM 2364.1(.2)/SOCI 2364.1(.2) Research Methods
- Six (6) credit hours in Arts at the 2000 level or above
- Six (6) credit hours of electives

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Year 3:

- Twelve (12) credit hours in CRIM at the 3000 level
- Twelve (12) credit hours in Arts at the 2000 level or above
- Six (6) credit hours of electives

Year 4:

- Six (6) credit hours in CRIM at the 4000 level or PSYC 3320.1(.2); PSYC 3335.1(.2); PHIL 2332.1(.2) and PHIL 2333.1(.2).
- Six (6) credit hours at the 3000 or 4000 level not listed as above in one of the following social sciences: Anthropology, Economics, Geography, Political Science, Psychology and Sociology.
- Six (6) credit hours in Arts at the 2000 level or above
- Six (6) credit hours of Arts electives at any level
- Six (6) credit hours of electives

Honours Program

This is a selective program. Applicants for admission must:

- have completed at least 60 credit hours;
- have a cumulative GPA of at least 3.00;
- have a cumulative GPA in Criminology courses of 3.30;
- have a faculty member's written agreement to serve as a supervisor for the honours thesis, CRIM 4500.0.

In exceptional circumstances, the Department may consider applicants who do not have a 3.30 CGPA in Criminology courses (but who have a 3.00 overall).

The deadline for application is 1 April of the year before students wish to begin the honours program and register in the Honours Seminar course, CRIM 4500.0.

For honours in Criminology, students must complete seventy-two (72) credit hours as follows:

- a. CRIM 2300.1(.2) Classical Criminological Theory
CRIM 2301.1(.2) Contemporary Criminological Theory
CRIM 2 302.1(.2) Criminal Statistics
CRIM 2303.1(.2) Crime and Society
CRIM 2304.1(.2) Canadian Criminal Justice System
CRIM 2364.1(.2)/SOC 2364.1(.2) Research Methods
- b. Twelve (12) credit hours in CRIM at the 3000 level
- c. Twenty-four (24) credit hours in CRIM at the 4000 level or PSYC 3320.1(.2); PSYC 3335.1(.2); PHIL 2332.1(.2) and PHIL 2333.1(.2), with a maximum of six (6) credit hours of Directed Reading courses.
- d. CRIM 4500.0/SOCI 4530.0 Honours Seminar
CRIM 4501.1(.2) Advanced Criminological Theory
CRIM 4502.1(.2) Advanced Research Methodology in Criminology or SOCI 4493.1(.2) Advanced Research Methods;
- e. six (6) credit hours at the 3000 or 4000 level not listed as above in one of the following social sciences: Anthropology, Economics, Geography, Political Science, Psychology and Sociology.

To graduate, students must maintain a cumulative GPA of 3.30 in Criminology courses.

Concentration in Criminology

Students in a ninety (90) credit hour B.A. program with a concentration in CRIM are required to complete twenty-four (24) CRIM credit hours with a minimum grade point average of 2.00. Courses cross-listed with Sociology may not be double counted.

Minor in Criminology

There is no minor in Criminology.

Course Descriptions

2300.1(.2) Classical Criminological Theory

Prerequisite: formal declaration of a major/honours in criminology.

This course introduces students to the major themes of classical criminological theory. Students will examine key criminological debates from the 18th and 19th century which have influenced contemporary criminological theory. Topics may include early biological, individualistic, political, and social explanations of crime and criminality.

2301.1(.2) Contemporary Criminological Theory

Prerequisite: formal declaration of a major/honours in criminology and CRIM 2300.1(.2).

This course introduces students to the major themes of contemporary criminological theory. Topics may include the influence of urban life, gender, race, media and politics in explanations of crime and criminals, the regulations and governance of society through various social control mechanisms and the impact of feminist and postmodernist writings for theorizing about crime and criminality.

2302.1(.2) Understanding Statistics

Prerequisite: formal declaration of a major/honours in criminology and CRIM/SOCI 2364.1(.2).

The purpose of this course is to develop an understanding of the strengths and weaknesses of criminology research and crime statistics. Techniques of crime measurement, prediction, recidivism, research design and data interpretation will be addressed. The course will focus on quantitative methods and analysis.

2303.1(.2) Crime and Society

Prerequisite: formal declaration of a major/honours in criminology.

This course introduces students to contemporary patterns, issues, problems and themes pertinent to the field of criminology in Canada.

2304.1(.2) Canadian Criminal Justice System

Prerequisite: formal declaration of a major/honours in criminology.

This course examines the process of the criminal justice system in Canada. The roles, powers, and discretion of the police, the courts, and the correctional system are examined.

2364.1(.2) Research Design [SOCI 2364.1(.2)]**3210.1 (.2) Social Difference and Human Rights [SOCI 3210.1 (.2)]****3220.1 (.2) 'Race', Colonialism and Anti-Racist Discourse [SOCI 3220.1 (.2)]****3305.0 Penal Governance and Federal Imprisonment in Canada [SOCI 3315.0]****3306.1(.2) Gender, Race and Justice [SOCI 3390.1(.2)]****3307.0 Policing and Society [SOCI 3354.0]**

Prerequisite: formal declaration of a major/honours in criminology; or SOCI 1210.1(.2) and SOCI 1211.1(.2).

This course is designed to explore critical issues in the policing of modern societies. The social role of the police and police practices in contemporary society will be examined. Topics will include the functions and objectives of modern policing, the exercise of police powers, the use of police discretion, the nature of police misconduct, the structures of police accountability and control, and the issues and problems of policing in a multicultural society.

3308.1(.2) Corporate Crime [SOCI 3355.1(.2)]

Prerequisite: formal declaration of a major/honours in criminology; or SOCI 1210.1(.2) and SOCI 1211.1(.2).

This course examines and analyzes the nature, scope and impact of corporate crime, the principle organizational, social, political, and economic factors in the definition and commission of such crimes, and the ways in which governments and legal systems respond to the problems.

3309.1(.2) Victimology [SOCI 3356.1(.2)]

Prerequisite: formal declaration of a major/honours in criminology; or SOCI 1210.1(.2) and SOCI 1211.1(.2).

This course offers an introduction to the study of victims of crime. Theoretical explanations and methodological techniques will be examined along with victim profiles and patterns of criminal victimization. The course will also address victim/victimizer attitudes and the role and impact of victims and the victim movement on the criminal justice system.

3310.1(.2) Criminal Law [SOCI 3357.1(.2)]

Prerequisite: formal declaration of a major/honours in criminology; or SOCI 1210.1(.2) and SOCI 1211.1(.2).

This course is designed to familiarize students with Canadian criminal law. The course will focus on topics such as the history, nature and functions of criminal law, its elements and role in a democratic society, exemptions from

criminal responsibility, its principles and procedures, and its administration and enforcement.

3312.0 Young Offenders and Juvenile Justice [SOCI 3359.0]

Prerequisite: formal declaration of a major/honours in criminology; or SOCI 1210.1(.2) and SOCI 1211.1(.2).

This course takes an historical/comparative approach to the study of youth crime and juvenile justice in Canada. It examines changing definitions of youth crime, contemporary crime patterns, their explanation and proposed solutions. Societal responses to youth crime are addressed with a particular emphasis on the Young Offenders Act, its comparison to the Juvenile Delinquents Act, and a critical examination of youth corrections.

Note: Students with a credit for SOC 454.0 are not eligible to enrol in CRIM 3312.0/SOCI3359.0.

3313.1(.2)-3314.1(.2) and 3315.0-3316.0 Selected Issues in Criminology**[SOCI 3388.1(.2)-3389.1(.2) and SOCI 3381.0-3382.0]**

Prerequisite: formal declaration of a major/honours in criminology; or SOCI 1210.1(.2) and SOCI 1211.1(.2).

These courses are designed to enable a student to examine particular criminological issues in detail. They will be offered according to faculty availability and expertise.

3318.1(.2) State, Crime, and Power in Developing Countries [SOCI 3318.1(.2)]

Prerequisite: Completion of the criminology core program requirements

This course is an interdisciplinary exercise designed for students in Criminology, International Development Studies, Political Science, and Sociology. Course participants will: (a) learn about the colonial origins of crime in Latin American; (b) be introduced to the basics of Latin American criminological thinking such as Liberation Criminology; (c) explore the various dimensions of criminal activity (street, organized, state and corporate) in developing countries; and (d) study the detrimental effects of crime, corruption and abuse of power on the societies of the South.

3320.1(.2) Women, Law and the State [SOCI 3345.1(.2)]

Prerequisite: formal declaration of a major/honours in criminology; or SOCI 1210.1(.2) and SOCI 1211.1(.2).

This course will provide in depth consideration of feminist perspectives on the relation of women to the state and law. The nature of the contribution of criminal and family law to the reproduction of gender relations will be analyzed. The implication of legal intervention and nonintervention in family relations, sex specific and sex-related legislation will be examined. Theoretical concepts such as patriarchal relations, sexuality and reproduction, state violence, formal and informal social control will be addressed. The regulation of women outside the criminal justice system will be examined.

3322.1.(2) Woman Battery and the Criminal Justice System [SOCI 3393.1.(2)]

Prerequisite: formal declaration of a major/honours in criminology; or SOCI 1210.1.(2) and SOCI 1211.1.(2).

Examines the role of criminal justice intervention for battered women by investigating the impact of the police, courts, and alternative programs. We will analyze the role of the Battered Women's Movement, academic research, and policy making. Feminist, family violence and psychological perspectives will be considered.

3324.1.(2) The Political Economy of Organized Crime

Prerequisite: formal declaration of a major/honours in Criminology; or SOCI 1210.1.(2) and SOCI 1211.1.(2).

The course introduces students to the study of organized crime. It investigates cultural and historical issues as well as the depiction of organized crime in film and literature. It focuses on the links between organized crime groups and socioeconomic elites in different parts of the world.

3325.1.(2) Crime Prevention Through Social Development [SOCI 3394.1.(2)]

3326.1.(2) Organized Crime [SOCI 3395.1.(2)]

3350.1.(2) Psychology and Law [PSYC 3320.1.(2)]

3351.1.(2) Abnormal Psychology [PSYC 3335.1.(2)]

3352.1.(2) Ethics and the Law [PHIL 2332.1.(2)]

3353.1.(2) Philosophy of Law [PHIL 2333.1.(2)]

4210.1 (2) Forced Migration and Transnationalism [SOCI 4210.1 (2)]

4220.1 (2) Power, Equity and Global Issues[SOCI 4220.1 (2)]

4400.0 Law in Society [SOCI 4431.0]

4401.1.(2) Gender and Law [SOCI 4432.1.(2)]

4402.1.(2) Issues in Juvenile Justice [SOCI 4404.1.(2)]

Prerequisite: CRIM 3312.1 (SOCI 3359.0) and SOCI 2363.1.(2) and 2365.1.(2) and completion of the core criminology requirements.

This is a seminar course that examines contemporary issues associated with the concept, philosophy and practice of juvenile justice. The course will examine children and youth as theoretical constructs in the context of the discourse surrounding children's rights and governance of the young. The course aims to develop students' critical understanding of the politics and philosophy of youth justice in postmodern society.

Note: Students with a credit for SOC 454.0 are not eligible to enrol in CRIM 4402.1.(2).

4403.0 Penology

Prerequisite: completion of the criminology core requirements.

This seminar traces the history of penal methods and the development of contemporary corrections with particular focus on the origins of imprisonment. This seminar will study contemporary correctional institutions with particular emphasis on the impact of prisons on inmates, prison subcultures, prison administration, and the assessment of educational, occupational and treatment programs. Correctional processes, as these relate to the typologies of offenders, and special problems of female, youthful and persistent offenders will be examined.

4404.1.(2) Critical Criminology

Prerequisite: completion of the criminology core requirements.

This seminar focuses on various themes in criminological theory which adopt a critical perspective of crime, crime control, law and criminality. Topics may include the politicization of crime and crime control, the significance of gender and race issues in explanations of crime and criminality, and criminalization as a mode of control.

4405.1.(2) Comparative and Historical Criminology

Prerequisite: completion of the criminology core requirements.

This seminar course examines the nature of deviance, crime and social control in past societies. It focuses on the development of criminal law and evidence, policing, the institutionalization of deviance and crime, penalty, the rise of social surveillance and social discipline, changing images of criminality and the social regulation of women.

4406.1.(2)-4407.1.(2) and 4408.0 Advanced Studies in Criminology

Prerequisite: completion of the criminology core requirements.

These seminar courses are designed to provide seminars pertaining to particular interests of faculty and students in criminology.

4409.1.(2)-4410.1.(2) and 4411.0 Directed Readings in Criminology

Prerequisite: completion of the criminology core requirements.

Intensive readings under the supervision of a faculty member in areas related to the student's program.

4412.1.(2) Cross-listed as ANTH 3470.0 Forensic Anthropology

4414.1.(2) The Politics of Youth Crime

Prerequisite: SOCI 2363.1.(2) and 2365.1.(2) or completion of the core criminology requirements; CRIM 3312.0 (SOCI 3359.0).

This seminar course will examine the discourse of youth crime through an analysis of crime statistics, media reports,

empirical research, theoretical perspectives, and risk management strategies. Its purpose will be to deconstruct current youth crime myths and the xenophobia directed toward youth in Canadian Society.

4415.1(.2) Drugs and Power in Latin America

Prerequisite: completion of the Criminology core program requirements..

It is the goal of the course to familiarize the student with the complexity of Latin American Organized Crime. We will examine the historical and cultural dimensions of the drug trade, the evolution and role of specific criminal groups, as well as the drug war in the Americas.

4416.1(.2) Soviet and Post-Soviet Organized Crime

Prerequisite: completion of the Criminology core program requirements .

The goal of the course is to familiarize the students with organized crime in the Soviet and Post-Soviet era. Students review the history of the USSR and investigate the role of Communist Party and State in the creation of the black market and the Mafia. Students also explore the rise of organized crime after 1991 as well as its internationalization.

4417.1(.2) Sex & Gender in Criminology and Law

Prerequisite: completion of the Criminology core program requirements

This is a seminar course designed to explore the major themes in feminist criminology and legal studies. The seminar will include discussion of empirical and theoretical contributions to the field, but the main focus will be on theory. Substantive topics covered include victimization, policing woman abuse, girls in gangs and female criminality. We will also critically evaluate how these topics are constructed in criminological and legal discourse. Conceptually, the course explores victimization, masculinity, subjectivity and discourse.

4421.1(.2) War as Crime [SO CI 4421.1(.2)]

4500.0 Honours Seminar [SO CI 4530.0]

Prerequisite: enrolment in honours program.

The purpose of this seminar is to aid students in the preparation of an honours thesis on a topic agreeable to both the student and the faculty. The thesis should be approximately 10,000 words of text and should demonstrate an integration of theoretical, analytical and methodological skills appropriate to a degree at the honours level. It is expected that there will be an empirical component to the thesis.

4501.1(.2) Advanced Criminological Theory

Prerequisite: enrolment in honours program.

This seminar course examines key debates and themes in criminological theory. Attention is given to the critical theoretical accomplishments of various writers.

Note: Students are advised to enrol in SOCI 4495.1(.2)-4496.1(.2) in years when CRIM 4501.1(.2) is not offered.

4502.1(.2) Advanced Research Methodology in Criminology

Prerequisite: enrolment in honours program.

This course will examine a wide range of quantitative and qualitative research methods and techniques used in criminological research. This course will emphasize the strengths and weaknesses, selection and application of various methodological techniques in conducting criminological research. These will include the application of statistical, experimental, and quasi-experimental techniques as well as the use of field research, interview techniques, historical and documentary analysis.

Note: Students are advised to enrol in SOCI 4498.1(.2) in years when CRIM 4502.1(.2) is not offered.

4503.0 Directed Readings in Criminology

Prerequisite: enrolment in honours program.

This course is designed to allow students to pursue a specific topic in criminology in considerable depth. Students are expected to demonstrate initiative and independence in this course of study.

Economics (ECON)

Chairperson, Professor	M. MacDonald,
Professors	A. Akbari, S. AmirKhalkhali, P. Arya, A. Dar, A. Mukhopadhyay, S. Novkovic
Associate Professors	N. Sharif, J. Taheri
Assistant Professor	Y. Aydede, V. Dang, M. Raymond
Adjunct Professors	W. Rankaduwa, C. Wilson
Professor Emeritus	A. Harvey

Department Statement

Economics has been defined as “the study of how men and society end up choosing, with or without the use of money, the employment of scarce productive resources, which could have alternative uses, to produce various commodities over time and distribute them for consumption, now and in the future, among various people and groups in society.” (Paul A. Samuelson)

Economics borders on other academic disciplines, such as political science, sociology, psychology, anthropology and business administration. It also draws heavily on the study of history, statistics and mathematics.

Students who desire some minimum understanding of economics are encouraged to consider taking one or two courses at the 1200 level. Entrance into higher level courses ordinarily requires a full-year of principles of economics, but this may be waived with the approval of the Department.

The Economics Department is able to offer students with a special interest in economics the opportunity to undertake some concentration beyond the core of required courses in the following areas and associated courses.

Money and Banking: ECON 3307.1(.2), 4407.1(.2)
 Public Finance: ECON 3318.1(.2), 3319.1(.2)
 International: ECON 3327.1(.2), 3365.1(.2), 4413.1(.2), 4414.1(.2)
 Quantitative: ECON 3302.1(.2), 3303.1(.2), 4403.1(.2), 4409.1(.2)
 Urban-Regional: ECON 3324.1(.2), 3325.1(.2), 4450.1(.2)
 Natural Resources and Environment: ECON 3361.1(.2), 3362.1(.2), 3363.1(.2)
 Comparative Systems: ECON 3315.1(.2), 3323.1(.2)
 Cost-Benefit Analysis and Health: ECON 3364.1(.2), 3366.1(.2)
 History and Development: ECON 3310.1(.2), 4410.1(.2)
 Labour: ECON 3340.1(.2), 3341.1(.2), 3349.1(.2)
 Industrial Organization: ECON 3316.1(.2)
 Other theory courses: ECON 3312.1(.2), 4400.1(.2), 4401.1(.2), 4404.1(.2), 4405.1(.2).

Students who desire a major in economics are encouraged to enrol in an appropriate program under the guidance of a faculty advisor. There are two general programs: (1) Bachelor of Arts with a major in economics, and (2) Bachelor of Commerce with a major in economics.

See Faculty of Arts and Faculty of Commerce, Section 3 of this *Calendar*, for the basic requirements for these degrees.

In addition to the programs cited above, information on graduate courses, may be found in *the Graduate Academic Calendar*.

Regardless of the degree sought, the Department of Economics requires that the program of study leading to a major in economics include the following:

- a. ENGL 1205.1(.2).
- b. Six (6) credit hours of university mathematics beyond the level of difficulty of Nova Scotia Grade 12 Mathematics or equivalent. [MGSC 1205.1(.2) and CISO 1225.1(.2), which are required of all Bachelor of Commerce students and recommended for all Bachelor of Arts majors in economics, satisfy this requirement.]
- c. Six (6) credit hours in the humanities (classics, history, philosophy and religious studies), or languages (English or modern languages). In special circumstances, with the permission of the Chairperson, all or part of this requirement may be fulfilled from among the following: ECON 3312.1(.2); 3315.1(.2); and 3323.1(.2). Philosophy 1200.0 does not satisfy this requirement.
- d. Six (6) credit hours from the social sciences other than economics.
- e. The following economics courses:
 ECON 1201.1(.2) Principles of Economics: Micro
 ECON 1202.1(.2) Principles of Economics: Macro
 MGSC 1206.1(.2) Introduction to Quantitative Methods II
 MGSC 2207.1(.2) Introductory Statistics
 ECON 3300.1(.2) Intermediate Microeconomic Theory
 ECON 3301.1(.2) Intermediate Macroeconomic Theory
 ECON 4400.1(.2) Advanced Microeconomic Theory or
 ECON 4401.1(.2) Advanced Macroeconomic Theory.
 One additional course (three (3) credit hours) in economics at the 4000-level.
 Four additional courses [three (3) credit hours each] in economics electives [twelve (12) credit hours].

In addition, students must satisfy conditions set down by the Faculty in which they enrol. Bachelor of Arts students majoring in economics are especially advised to consult Faculty of Arts requirement 3c when fulfilling the above regulation.

For suggested courses leading to a Bachelor of Arts Degree with a Major in Economics, consult the Chairperson.

A Concentration for Students in the Bachelor of Arts-General Program

To obtain a concentration in Economics in partial fulfillment of the B.A. General degree (i.e., one with Double Arts Concentrations and a minimum of ninety (90) credit hours, a

minimum of twenty-four (24) credit hours in Economics is required; also a minimum cumulative grade point average of 2.00. Further details are available from the chairperson.

Bachelor of Commerce degree with a Major in Economics,

Upon completion of 45 credit hours, Commerce students with a cumulative grade point average of 2.0 may elect to declare a major in Economics. (In exceptional circumstances, students can also be admitted to the major by permission of the Chairperson.)

To assist students, the Year 3 and Year 4 course requirements for an Economics major and the core BComm degree program requirements are listed below. Course descriptions follow.

To complete a major in Economics, students must attain a minimum grade point average of 2.2 in ECON 1201, ECON 1202, and the 3rd- and 4th-year ECON courses (as indicated below by *).

Year 3

*ECON 3300.1(.2) Intermediate Microeconomic Theory - see note below

*ECON 3301.1(.2) Intermediate Macroeconomic Theory - see note below

*ECON 4400.1(.2) Advanced Microeconomic Theory or

*ECON 4401.1(.2) Advanced Macroeconomic Theory

FINA 2360.1(.2) Business Finance I

FINA 3361.1(.2) Business Finance II

*Three (3) credit hours in Economics electives at the 3000 level or above

Six (6) credit hours in humanities or language electives [Classics, History, Philosophy (except PHIL 1200.0), Religious Studies, English, or Modern Languages]

MGMT 3480.1(.2) Ethical Responsibilities of Organizations
Three (3) credit hours in free electives

Year 4

MGMT 4489.1(.2) Strategic Management

*Six (6) credit hours Economics electives at 3000 level or above

*Three (3) credit hours in Economics electives at 4000 level

Six (6) credit hours in social sciences (excluding Economics) elective [Anthropology, Geography, Political Science, Sociology, or Psychology]

Twelve (12) credit hours in free electives

Note: It is recommended that students planning to major in Economics take ECON 3300.1 (.2) or 3301.1 (.2) in Year 2 and defer three (3) credit hours of Economics electives to Year 3.

Honours in Economics

The Department of Economics offers honours programs to students enrolled in either the Faculty of Arts or the Faculty of Commerce. Descriptions of the general requirements for the degrees of Bachelor of Arts (Honours) and of Bachelor of Commerce (Honours) are contained in Section 3. In addition to these general requirements, for graduation with

honours in economics, all students must comply with the following:

- a. Students must satisfy the applicable requirements for a major in economics as outlined on the preceding pages.
- b. The sixty (60) credit hours in economics presented for honours must include:
 - (i) ECON 1201.1(.2), ECON 1202.1(.2), MGSC 1206.1(.2), and MGSC 2207.1(.2), or equivalent;
 - (ii) ECON 3300.1(.2) and ECON 4400.1(.2);
 - (iii) ECON 3301.1(.2) and ECON 4401.1(.2);
 - (iv) ECON 3302.1(.2), ECON 3303.1(.2), and ECON 4403.1(.2), or nine (9) credit hours from the Mathematics and Computing Science Department with the approval of the Chairperson of the Economics Department;
 - (v) ECON 4498.1(.2);
 - (vi) ECON 4499.1(.2) or another advanced economics three (3) credit hours approved by the Chairperson of the Department;
 - (vii) either ECON 3310.1(.2), ECON 3312.1(.2), ECON 3315.1(.2), ECON 3323.1(.2), or another three (3) economics credit hours approved by the Chairperson;
 - (viii) ECON 4404.1(.2) or ECON 4405.1(.2).

c. With the approval of the Chairperson of the Economics Department, a student may be permitted to substitute up to twelve (12) credit hours from a related subject area as part of the sixty (60) credit hours in economics presented for honours.

d. Commerce students doing honours in economics are permitted to count nine (9) economics credit hours at the 3000-level or above as a non-commerce elective.

e. The recommended course selection and sequence for the degree of Bachelor of Commerce (Honours: Economics) can be found in the Bachelor of Commerce section of this *Calendar*.

Minor in Economics

Students in the Faculties of Arts and Science have the option of declaring a minor in Economics. To satisfy the requirements for this minor students must complete twenty-four (24) credit hours in Economics, at least twelve (12) credit hours of which must be at the 3000-level or above.

Course Descriptions

1201.1(.2) Principles of Economics: Micro

The objective of this course is to introduce students to the basic principles of microeconomics. In particular, the course focuses on the study of the economic behaviour of individual households and firms. It also focuses on the determination of the market prices of individual goods and services under different market structures.

1202.1(.2) Principles of Economics: Macro

The objective of this course is to introduce students to the basic principles of macroeconomics, i.e., the study of the economy as a whole and to show the relevance of these principles for an understanding of current economic issues. Topics include: national income, the price level,

employment, money and banking, monetary policy and fiscal policy, international trade and economic growth.

3300.1(.2) Intermediate Microeconomic Theory

Prerequisite: ECON 1201.1(.2) and MGSC 1206.1(.2).

Theory of consumer behaviour and demand, theory of production and cost, behaviour of the firm, theory of price and output under different market structures, and the theory of factor markets.

3301.1(.2) Intermediate Macroeconomic Theory

Prerequisite: ECON 1202.1(.2) and MGSC 1206.1(.2).

Measurement of macroeconomic variables; models of aggregate income and price determination; unemployment and inflation; macroeconomic policy debates.

3302.1(.2) Mathematical Economics

Prerequisite: ECON 1201.1(.2) and 1202.1(.2); and MGSC 1206.1(.2) or equivalent.

An introduction of the role of mathematics in economic analysis. Mathematical topics include linear algebra, partial differentiation, implicit function theorems and comparative statics analysis, unconstrained and constrained optimization theory.

3303.1(.2) Intermediate Economic Statistics

Prerequisite: MGSC 2207.1(.2) or equivalent.

A further study of the basic concepts of statistics and its application to the solution of business and economic problems: review of probability, random variables and their distribution, sampling and sampling distributions, normal and associated distribution, statistical inference, simple and multiple regression and related topics.

3307.1(.2) Money and Banking

Prerequisite: ECON 1201.1(.2) and 1202.1(.2).

Money and the payments system, development of banking in Canada, financial instruments, theory of banks' intermediation, chartered banks structure, operation and competition, governments and Canadian financial markets.

3310.1(.2) Development Economics

Prerequisite: ECON 1201.1(.2) and 1202.1(.2).

Alternative theories of growth and development, including economic and non-economic determinants of growth in developing countries, the role of government in development policies and lessons from experience in growth and change.

3315.1(.2) Comparative Economic Systems

Prerequisite: ECON 1201.1(.2) and 1202.1(.2).

An examination of how different economic systems choose to solve the basic economic problems of resource allocation and distribution of income and wealth. Theoretical models of (idealized) economic systems as developed by the Classical economists (e.g., Smith, Ricardo, Mill), Marx, Schumpeter, Lange, Keynes, etc., will be studied. The structure and performance of existing systems (e.g., Western managed

capitalism, Yugoslavian market socialism and Eastern European command socialism) will also be analyzed.

3316.1(.2) Industrial Organization

Prerequisite: ECON 1201.1(.2) and 1202.1(.2).

The course begins by laying out the arguments for competitive market processes and then proceeds to investigate the determinants of real-world industrial market structures, the behaviour of firms, and efficiency in resource allocation.

3318.1(.2) Public Finance: Expenditure

Prerequisite: ECON 1201.1(.2) and 1202.1(.2).

This course is an introduction to Public Finance with special emphasis on the theory of government expenditures. Topics may include public goods, externalities, income redistribution, and fiscal federalism.

3319.1(.2) Public Finance: Taxation

Prerequisite: ECON 1201.1(.2) and 1202.1(.2).

This course is an introduction to Public Finance with special emphasis on government revenues. Topics may include tax incidence theory, personal income taxation, sales and excise taxes, property tax, corporation income tax, public debt, and stabilization policy.

3322.1(.2) Canadian Economic Issues

Prerequisite: ECON 1201.1(.2) and 1202.1(.2).

This course deals with economic issues relevant to business and public policy. Topics may include regulation of industry and competition policy, the labour market and collective bargaining, environmental policy, public debt, fiscal federalism, stabilization policy, economic growth, and other issues of current interest.

3323.1(.2) Economies in Transition

Prerequisite: ECON 1201.1(.2) and 1202.1(.2).

This course treats problems of economic transition through case studies of the countries undergoing the transformation from plan to market. In particular, it offers the treatment of micro and macro economic problems of transition from socialist central planning to a market economy. The main focus is on issues of property rights, privatization, and institutional and legal framework. Besides those, different approaches to transition itself will be discussed, namely the shock therapy vs. gradualism, their costs and benefits.

3324.1(.2) The Atlantic Economy

Prerequisite: ECON 1201.1(.2) and 1202.1(.2).

Analysis of the structure, development and performance of the economy of the Atlantic region. Topics covered include: economic history of the region, current structure of the regional economy and state of economic development, sub-regional differences in economic structure and performance, external trade linkages, demographic and labour market characteristics, the role of government in the development process.

3325.1(.2) Atlantic Economy Seminar

Prerequisite: ECON1201.1 (.2) and 1202.1(.2).

This course will examine in detail a small number of current economic issues in the Atlantic region. General topic areas, from which specific issues may be chosen, include: the impact on the region of policies and programs of the federal government including monetary, fiscal, manpower, and development policies; the role of provincial and municipal planning and development agencies; the role of key sectors of the economy in future development, including energy, natural resources, steel, and transportation.

3327.1(.2) Asia Pacific Economies

Prerequisite: ECON 1201.1(.2) and 1202.1(.2).

The goal of the course is to create and enhance a capacity for understanding contemporary economic development in Asia Pacific. The course examines economic, historical, and institutional conditions and factors that influence economic growth in selected countries in this region. Policy lessons related to exchange rates, trade, and development will be drawn. The course will also look at some recent developments and address current debates on growth, distribution, environment, and globalization.

3340.1(.2) Human Resource Economics

Prerequisite: ECON 1201.1(.2) and 1202.1(.2).

This course examines a variety of topics in the study of labour markets and human resource use. Topics in any year may include: the changing composition of the labour force and structure of employment; unemployment and manpower policy; history, structure and impact of the labour movement; inequalities in the labour market; income distribution and problems of poverty; technological change; macro-economic policy and the labour market.

3341.1(.2) Labour Economics

Prerequisite: ECON 1201.1(.2) and 1202.1(.2).

This course focuses on the framework for analyzing labour market issues. Employment and wage determination under different labour market structures are analyzed. Emphasis is on the economics analysis of work incentives, wage differentials including the importance of human capital, unionization, internal labour markets, discrimination and segmented labour markets.

3349.1(.2) Women and the Economy [WMST 3349.1(.2)]

Prerequisite: ECON 1201.1(.2) and 1202.1(.2).

This course will examine various aspects of women's participation in the economies of developed countries (primarily Canada) as well as developing countries. Topics in any year may include analysis of the relationship between the paid and unpaid work of women, changes in labour force participation, trends and determinants of the male/female wage gap, models of household economic decision-making, the impact of technological change, and the international gender division of labour. Particular attention will be paid to policy issues relevant to the economic status of women. The course will also examine gender bias in the theory,

methodology and practice of economics and will evaluate various theoretical approaches to the study of women.

3361.1(.2) Fisheries Economics

Prerequisite: ECON 1201.1(.2) or permission of instructor.

This course emphasizes the application of economic concepts to problems of fishery management and development. Topics to be discussed include: common property resources, the economics of fishery regulation, socioeconomics, fish markets, and the fishery as part of the national and regional economy. Particular attention will be paid to current issues in the Atlantic Canada fishery.

Classes 1 1/2 hrs. a week. Seminars 1 1/2 hrs. a week. 1 semester.

3362.1(.2) Natural Resource Economics

Prerequisite: ECON 1201.1(.2) and 1202.1(.2).

This course examines the principles governing the use of natural resources, and analyzes the economics of natural resource industries such as fisheries, forestry and mining. Emphasis is placed on the economic importance of time, since resource conservation requires a balance between current and future use. Methods to achieve optimal social benefits through the economic regulation of resource exploitation will be addressed.

3363.1(.2) Environmental Economics

Prerequisite: ECON 1201.1(.2).

This course focuses on the application of economic principles to such environmental issues as air and water pollution, preservation of wildlife and wilderness areas, and the balance between economic activity and environmental health. The environmental impacts of fisheries, forestry, and mining are also discussed. Methods for environmental management are considered, particularly addressing the potential role of economic institutions and economic instruments. Some discussion of current Canadian policy issues is also undertaken.

3364.1(.2) Cost-Benefit Analysis

Prerequisite: ECON 1201.1(.2) and 1202.1(.2).

This course deals with the methodology and problems underlying the evaluation of projects from the social welfare perspective. Topics will include various elements relevant to the measurement of social benefits and opportunity costs: market distortions, the role of time, distributional issues, uncertainty and risk. Applications discussed will be drawn from a number of areas, such as urban economics, health economics, the environment, forestry and fisheries.

3365.1(.2) International Economic Issues

Prerequisite: ECON 1201.1(.2) and 1202.1(.2).

An examination of current issues and trends in international economics, covering international trade and international macroeconomics and finance subject areas. Different interpretations of recent events will be presented and critically appraised. Students will be expected to locate and analyze economic, financial and trade data.

3366.1(.2) Health Economics

Prerequisite: ECON 1201.1(.2) and 1202.1(.2).

This course aims at developing an understanding of the economic issues underlying the provision of health care. Students will learn how to apply the tools of economic analysis to a study of the roles of, and interactions between, health-care providers, insurers (private and public), and health care demanders, as well as questions relating to alternative modes of health care financing, with emphasis on Canadian issues.

4400.1(.2) Advanced Microeconomic Theory

Prerequisite: MGSC 1206.1(.2) or equivalent, and ECON 3300.1(.2).

Advanced treatment of the theories of consumer behaviour and the firm with special emphasis on duality theory; general equilibrium theory; welfare economics. Other topics may include choice under uncertainty and game theory.

4401.1(.2) Advanced Macroeconomic Theory

Prerequisite: MGSC 1206.1(.2) or equivalent, and ECON 3301.1(.2).

Microeconomic foundations of macroeconomics; inflation; interest rates; exchange rates; labour markets and unemployment; investment and real business cycles; economic growth.

4403.1(.2) Econometrics

Prerequisite: ECON 3303.1(.2).

Theory and applications of econometric models and their estimation. Topics will include generalized least squares, dynamic econometric models, the analysis of time series models, and models with qualitative variables.

4404.1(.2) Special Topics in Microeconomics

Prerequisite: ECON 4400.1(.2).

Selected topics in microeconomics chosen for rigorous, in-depth study from the following areas: input markets; general equilibrium; welfare economics; inter-temporal choice; information theory. Topics may vary depending on the interests of the students and the instructor.

4405.1(.2) Special Topics in Macroeconomics

Prerequisite: ECON 4401.1(.2).

Selected topics in macroeconomics chosen for rigorous, in-depth study from the following areas: consumption and investment; basic infinite horizon models; the overlapping generations model; business cycle theories; nominal rigidities and economic fluctuations. Topics may vary depending on the interests of the students and the instructor.

4407.1(.2) Monetary Economics

Prerequisite: ECON 3300.1(.2), 3301.1(.2).

The first part of the course consists of an introduction to microeconomic monetary theory including models of money demand, models of asset demand, portfolio allocation and

the firm's financial problem. The second part of the course deals with macroeconomic monetary problems such as inflation, dynamic inconsistency, monetary policy objectives and conduct of monetary policy.

4409.1(.2) Econometric Modeling and Forecasting**4410.1(.2) Issues in Economic Development**

Prerequisite: ECON 3300.1(.2), and 3310.1(.2).

Specific problems in economic development; emphasis on government policies, foreign aid, foreign trade and their impact on underdeveloped countries.

4413.1(.2) International Macroeconomics and Finance

Prerequisite: ECON 1201.1(.2), and 3301.1(.2).

An introduction to the past and current issues and debates in theoretical and empirical international macroeconomics, with coverage of the foreign exchange market and associated derivative markets. Topics include the balance of payments, exchange rate determination and exchange rate and stabilization policy.

4414.1(.2) International Trade

Prerequisite: ECON 3300.1(.2).

An introduction to the theory of international trade: comparative advantage, modern refinements, gains from trade, empirical relevance of trade models, tariffs and protection, economic integration, trade and growth.

4475.1(.2) Business Consultancy

Prerequisite: ECON 3300.1(.2), and permission of Chairperson.

This course allows students to gain business experience by working for clients of the Saint Mary's University Business Development Centre. Student groups receive a project proposal outlining the requirements, information needs and services they will provide the client during the semester. Projects generally take the form of a business plan, market study, or other business-related function and often involve financial projections. Each project provides students an opportunity to use skills learned in business courses and to understand the interrelationship between marketing, accounting, finance, and management in a practical business setting. Under supervision, students prepare a professional report and the final presentation that communicate the project's results for the client.

Work groups often include students from different business disciplines and are assigned based upon the needs of the project. Groups schedule their preferred meeting times but are required to meet a minimum of three hours each week. For more information see <http://www.stmarys.ca/smubdc>.

Internship. 1 semester.

4490.1(.2) Seminar in Economics

Prerequisite: ECON 3300.1(.2), and 3301.1(.2).

This course deals with selected topics in economics. It is offered when in sufficient demand, and specific topics

covered may vary depending on the interests of students and instructors.

Classes and independent study. 1 semester.

4492.1(.2) Directed Study

Prerequisite: ECON 1201.1(.2), 1202.1(.2), and permission of instructor.

Intended to supplement or provide an alternative to the regular economics courses in order to meet the special needs and interests of students, the course provides an opportunity to study a particular subject in detail and requires from the student some measure of independence and initiative.

Independent study. 1 semester.

4498.1(.2) Research Seminar in Economics

Prerequisite: ECON 3300.1(.2), and ECON 3301.1(.2).

The study of the nature of methodology of research from the standpoint of economics. This course is designed to assist

students in developing skills necessary to design, conduct, report and evaluate economic research projects.

Students will develop a research project and produce a research report.

Seminar 2 hrs. a week. 1 semester.

4499.1(.2) Honours Project in Economics

Prerequisite/co-requisite: admission to the honours program (thesis option) and completion of ECON 4498.1(.2), or permission of the Chairperson.

This course requires the completion of a major economic research project or thesis under the direction of one or more faculty members.

Independent Study.

Education (EDUC)

(Acting) Dean,

Dr. Esther E. Enns

Undergraduate Courses

Saint Mary's University offers undergraduate courses in the liberal study of education. These courses are available as electives to Saint Mary's students enrolled in the Faculties of Arts, Science and Commerce, and as professional development courses to those holding Nova Scotia Bridging Teacher's Certificates. Before enrolling, those interested in using courses for the purpose of professional development should obtain the approval of the Registrar of Teacher Certification at The Nova Scotia Department of Education, PO Box 578, Halifax, Nova Scotia, B3J 2S9.

Education Connection

Teacher Certification Access Program

Saint Mary's University provides programs through which students can prepare for degrees in Education. Among the choices of programs leading to teacher certification, Saint Mary's students can take advantage of our links with the University of Maine at Presque Isle.

This is a valuable opportunity for students who began their university education after 1 August 2000 and are interested in P-12 teaching as a career. For certification as a teacher, Nova Scotia regulations require these students to complete three years of undergraduate arts and science courses plus two years of education courses, one semester of which is practice teaching.

This program provides several benefits: international experience; Certification as a teacher in both Maine and Nova Scotia; a reduced tuition rate (New England/Maritime) at the University of Maine at Presque Isle for Saint Mary's students who are Canadian, Saint Mary's international students are entitled to the out-of-state rate; conditional early admission to the University of Maine at Presque Isle at the end of the second year at Saint Mary's; guaranteed admission to the University of Maine at Presque Isle for all qualified applicants; waiver of application fees at the University of Maine at Presque Isle; completion of practice teaching in many locations, including Nova Scotia.

Students who wish to take advantage of this opportunity must complete an undergraduate degree at Saint Mary's of at least ninety (90) credit hours in arts and science courses, which must include the undergraduate courses required for teacher certification in both Maine and Nova Scotia for the level and subject the student wishes to teach, and fifteen (15) credit hours in Education courses. Students must apply to enter the Bachelor of Science in Education program at the University of Maine at Presque Isle. Students should also complete the Praxis I exam and include the results in their application for admission to the University of Maine at Presque Isle.

At Presque Isle students will complete two semesters of Education courses. Students will then complete one semester of Practice Teaching, which may be done in any of several locations in Maine, Ontario, Prince Edward Island, New Brunswick and Nova Scotia (including Cape Breton).

Documents describing this program are available from BA Program Services, McNally Main 215.

Certificate Programs for Teachers

Saint Mary's offers two Certificate Programs suitable for the professional development of teachers which have been approved for the upgrading of Nova Scotia Teacher's Certificates.

The Certificate in the Mathematical Sciences for Education is described in the Mathematics and Computing Science entry, Section 5 of this *Calendar*.

The Certificate in Linguistics is described in the Linguistics entry, Section 5 of this *Calendar*.

Master of Education (TESL)

A Master of Education degree in the teaching of English as a second or foreign language is offered by Mount Saint Vincent University in cooperation with Saint Mary's. The courses in this program taught at Saint Mary's provide an introduction to the principles and practices of second or foreign language teaching and are suitable for inclusion in Integrated Programs for the professional development of teachers. For details, see the *Graduate Academic Calendar*.

Course Descriptions

2365.1(.2)Philosophy of Education: Classic Texts [PHIL 2365.1(.2)]

Prerequisite: at least thirty (30) credit hours of University courses.

A critical examination of influential works in the history of educational thought.

3305.1(.2) Perspectives on Schooling

Prerequisite: at least thirty (30) credit hours of University courses.

This course examines the role of the school in society and the role of the teacher in the school. Perceptions of school purveyed by the media and held by the public are considered and contrasted with the perspectives of teachers and students. The range of contemporary educational practice is surveyed. This course is recommended for those considering teaching as a career and for those who desire an informed perception of the day-to-day working of the school.

3306.1(.2) Schooling and Society

Prerequisite: at least thirty (30) credit hours of University courses.

This course continues the examination of the role of the teacher in the school and the school in society begun in EDUC 3305.1(.2). An historical and comparative perspective is used to explore teaching as a career and the school as an increasingly central feature of developed societies.

3307.1(.2) Sociology of Education (SOCI 3306.1(.2))

Prerequisite: at least thirty (30) credit hours of University courses.

A study of major sociological approaches (both conceptual and methodological) to education in different societies, with special emphasis on Canadian society. The course will focus on topics such as relationship between family, education and society; education and inequality; the social organization of knowledge; education and social change; the politics of education.

3311.1(.2) Principles of Educational Evaluation

Prerequisite: at least thirty (30) credit hours of University courses.

Many teachers find the role of evaluator difficult and in continual conflict with their favoured roles of intellectual guide and counsellor. Methods of evaluation appear to limit education goals and objectives and interfere with their attainment. This course will examine the positive and negative features of different types of evaluation, the uses of evaluation in education, and how each use supports or defeats the goals we have for educational attainment.

3365.1(.2) Philosophical Foundations of Education [PHIL 3365.1(.2)]

Prerequisite: at least thirty (30) credit hours of University courses.

This course is an enquiry into the nature and aims of education. Topics considered will include analyses of the concept of education, evaluation of contrasting views about what constitutes an ideal education, and implications of various theories of knowledge for methods of teaching and learning. Selections from historical and contemporary thinkers will be studied.

4425.1(.2) Instructional Media

Prerequisite: at least thirty (30) credit hours of University courses.

In this course, students will study the use of audio-visual media in educational settings.

4439.1(.2) The Application of Learning Theory in Education

Selected theories of learning and classroom practices are analyzed with the purpose of determining how theories of learning are used, and how educational practices are informed and altered by them.

4456.1(.2) Curriculum and Instruction in Teaching English as a Second or Foreign Language I

Prerequisite: at least thirty (30) credit hours of University courses.

Intended for teachers of English as a second or foreign language (ESL/EFL), this course focuses on the curriculum and methods used in teaching English to non-native speakers both in Canada and abroad. Focus is on analysis and evaluation of selected curricular approaches and pedagogical methods in foreign language teaching.

4457.1.(2) Curriculum and Instruction in Teaching English as a Second or Foreign Language II

Prerequisite: EDUC 4456.1.(2)

A continuation of EDUC 4456.1.(2). Topics may include trends and issues in foreign language education, and critical examination of selected approaches, e.g. teaching for communication, content-based ESL/EFL.

4458.1.(2) Pedagogical Grammar for ESL Teachers: Theory and Practice

Prerequisite: LING 1200.0 or enrolment in graduate program.

This course, intended for teachers of English as a Second or Foreign Language, is designed to provide a review of the syntactic structure of English, as well as ideas for how grammar can be integrated into the communicative language classroom. Topics covered in the course include contrasting types of grammatical analysis; awareness of grammar functions; different approaches to the teaching of grammar; identification, analysis, and remediation of student errors; grammatical difficulties for ESL/EFL learners; selection and evaluation of commercial texts; and preparation of pedagogical materials for students in a variety of contexts and instructional settings.

4459.1.(2) Seminar and Practicum in Teaching English as a Second/Foreign Language

Prerequisite: EDUC 4456.0 (5656.0)

This course consists of a series of professional seminars designed to examine issues related to contemporary English as a Second/Foreign Language pedagogy. Topics include, but are not restricted to, needs analysis, lesson planning, classroom management, and classroom interaction. Students will use a variety of methods, techniques, and strategies to promote second language acquisition, while, at the same time, encouraging reflective practice. This course includes a twenty-five hour supervised practicum during the semester.

4461.1.(2) Language, Culture, and Education

Prerequisite: at least thirty (30) credit hours of University courses.

This course focuses on the personal aspects of intercultural communication - what happens when people from different cultures interact face-to-face. Topics include foundational issues of culture and communication including culture shock, adjustment, re-entry shock, verbal and non-verbal communication, gender, race and class, children's ethnic socialization, the status of families as cultural units, and multicultural and anti-racist education. The course emphasizes the development of strategies for successful intercultural education.

4473.1.(2) Comparative Perspectives on Innovations in Education – Reforms [IDST 4473.1.(2)]

Prerequisite: at least thirty (30) credit hours of University courses.

This course will assess, compare and contrast variations and reforms to mainstream educational systems, and will emphasize the conditions out of which such reforms are initiated. Special emphasis will be given to contrasting public systems of education with privatization initiatives, together with public/private partnerships and changes that affect access to education, gender and education, and so on. This course will draw on the considerable body of literature and concrete case studies throughout the world; however, considerable emphasis will be given to examples and case studies from the regions or sub-regions of Asia, Africa, Latin America and the Middle East/North Africa.

4474.1.(2) Comparative Perspectives on Innovations in Education – Alternatives [IDST 4474.1.(2)]

Prerequisite: at least thirty (30) credit hours of University courses.

This course will seek to understand the material and social conditions, practical initiatives, rationale and outcomes of radical alternatives to mainstream education and mainstream educational reforms. Above and beyond in-depth discussions of perspectives on informal and non-formal educational systems, the works of Illich, Freire, and other educational radicals will be discussed, as will the concepts of intercultural bilingual education, social capital education, and other alternative conceptions of education. The course will provide a forum for the discussion and deeper understanding of the relation between the larger social, political and economic structure and the educational goals and objectives of radical education alternatives. Considerable emphasis will be given to examples and case studies from the regions or sub-regions of Asia, Africa, Latin America and the Middle East/North Africa.

4476.1.(2) Education and Development I: Perspectives [IDST 4476.1.(2)]

Introduction to concepts and analysis underlying a comparative understanding of selected educational systems around the world. The course will emphasize comparisons between mainstream educational understandings in the developed world, the agenda of international education organizations, international educational funders, and the implementation of educational systems, both public and private. Specific reference will be made to access to education, curriculum and culture, gender and education, and similar issues with an emphasis on examples from the so-called *developing world* in Asia, Africa, Latin America and the Middle East/North Africa.

4477.1.(2) Education and Development II: Policies and Practices [IDST 4477.1.(2)]

A continuation of EDUC 4476.1.(2). Examination and comparison of educational policies in selected countries or regions of the world with a view to assessing educational outcomes, education processes and the relation between education, the public sector, the private sector and international organizations, and the effect of such policies

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worldwide. Emphasis is on Asia, Africa, Latin America and the Middle East/North Africa.

4518.1(.2) Introduction to International Comparative Education: Perspectives [IDST 4518.1(.2)]

Prerequisite: at least thirty (30) credit hours of University courses.

Introduction to concepts and analysis underlying a comparative understanding of selected educational systems around the world. The course will emphasize comparisons between mainstream educational understandings in the developed world, the agenda of international education organizations, international educational funders, and the implementation of educational systems, both public and private. Specific reference will be made to access to education, curriculum and culture, gender and education and similar issues with an emphasis on examples from the so-called developing world in Asia, Africa, Latin America and the Middle East/North Africa..

4528.1(.2) Introduction to International Comparative Education: Policies [IDST 4528.1(.2)]

Prerequisite: at least thirty (30) credit hours of University courses and EDUC 4518.1(.2) or permission of Instructor

This course is a continuation of EDUC 4518.1(.2). Examination and comparison of educational policies in selected countries or regions of the world with a view to assessing educational outcomes, educational processes and the relation between education, the public sector, the private sector and international organizations, and the effect these policies have had, or are having worldwide, with emphasis on the regions or sub-regions of Asia, Africa, Latin America and the Middle East/North Africa

4591.1(.2) to 4593.1(.2) Directed Study in Education

Prerequisite: Permission of the Program Coordinator and/or Dean

An independent study course organized by a faculty member in consultation with a student. It enables a student to pursue independent research in a specific theme in education. Papers and/or examinations will be required.

4876.1(.2) – 4899.1(.2) Directed Study in Education

Prerequisite: at least thirty (30) credit hours of University courses.

An independent study organized by a faculty member in consultation with a student. It enables a student to pursue independent research in a specific theme in education. Papers and/or examinations will be required.

Engineering (EGNE)

External Director, Professor M. Butler (acting)

Professors P. Boyle, D. Swingler,
V. Tarnawski, S. Van Kamamidi

Associate Professor D. Van Dyer

Details of the program requirements for Engineering are delineated in Section 3 of this *Calendar*.

Course Descriptions

1203.1(.2) Engineering Mechanics (Statics)

Prerequisite: MATH 1210.1(.2)/1211.1(.2) (concurrently).

Fundamental concepts and principles of mechanics, statics of particles, equivalent force systems, equilibrium of rigid bodies, analysis of structures, friction, distributed forces, centroids, centre of gravity, moments of inertia.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

1204.1(.2) Computer Methods for Engineers

Prerequisite: Nova Scotia Pre-calculus Mathematics 12 Academic or MATH 0010.1(.2)/0011.1(.2) and Nova Scotia Grade 12 Physics Academic or PHYS 0011.0, or equivalents. Students must be registered in either the Diploma of Engineering or the B.Sc./Diploma in Engineering program.

This course introduces students to computer tools and techniques for the solution of common engineering problems. Software methods include C language programming, MathCad, spreadsheets, PC operating systems and networks will be studied. Problems involving the solution of simultaneous equations, matrix algebra, numerical integration/ differentiation, and display and analyses of experimental data will be addressed.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

1206.1(.2) Engineering Design Graphics (Design I)

Graphics as a language of communication; 3D visualization; projection theory, orthographic, oblique and

isometric sketching and drawing as a means of representing 3D objects on 2D paper; reading of engineering drawings; standards and conventional practices. An integral part of the course is a design project to provide students with conceptual design, team work and computer drafting experiences including reporting and presentation.

Classes 3 hrs. a week and lab 3 hrs. a week. 1 semester.

1209.1(.2) Engineering Economics

Prerequisite: Students must be registered in either the Diploma of Engineering or the B.Sc./Diploma in Engineering program.

This course deals with the economics of engineering design. After introducing fundamental concepts and cash flow diagrams, interest factors are dealt with in some detail. A variety of discounted cash flow techniques are covered including rate of return calculations. Inflation, tax, replacement and risk are also amongst the topics considered.

Classes 3 hrs. a week and labs 1 hr. a week.

2301.1(.2) Dynamics

Prerequisite: MATH 1210.1(.2), MATH 1211.1(.2), EGNE 1203.1(.2), and EGNE 1204.1(.2).

Rectilinear and curvilinear kinematics using cartesian, normal-tangential, and polar cylindrical labels: projectile motion with zero and non-zero drag. Continuous and discrete forms of the second law: work-energy, conservation of energy, impulse-momentum. Newtonian analysis of bodies in translation, rotation about a fixed axis, and plane general motion. Planar mechanisms with pin joints, sliding connections, and gears.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

2303.1(.2) Fluid Mechanics

Prerequisite: MATH 1210.1(.2), MATH 1211.1(.2), EGNE 1203.1(.2), and EGNE 1204.1(.2).

Fluid properties, fluid statics and stability. Lagrangian and Eulerian methods of analysis. Bernoulli's equation and applications. Linear momentum equation and applications. Dimensional analysis and dynamic similitude. Viscous effects in pipe flow.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

2304.1(.2) Mechanics of Deformable Bodies

Prerequisite: MATH 1210.1(.2), MATH 1211.1(.2), and EGNE 1203.1(.2).

An introduction to the techniques and theories involved in the analysis of the strength, deformation and stability of structural members and assemblies under the action of forces. Specifically, the object is to develop understanding of the relationships between loads applied to non-rigid bodies and the resulting stresses and strains. Topics include: stress and strain, axially loaded members, torsionally loaded members, flexural loading, combined

loadings, column loading and finally an introduction to the Theory of Elasticity.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

2305.1(.2) Introduction to Digital Logic Circuits

This course introduces students to fundamental principles of digital system design. Topics covered include Boolean algebra; basic logic gates; combinational logic circuits including programmable logic arrays (PLA's) and arithmetic circuits; sequential logic design involving flip-flops; counters; finite state machines.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

2306.1(.2) Engineering Thermodynamics

Prerequisite: PHYS 1210.1(.2) and 1211.1(.2); also MATH 1210.1(.2) and 1211.1(.2).

Energy and the first law, ideal gas, gas state equation, macroscopic properties of pure substances, properties and state, energy analysis of thermodynamic systems, entropy and the Second Law, thermodynamic relations, consequences and applications of the Second Law to thermodynamic systems.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

2307.1(.2) Engineering Design II

Prerequisite: EGNE 1206.1(.2) and 1204.1(.2).

The work of EGNE 1206.1(.2) is extended to include technical drawings and computer graphics, a design project with working drawings and a technical report, as well as the construction and testing of a physical model.

Classes 3 hrs. a week and lab 3 hrs. a week. 1 semester.

2308.1(.2) Electric Circuits

Prerequisite: PHYS 1210.1(.2) and 1211.1(.2) (concurrently).

The objective of this course is to introduce the student to the fundamental laws of electric circuits and circuit parameters, the concept of time-constants, impedances and admittances and general network theorems. Topics include: Kirchhoff's Laws; Ohm's law and circuit parameters, resistive networks, loop and node equations; network theorems, super position, Thevenin-Norton; A.C. circuits, sinusoidal response, power, power factor, three-phase circuits; transients in simple circuits.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

2309.1(.2) Probability and Statistics for Engineers

Prerequisite: MATH 1210.1(.2) and 1211.1(.2).

The topics covered include 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, an introduction to linear regression. The course emphasizes

engineering applications and makes extensive use of statistical computer packages.

Classes 3 hrs. and labs 2 hrs. a week. 1 semester.

2310.1(.2) Technical Communications

Prerequisite: Students must be registered in either the Diploma of Engineering or the B.Sc./Diploma in Engineering program.

This course is designed to prepare students for the range of communicative functions important to professional engineers. Students will complete assignments requiring proficiency with word processing, PowerPoint (or similar software), spreadsheets and databases, and will be taught how to produce business letters, proposals, reports and oral presentations in a professional manner.

Classes 3 hrs. a week. 1 semester.

2311.1(.2) Circuit Analysis (Circuits II)

Prerequisite: EGNE 2308.1(.2).

This course builds on the introduction to electric circuits in EGNE 308.1(.2). Topics include sinusoidal steady-state response via phasor diagrams and impedance concepts; power and energy; mutual inductance and transformers; balanced and unbalanced three-phase circuits.

It is intended that labs be “virtual labs” using Electronics Workbench/Spice packages on P.C. network.

Classes 3 hours and lab 3 hours a week. 1 semester.

English (ENGL)

Chairperson, Associate Professors	G. Stanivukovic B. Bartlett, Kennedy, M. Larsen, R. Perkin, G.Thomas
Associate Professors	E. Asp, J. Baker, T. Heffernan, R. Hulan, D
Assistant Professors	M. Barr, T. Chorney, D. Heckerl, G. Hlongwane, S.Kennedy, A. MacLeod, S.Malton
Professors Emeriti	W. Katz, A. Seaman, K.Tudor

Department website:

<http://www.smu.ca/academic/arts/english/>

Department Mission

The English department offers a wide variety of courses leading up to both major and minor concentrations in English, as well as an honours degree. The core of the program reflects a traditional approach to English studies, including literary-historical and genre courses. What makes the department distinctive, however, are a number of courses cross-listed with other disciplines or programs, such as Atlantic Canada Studies, Gender and Women’s Studies, Linguistics, Irish Studies, and Creative Writing. This feature allows students to expand their area of academic study in ways that reflect interdisciplinary approaches and their own developing interests.

The Major Program

Students wishing to major in English must satisfy the general requirements set out by the Faculty of Arts, and complete forty-two (42) credit hours in English including three (3) credit hours at the Introductory level – ENGL 1205.1(.2).

The Major Program (42 credit hours) consists of:

- Three (3) credit hours of ENGL 1205.1(.2)
- Twelve (12) credit hours in ENGL at the 2000 level (see detailed requirements in year 2)
- Eighteen (18) credit hours in ENGL at the 3000 level (see detailed requirements in year 3)
- Nine (9) credit hours in ENGL at the 4000 level

Suggested schedule**Year 1**

- ENGL 1205.1(.2) (NOTE: a passing grade in this course is required for entrance into 2000 level ENGL courses).
- Six (6) credit hours from one or two of the following: Philosophy 1200.0 (no other philosophy course satisfies this requirement); Mathematics [including MGSC 1205.1(.2); MGSC 1206.1(.2); and CISY 1225.1(.2)].
- Nine (9) credit hours from at least two of the following Humanities: Classics, History, Religious Studies, English [other than ENGL 1205.1(.2)], Philosophy (other than PHIL 1200.0), and Modern Languages courses on languages, literature and culture
- Twelve (12) credit hours from first year courses in the following social sciences: Anthropology, Economics, Geography, Linguistics, Political Science, Psychology and Sociology (a maximum of six (6) credits will be counted in any one area)

Year 2

- ENGL 2307.0 Literary Traditions in English
- Six (6) credit hours from 2000 level English courses (the Department recommends students take ENGL 2205.1(2) Practical Criticism as part of this requirement)

- Twelve (12) credit hours from arts courses at the 2000 level (may include English courses at the 2000 level beyond the above requirement)
- Six (6) credit hours of electives

Year 3

- Nine (9) credit hours from the following ENGL 3000 level courses in the pre-Twentieth Century period:

ENGL 3331.1(2); 3344.1(2); 3347.1(2); 3348.1(2); 3404.1(2); 3408.1(2); 3409.1(2); 3452.1(2); 3458.1(2); 3412.0; 3414.0; 3416.0; 3419.1(2); 3446.1(2); 3447.1(2); 3481.1(2); 3482.1(2); 3483.1(2); 3484.1(2).

There may also be Special Author/Special Subject courses that fulfill the distribution requirement for 3000 level course, if approved by the Department Chairperson.
- Nine (9) credit hours from 3000 level courses beyond the above requirement
- Nine (9) credit hours from 3000 level English courses beyond the above requirement.
- Three (3) credit hours of electives

Year 4

- Nine (9) credit hours from 4000 level ENGL courses
- Fifteen (15) credit hours of arts courses at the 4000 level (may include English courses at the 4000 level beyond the above requirement)
- Six (6) credit hours of electives

The Minor Program in English

A minor consists of at least twenty-four (24) credit hours in English with a maximum of three (3) credit hours at the 1000 level and a minimum grade point average of 2.0. Students may also minor in Creative Writing or Linguistics.

The Minor Program in Creative Writing

Students who declare a minor in Creative Writing must take at least twelve (12) credit hours in Creative Writing in at least two of the four genres offered (fiction, poetry, drama and non-fiction).

Students are also required to take twelve (12) credit hours more in English courses beyond ENGL 1205.1(.2).

Students who wish to major in English and minor in Creative Writing must take forty-eight (48) credit hours in English courses above ENGL 1205.1(.2) and fulfill the requirements of both programs.

Concentration

A minimum of twenty-four (24) credit hours in English is required to obtain a concentration in English in partial fulfillment of the B.A. General degree (i.e., one with Double Arts Concentrations and a minimum of ninety (90) credit hours).

Further details are available from the Chairperson.

The Honours Program

Students wishing to major in English with Honours must satisfy the general requirements set out by the Faculty of Arts, and complete sixty (60) credit hours in English including three (3) credit hours at the Introductory level – ENGL 1205.1(.2).

The Honours program (60 credit hours) consists of:

- Three (3) credit hours of ENGL 1205.1.2)
- Twelve (12) credit hours at the 2000 level (see detailed requirements in year 2)
- Thirty (30) credit hours at the 3000 level (see detailed requirements in year 3)
- Six (6) credit hours of the Honours Seminar
- Nine (9) credit hours at the 4000 level

Suggested Schedule

Year 1

- ENGL 1205.1(.2) (NOTE: a passing grade in this course is required for entrance into 2000 level ENGL courses).
- Six (6) credit hours from one or two of the following: Philosophy 1200.0 (no other philosophy course satisfies this requirement); Mathematics [including MGSC 1205.1(.2); MGSC 1206.1(.2); and CISY 1225.1(.2)]
- Nine (9) credit hours from at least two of the following Humanities: Classics, History, Religious Studies, English [other than ENGL 1205.1(.2)], Philosophy (other than PHIL 1200.0), and Modern Languages courses on literature and culture
- Twelve (12) credit hours from first year courses in the following social sciences: Anthropology, Economics, Geography, Linguistics, Political Science, Psychology and Sociology (a maximum of six (6) credits will be counted in any one area)

Year 2

- ENGL 2307.0 Literary Traditions in English
- Six (6) credit hours from 2000 level English courses (the Department recommends students take ENGL 2205.1(2) Practical Criticism as part of this requirement)
- Twelve (12) credit hours from arts courses at the 2000 level (may include English courses at the 2000 level beyond the above requirement)
- Six (6) credit hours of electives

Year 3

- Twelve (12) credit hours, satisfying the following area requirements, with three (3) credit hours from each:
 - Medieval and Renaissance: English 3404.1(.2), 3439.1(.2), 3447.1(.2), 3419.1(.2), 3421.1(.2), 3422.1(.2), 3444.1(.2), 3445.1(.2), 3446.1(.2);
 - 18th Century: English 3412.0, 3414.0, 3408.1(.2);

- iii. 19th Century: English 3344.1(.2), 3347.1(.2), 3348.1(.2), 3409.1(.2), 3452.1(.2), 3481.1(.2), 3482.1(.2), 3483.1(.2), 3484.1(.2);
- iv. 20th Century/Contemporary: English 3334.0, 3343.1(.2), 3345.1(.2), 3351.1(.2), 3367/1(.2), 3435.1(.2), 3437.1(.2), 3438.1(.2), 3453.1(.2), 3429.1(.2), 3443.1(.2), 3450.1(.2), 3451.1(.2), 3453.1(.2), 3459.1(.2), 3471.1(.2), 3472.1(.2), 3473.1(.2).

There may also be Special Author/Special Subject courses that fulfill one or more of these distribution requirement for 3000 level course, if approved by the Department Chairperson

- Six (6) credit hours of ENGL 3301.0 Literary Theory OR ENGL 3302.1(2) Literary Theory I AND ENGL 3303.1(2) Literary Theory II
- Twelve (12) credit hours from ENGL 3000 level courses

Year 4

- Six (6) credit hours of the Honours Seminar (topics vary from year to year; students are encouraged to check the departmental calendar for offerings)
- Nine (9) credit hours from 4000 level English courses
- Nine (9) credit hours from arts courses at the 4000 level
- Six (6) credit hours of electives

Course Descriptions

1205.1(.2) Introduction to Literature

This course introduces students to works of literature in English representing a variety of historical and cultural contexts. It develops the student's ability to interpret written texts and to write about them in an informed and organized manner.

Note: This course replaces the former courses EGL 203.1(.2) and EGL 204.1(.2). Students are advised that credit will not be awarded for ENGL 1205.1(.2) if the student already has a credit for either of the "Introduction to Literature" I or II [i.e., EGL 203.1(.2) or 204.1(.2)].

A PASSING GRADE IN ENGL 1205 IS NORMALLY REQUIRED FOR ENTRANCE TO 2000-LEVEL ENGLISH COURSES.

English 2205.1(.2) Practical Criticism

This course provides an introduction to the discipline of literary criticism through extensive exercises in the practical criticism of selected literary works. It is aimed at developing essential skills in close reading and a critical vocabulary with which to analyze and discuss literature, while sharpening our attentiveness to the way in which form and content contribute to meaning in a literary work.

2261.1(.2) Postcolonial Literature: Africa, the Caribbean, and South Asia

Prerequisite: ENGL 1205.1(.2)

This course introduces students to postcolonial writing in English from Africa, the Caribbean and South Asia. Authors to be studied may include Chinua Achebe, Buchi Emecheta, Shyam Selvadurai, Samuel Selvon, Jamaica Kincaid, Kamala Das and Anita Desai.

2262.1(.2) Postcolonial Literature: Canada, Australia, and New Zealand

Prerequisite: ENGL 1205.1(.2)

This course introduces students to postcolonial writing in English from Canada, Australia and New Zealand. Authors to be studied may include Eden Robinson, Sky Lee, Ruby Wiebe, Gerry Bostock, Jack Davis and Witi Ihimaera.

2301.1(.2) Nineteenth Century Crime and Detective Fiction

Prerequisite: ENGL 1205.1(.2)

This course considers the development of fiction of crime, mystery, and detection during the nineteenth century, a period in which this genre flourished. Authors to be studied include Mary Elizabeth Braddon, Wilkie Collins, Arthur Conan Doyle, Charles Dickens, Henry James, E. A. Poe, and R. L. Stevenson. Attention may also be given to relevant social developments, such as the rise of the police force, advances in criminology and detection, the typology and psychology of the criminal, and the "lady detective", white-collar crime and criminal networks, and the Victorian Underworld.

2302.1(.2) Twentieth Century Crime and Detective Fiction

Prerequisite: ENGL 1205.1(.2)

A study of major 20th Century stories of crime, mystery, and detection. Authors may include Agatha Christie, Raymond Chandler, Dashiell Hammett, and Sue Grafton.

2303.1(.2) Fictions of Finance

Prerequisite: ENGL 1205.1(.2)

This course examines the representation of money and finance in a range of genres – including fiction, drama, poetry, and film – and from a range of literary periods. Authors to be considered include William Shakespeare, Charles Dickens, Fyodor Dostoevsky, Theodore Dreiser, George Eliot, D. H. Lawrence, F. Scott Fitzgerald, Arthur Miller, and Martin Amis. Topics to be addressed include narratives of financial success and failure, gambling and risk, the expansion of capitalism and the stock market, lotteries and auctions, fraud and financial crime, and hoarding and expenditure.

2307.0 Literary Traditions in English

Prerequisite: ENGL 1205.1(.2) or equivalent.

This course examines literature written in English from Old English to the present with the goals of developing

awareness of literary history and of exploring relationships between literature and its social and cultural contexts.

2308.1.(2) Development of English Prose Style [LING 2308.1.(2)]

The course offers a close study of the lexical, syntactic and rhetorical choices in very short selections of prose writing from 1500 to the present. The passages will be studied in chronological order, with a view to observing developments in prose style in each period.

2311.1.(2) Modern English Language [LING 2311.1.(2)]

The course will examine the nature of modern English semantics (meaning), syntax ('wordings'), and morphology (word formation). Some attention is also paid to intonation (soundings). The course is presented using contemporary grammatical theories.

2313.0 Narrative in Fiction and Film

A study of a number of important works of fiction that have been successfully adapted to film. Students consider the specific properties that are unique to each medium and the implications (formal, thematic, social and political) involved in translating from page to screen.

2315.1.(2) Masterpieces of Western Literature (Pre-Renaissance)

An historical survey of the major works of Western civilization from classical Greece to the Renaissance.

2316.1.(2) Masterpieces of Western Literature (Post-Renaissance)

An historical survey of the major works of Western civilization from the Renaissance to the 20th century.

2317.0 Writing by Women [WMST 3317.0]

A course designed to examine some of the theoretical and practical concerns presented by women's writing. Both the nature of women's tradition in literature and the scope and method of feminist literary criticism will be studied. The emphasis will be on literature of the 18th, 19th, and 20th centuries, but earlier writings will be considered as well.

2318.1.(2) The Writer and Nature

Ranging from 18th century meticulous observers of the natural world through the Romantic poets to modern writers who envision an apocalyptically threatened environment, this course seeks to trace the shifts in literary approaches to nature within different English-speaking traditions and to follow the changing perceptions of the place of the human being within the natural landscape.

2325.1.(2) The Media in Every day Life

This course focuses on the role of printed and electronic media in forming our imaginative conceptions of the world around us.

2326.1.(2) Language and Gender [LING 2326.1.(2)]

This course examines the role of language in forming popular perceptions about the position of women and men in society. The topics include a comparison between English and other languages in matters of grammar, vocabulary, and semantics; a comparison between modern English and earlier stages; and an enquiry into the origin of authoritarian

notions of correctness. The historical role of women as users and teachers of language is also considered. Present-day attitudes, implementation of non-sexist language guidelines, and the struggle to establish non-discriminatory language practices are also included in the study.

2327.1.(2) The Bible and English Literature [RELS 2376.1.(2)]

A study of the influence of the Bible on English literature from Anglo-Saxon times to the present. Particular emphasis will be given to the King James Bible (1611). Some attention will be paid to the ancient context and literary forms of the Jewish and Christian scriptures and to recent theoretical approaches to the relationship of the Bible and literature.

2328.1.(2) The Catholic Tradition in Modern Literature in English [RELS 2375.1.(2)]

A study of the influence of Roman Catholicism on works of English literature from 1845 (the date of John Henry Newman's conversion to Roman Catholicism) to 2000. Some attention may also be paid to the Anglo-Catholic revival. By focusing on a range of literary genres, especially the novel and the spiritual autobiography, the course will investigate such topics as the influence of Catholic theology on literary form; the treatment of the conflict between individualism and authority; the representation of such controversial topics as papal infallibility, the Second Vatican Council, and the encyclical *Humanae Vitae*; the experience of Catholic women.

2341.1.(2) Introduction to Drama I

This course is a survey of representative plays from ancient Greece to 1700.

2342.1.(2) Introduction to Drama II

This course is a survey of representative plays from 1700 to the present.

2356.1.(2) The Development of Science Fiction to the New Wave

The course will explore visionary and speculative literature ranging from early nineteenth century speculative fictions up to and including the New Wave. Topics such as the following will be discussed: the influence of the classical writers M. Shelley, J. Verne, and H.G. Wells; the importance of the "pulp" magazines of the 1920s and 1930s and 1940s; Golden Age writers and writing; and the development of the New Wave movement.

ENGL 2360.1.(2) The Fantastic

This course will trace the rise of fantastic literature into a variety of modern cultural forms (novel, short story, graphic novel, film, gaming) and explore the ideologies it encodes. Examining how the fantastic filters the mythic, medieval and romantic, we will be in a position to speculate on how fantasy's various manifestations both tie us to the past and reconstruct identity and society in the postmodern era.

2364.1.(2) The Modern Novella

A course designed to introduce the student to a wide range of short novels which illustrate both the rich diversity and the fundamental unity of concern which characterize the modern imagination and cultural consciousness.

2380.0 Literature of Atlantic Canada

An examination of the literature and literary background of Atlantic Canada. Emphasis in the first semester is on the 19th and early 20th centuries; in the second semester it is on contemporary writing.

2391.1.(2) The Study of Short Fiction

This course is designed to introduce students to short fiction as well as to the analytical concepts necessary for its critical appreciation and judgment.

2392.1.(2) The Study of the Narrative

This course is designed to introduce students to the novel in English as well as to the analytical concepts necessary for its critical appreciation and judgment.

2393.1.(2) The Study of Poetry

Methods and problems in poetics and the reading and analysis of English poetry for the purpose of preparing students for advanced work.

2396.1.(2) Shakespeare: An Introduction

This course will provide an introduction to English culture in Shakespeare's time, including a brief overview of the development of English drama. Students will study a selection from Shakespeare's comedies, tragedies, histories, and sonnets, ranging from his earliest to his latest writings.

2800.0-2825.0 Special Author, Special Subject

The subject matter of particular courses will be announced from time to time. These courses are designed to examine authors and topics not dealt with in other 2000-level courses.

2826.1.(2) -2849.1.(2) Special Author, Special Subject

The subject matter of particular courses will be announced from time to time. These special half-credit courses provide the opportunity to study a particular author or subject in depth and detail. They are designed to examine authors and topics not dealt with in other 2000-level courses or to allow for a different approach to the study of authors and/or topics already covered in other courses.

English 3302.1.(2) Literary Theory I

This course provides an introduction to the major issues, figures, and theoretical approaches in the discipline of literary criticism. This section covers the ancients through to nineteenth-century writers.

English 3303.1.(2) Literary Theory II

This course provides an introduction to the major issues, figures, and theoretical approaches in the discipline of literary criticism. This section covers twentieth century through to contemporary writers.

3312.1.(2) Canadian English [LING 3312.1.(2)]

The course examines the background of Canadian English, the qualities which mark it as distinct from British and American English, and the regional varieties found within it, with emphasis on the speech of the Atlantic Provinces.

3331.1.(2) History of Children's Literature

A survey of children's literature to the end of the nineteenth century. The literature will be read and understood in its historical context. The emphasis will be on the works generally considered classics of children's literature

3334.0 The Literature of Modern Ireland [IRST 3334.0]

This full year course examines all genres of writing in Ireland after 1890, and emphasizes the social and cultural contexts in which individual texts came to be written. After 1890 'Irishness' became a contested site, and we will trace the different varieties of Irishness as articulated in the works of writers as different as W. B. Yeats, Lady Gregory, James Joyce, Elizabeth Bowen and Samuel Beckett, as well as a range of contemporary writers, such as Patrick McCabe and Medbh McGuckian, for whom the earlier formulations have proven inadequate/problematic. There will be a strong emphasis on issues relating to national identity, gender and cultural politics..

3343.1.(2) Cultural Studies

This is an interdisciplinary course that explores culture and contexts within which culture is produced, disseminated, and consumed. The course introduces students to some of the basic cultural studies theories and methodologies, like psychoanalysis, economics, sociology, but also film and media studies, gay and lesbian theories, feminist, ethnic, and popular-culture studies.

3344.1.(2) Canadian Literature to 1920

An introduction to the drama, fiction, prose and poetry written in early Canadian literary history emphasizing the colonial and post-Confederation periods.

3345.1.(2) Canadian Literature After 1920

An introduction to the drama, fiction, prose and poetry written in Canada since 1920 studied in critical and historical context.

3347.1.(2) American Literature 1820-1865

A survey of major works of American literature from 1820 to the end of the Civil War. Authors may include Dickinson, Douglass, Emerson, Hawthorne, Melville, Thoreau, and Whitman. This course, along with American Literature 1865-1914, provides students with a sound historical understanding of this most formative period in American literature.

3348.1.(2) American Literature 1865-1914

A survey of major works of American literature from 1865 to the eve of World War I. Authors may include Cather, Chopin, Crane, DuBois, Dreiser, James, London, Twain and Wharton. This course, along with American Literature 1865-1914, provides students with a sound historical understanding of this most formative period in American literature.

3351.1.(2) American Fiction from 1950 to the Present

A study of American fiction since World War II. Authors to be studied are chosen partly because they interpret some important aspects of the American national experience during this period and partly because they raise basic questions about the aesthetics of fiction.

3357.1.(2) Recent Science Fiction

This course will look at the recent expansion of the genre through experiments with form and subject matter. Topics such as the following will be discussed: the influence of the New Wave movement and the Feminism; the development of Cyberpunk; interactive science-fiction, including “fandom” and the proliferation of “fanzines”; science fiction as a multi-media genre; role-playing games; millennialism; and the recent trend towards the assimilation of science fiction with fantasy and/or horror.

3361.1.(2) World Literature in English: Selected Focus**3367.1.(2) Canlit: the 60s and 70s**

A study of the emergence of “Canlit” in the 1960s and 1970s with emphasis on the development of cultural institutions. In addition to the literature produced in the period, including representative poems, plays, short stories and novels, the course will examine the influence of thematic criticism, regionalism, and nationalism on the creation of Canadian canons.

3375.1.(2) Writing Fiction I

Additional prerequisite: submission of samples of writing prior to registration and permission of Creative Writing Coordinator.

A course in the many techniques, skills, goals and problems in writing fiction. The emphasis is on analyzing student stories in workshops, but lectures and writing exercises may also be included.

3376.1.(2) Writing Fiction II

Additional prerequisite: submission of samples of writing prior to registration and permission of Creative Writing Coordinator.

This course encourages students to experiment with literary techniques and to develop their own writing style. Students will participate in workshops, read widely in the genre of the short story and be encouraged to rethink and revise their own fiction.

3381.0 Writing Poetry

Additional prerequisite: submission of samples of writing prior to registration and permission of Creative Writing Coordinator.

This course provides students with an opportunity to write and workshop their own poetry. The great range of choices available to poets in terms of form, rhythm, voice and diction will be explored. The emphasis will be on student submissions, but the work of published poets will also be discussed.

3382.0 Writing Plays

Additional prerequisite: submission of samples of writing prior to registration and permission of Creative Writing Coordinator.

This course provides students with the opportunity to write and workshop their own plays. The literary aspects of drama, as well as its practical and production aspects, will be explored. Though the course focuses on student efforts, the

works of classic and contemporary playwrights may also be discussed.

3383.1.(2) Writing Prose - Non-Fiction

Additional prerequisite: submission of samples of writing prior to registration and permission of Creative Writing Coordinator.

A creative writing course dealing with such forms of prose as travel literature, essays, reviews, memoirs, biographies, and journals. Students will experiment with various forms and critique each other’s efforts in a workshop format. Published examples of non-fiction prose will be read and discussed.

3402.0 History of the English Language [LING 3402.0]

A survey of the development of the English language from its earliest stages to the present. Representative texts are used from each period so that students can acquire first-hand knowledge of the successive changes in grammar (syntax, morphology, and phonology) and vocabulary.

3404.1.(2) Chaucer: The Canterbury Tales

Prerequisite: At least six (6) credit hours in English at the 2000 level.

This course will provide a general introduction to the works of Chaucer, including a detailed study of *The Canterbury Tales* against the background of the late fourteenth century English culture.

3408.1.(2) Drama and Society - Restoration to 18th Century

This course gives particular attention to the comedy of manners and its principal exponents such as Etherege, Wycherley, Congreve and Sheridan. Also studied are sentimental comedy, heroic and domestic tragedy, and the ballad opera, as well as the way social and political development affected the theatre.

3412.0 Restoration and 18th Century Literature

This course focuses on the various forms of English poetry and prose between 1660 and 1800. It includes poets such as Dryden, Finch, Pope, and Gray, and writers of prose such as Swift, Johnson, Burney and Boswell.

3414.0 The Novel: Defoe to Austen

This course surveys the origin and development of the English novel during the 18th century. It includes the study of such novelists as Defoe, Fielding, Richardson, Smollett, Sterne, Goldsmith and Austen.

3416.0 The Romantic Movement

This course studies the origins and development of the English Romantic movement. Major emphasis will be placed on the works of Blake, Wordsworth, Coleridge, Shelley, Keats and Byron.

3419.1.(2) English Poetry and Prose of the 16th Century
Prerequisite: twelve (12) credit hours in ENGL at the 2000-level or above.

The course focuses on English poetry and prose written in the 16th century, and on the cultural and social context within which this literature was produced. Some writers that may be studied include More, Wyatt, Surrey, Shakespeare, Marlowe, Lyly, Sidney, Spenser, Nashe, Whitney, Lamer, Stuart and Queen Elizabeth I.

3421.1.(2) English Poetry and Prose of the 17th Century
Prerequisite: twelve (12) credit hours in ENGL at the 2000-level or above.

The course focuses on English poetry and prose written in the 17th century, and on the cultural and social context within which this literature was produced. Some of the writers that may be studied include Donne, Jonson, Marvell, Milton, Traherne, Herbert, Dryden, Florio, Bacon, Burton, Browne, Speght and Wroth.

3428.0 20th Century Poetry

A study of 20th century poetry in English. British, American and Canadian poetry of the Modernist period and the post-World War II period is given special emphasis.

3429.1.(2) American Literature 1914-1950

Prerequisite: ENGL 1205.1.(2) (or equivalent) and twelve (12) credit hours in ENGL at the 2000-level or above.

A study of major American modernist writers of fiction and poetry from the turn of the twentieth century until the period just after World War II. Writers studied may include Hemingway, Fitzgerald, Steinbeck, Eliot, Pound and Stevens.

3430.0 Scottish Literary Traditions

A selective examination of Scottish literary traditions from the late Middle Ages to the present. As required for particular writers, attention will also be paid to the Scots language and to cultural background.

3435.1.(2) 20th Century European Drama

A study of the principal European dramatists and theatre movements in the present century with emphasis on the ones that have most influenced drama written in English. Reference is made to works by such dramatists as Ibsen, Strindberg, Chekhov, Pirandello, Brecht, Beckett and Ionesco.

3437.1.(2) Canadian Drama

3438.1.(2) American Drama

This course traces the origins and principal developments of drama in the United States. Special reference is made to the work of leading dramatists, including O'Neill, Wilder, Miller, Williams, Albee, Wilson and Shepard.

3439.1.(2) Literature in English 1350-1500

Prerequisite: ENGL 3404.1.(2)

In the late 14th century the viability of English as literary language was confirmed by the works of Geoffrey Chaucer

and other writers. This course traces the development of late medieval literature in English up to the emergence of Modern English in the 16th century.

3443.1.(2) Irish Poetry [IRST 3443.1.(2)]

Prerequisite: IRST 1215.2.(2) or IRST 1216.1.(2) or ENGL 2393.1.(2)

This course will examine recent Irish poetry, beginning with W. B. Yeats and concluding with an extended analysis of the poetry of Northern Ireland. We will be placing poems in cultural context, but also examining the formal aspects of the work. Students will be required to read a considerable amount of Irish social and cultural history, as well as some theoretical works about poetry and poetics.

3444.1.(2) Shakespeare I

The subject of this course is Shakespeare's comedies and romances.

3445.1.(2) Shakespeare II

The subject of this course is Shakespeare's history plays and problem plays.

3446.1.(2) Shakespeare III

The subject of this course is Shakespeare's tragedies.

3447.1.(2) Shakespeare's Contemporaries

This course studies selected plays by such writers as Kyd, Marlowe, Dekker, Jonson, Beaumont and Fletcher and Webster.

3450.1.(2) British Drama 1900-1955

The focus of this course is the dominant role of G. B. Shaw in the theatre of the first three decades of the 20th Century. Other playwrights studied include Granville Barker, Galsworthy, Barrie, Coward, Rattigan, Eliot and Fry.

3451.1.(2) British Drama since 1956

The "overnight revolution" in British Theatre in 1956 produced successive waves of outstanding dramatists who will be studied in the course, including Osborne, Pinter, Arden, Bond, Stoppard, Ayckbourn and Shaffer. The work of three major companies which helped to promote them, the Royal Court Theatre, the Royal Shakespeare Company and the National Theatre Company, will also be featured.

3453.1.(2) Irish Drama in the 20th Century [IRST 3453.1.(2)]

This course studies Irish drama from the founding of the Irish National Theatre society in 1903 up to the present time, including the works of Yeats, Hyde, Lady Gregory, Synge, Shaw, O'Casey, and Beckett.

3458.1.(2) History and Theory of the Novel I

This course will serve as an introduction to the critical reading of the novel. We will study the historical, cultural, and philosophical climate that allowed for the emergence of the novel in the eighteenth century and will track the changes in narrative style, and the implications of these changes, from realism to modernism to postmodernism to post-colonialism. History and Theory of the Novel I will consider the novel in the eighteenth and nineteenth century.

3459.1(2) History and Theory of the Novel II

This course will serve as an introduction to the critical reading of the novel. We will study the historical, cultural, and philosophical climate that allowed for the emergence of the novel in the eighteenth century and will track the changes in narrative style, and the implications of these changes, from realism to modernism to postmodernism to post-colonialism. History and Theory of the Novel II will consider the novel from the twentieth century to the contemporary period.

ENGL 3460.1(2) British Literature, 1900—1945

The course surveys British literature from the beginning of the twentieth century to the end of the second world war, and includes works of poetry, prose, fiction, and drama. Attention will be paid to the social, cultural, and historical contexts of the literature, with reference to such major events as the two world wars and the depression. Authors studied may include George Bernard Shaw, Virginia Woolf, D.H. Lawrence, T.S. Eliot, Graham Greene, and W.H. Auden.

ENGL 3461.1(2) British Literature, 1945—2000

The course surveys British literature from the end of the second world war to the conclusion of the twentieth century, and includes works of poetry, prose, fiction, and drama. Attention will be paid to the social, cultural, and historical contexts of the literature, with reference to topics such as the end of the British empire, the cold war and its aftermath, and the increasing importance of the electronic media. Authors studied may include Doris Lessing, Philip Larkin, Ted Hughes, Harold Pinter, Margaret Drabble, and Ian McEwan.

3471.1(2) Contemporary Canadian Fiction

An advanced course in Canadian fiction produced in the 70s, 80s, and 90s that gives students an opportunity to consider selected novels and short stories in some depth. Texts are considered within the context of Canadian literary criticism, history, and theory.

3472.1(2) Contemporary Canadian Poetry

An advanced course that considers questions of genre and form in Canadian poetry after 1965. Selected collections of poetry are studied within the context of Canadian literary criticism, history, and theory. Specific topics covered include the long poem, the lyric and visual poetry.

3481.1(2) The British Novel 1800-1855

A study of the British novel in the first half of the nineteenth century, focusing on writers such as Jane Austen, Emily Brontë, Charlotte Brontë, William Makepeace Thackeray, and the early Charles Dickens. Attention will be paid to the style and narrative technique of the novels studied, to their place in the cultural history of the period, and to their relationship to their social and to their historical context.

3482.1(2) The British Novel 1855 - 1910

A study of the British novel from the mid-Victorian period to the end of the Edwardian period, focusing on writers such as George Eliot, the later Charles Dickens, Thomas Hardy, Henry James, and Joseph Conrad. Attention will be paid to the style and narrative technique of the novels studied, to their place in the cultural history of the period, and to their relationship to their social historical context.

3483.1(2) Victorian Poetry and Prose I

This course focuses on the poetry and prose of the early Victorian period, including poets such as Elizabeth Barrett Browning, Robert Browning, and Alfred, Lord Tennyson, and prose writers such as Thomas Carlyle and John Stuart Mill. Attention will be paid to the way that Victorian poetry develops out of the Romantic Movement, and to the relationship between literature and the political and social context, focusing on topics like reform and the industrial revolution.

3484.1(2) Victorian Poetry and Prose II

This course focuses on the poetry and prose of the later Victorian period, including poets such as Matthew Arnold, Christina Rossetti, and Gerard Manley Hopkins, and prose writers such as John Henry Newman, Charles Darwin, Matthew Arnold, Walter Pater, and Oscar Wilde. Attention will be paid to the aesthetic movement, the definition of culture, and the crisis of religious faith.

3800.0-3825.0 Special Author, Special Subject

The subject matter of particular courses will be announced from time to time. These courses are designed to examine at an advanced level authors and topics not dealt with in other 3000-level courses

3826.1(2) -3849.1(2) Special Author, Special Subject

The subject matter of particular courses will be announced from time to time. These special half-credit courses provide the opportunity to study a particular author or subject in depth and detail. They are designed to examine at an advanced level authors and topics not dealt with in other 3000-level courses or to allow for a different approach to the study of authors and/or topics already covered in other countries.

STUDENTS SHOULD NORMALLY HAVE COMPLETED NINE (9) CREDIT HOURS IN ENGLISH AT THE 2000 OR 3000 LEVEL BEFORE TAKING 4000-LEVEL ENGL COURSES.

4405.1(2) Advanced Studies in Chaucer

Prerequisite: ENGL 3404.1(2)

In this course students will examine Chaucer's achievement as a late medieval writer in English within the context of European literature, and especially in relation to early renaissance developments in Italian. Works to be studied in detail may include *The Book of the Duchess*, *The House of Fame*, *The Parliament of Fowls*, *Boece*, and *Troilus and Criseyde*.

4417.1(2) Feminist Literary Theory [WMST 4417.1(2)]

This course will engage students in a study of feminist literary theory. Some of the most influential theorists in this area will be analyzed as well as the dominant cultural systems to which they have responded. Students will not be required to have any prior knowledge of the field.

4422.1.(2) Studies in Renaissance Love Poetry

Prerequisite: twelve (12) credit hours in ENGL at the 2000-level or above.

The course focuses on a representative selection of Renaissance love poetry in its cultural, social and philosophical contexts. It examines the poetic strategies used to explore the meaning and value of love in its relation to sexuality and gender. Special attention will be given to the sonnet form, its relationship to the courtly love tradition and the cult of the "Virgin Queen," Elizabeth I, but other poetic genres will be studied as well. Intellectual and thematic contexts will be constructed from various classical and Italian texts, such as Plato's *Symposium*, the poems of Catullus and Sappho and Petrarch's sonnets. Writers studied may include Wyatt, Sidney, Spenser, Marlowe, Cavendish, Wroth, and Marvell.

4423.1.(2) John Donne and the Literary Traditions of the Renaissance

Prerequisite: twelve (12) credit hours in ENGL at the 2000-level or above.

This course will focus on the work of John Donne, an influential early 17th c. English writer, the founder of the so-called "metaphysical" school of style. Through his work, students will become acquainted with various social and cultural contexts of the Renaissance. Readings will include selections from Donne's devotional and love poems, elegies, verse epistles, sermons and other prose. Also, Donne's work will be compared to the work of other Renaissance writers, and placed within the context of the European Baroque, as represented in visual art and literature.

ENGL 4424.1.(2) Renaissance Literature: Advanced Study

Prerequisite: twelve (12) credit hours in ENGL at the 2000 level or above

The subject of the course will vary from year to year. It allows the opportunity to explore an aspect of Renaissance literature in more depth than is possible in other courses. The following are some examples of possible topics: a single major author or group of authors from the period (e.g. Spenser, Bacon, More); a literary movement or form (e.g. the Metaphysical school of poetry; the Cavalier school of poetry; the epic; the sermon; a social or cultural issue (e.g. "the woman issue"; literature and the institution of the Elizabethan or Jacobean Court); or a close study of one of the major literary works of Renaissance era (*The Faerie Queene*, *Paradise Lost*, *The Anatomy of Melancholy*)

4427.1.(2) Language, Gender and Power [LING 3427.1.(2); WMST 4427.1.(2)]

This course examines the role of language and its use in constructing and negotiating social positions of men and women and by men and women. It compares discourse strategies used by powerful/powerless speakers and gender-associated discourse strategies. It examines dialect and generic features used in constructing and maintaining social identities and differences.

4431.1.(2) The Modern Irish Novel [IRST 4431.1.(2)]

This course will involve a study of the modern Irish novel, placing each work in its social and cultural context. It may include works by James Joyce, Elizabeth Bowen and/or Samuel Beckett, as well as a selection of contemporary novels by writers like Anne Enright and John Banville.

4434.1.(2) Autobiography

This course explores the many ways in which various narrative forms are used to represent and relate the self. Texts to be examined will range from classics of autobiographical writing such as De Quincey to modern and contemporary works.

4441.1.(2) The Irish Short Story [IRST 4441.1.(2)]

This course will examine the short story as a major form in the fiction (in English) of Ireland, tracing its development from the Irish folktale to the sophisticated modern stories of internationally read practitioners such as Joyce, O'Connor, O'Faolain and Lavin.

4455.1.(2) The Modern Novel

A close critical analysis of representative works of a number of prominent late 19th and 20th century novelists in the light of certain literary, cultural, socio-political and philosophic tendencies which have exercised a decisive influence in the formation of the modern imagination.

4456.1.(2) The Postmodern Novel

Prerequisite: twelve (12) credit hours in ENGL at the 3000-level or above.

This course focuses on some of the major novelists of the second half of the twentieth century in the context of the cultural and political climate that has given rise to this fiction and the term postmodernism.

4457.1.(2) Advanced Studies in American Literature

Prerequisite: twelve (12) credit hours in ENGL at the 2000-level or above.

This advanced course in American literature offers intensive treatment of authors, genres, and themes addressed at the intermediate level. Possible topics in the course may include: (1) intensive study of single authors in relation to historical trends in literary criticism ('reception history'); (2) intensive exploration of particular currents in the development of a specific genres; (3) concept-based courses; or (4) broad-based 'cultural studies' approaches to American literature.

4462.1.(2) Native North American Literature

Prerequisite: ENGL 1205.1.(2), ENGL 2344 and/or ENGL 2345.1.(2) are strongly recommended.

A course on the literature arising from the awakening of Native American political consciousness in the late twentieth century. The course explores representative works of prose, poetry, drama and fiction in the context of theories generated by borderland studies and Native studies. The course will allow students to study representative works by Native North American writers in more detail than in other courses in Canadian and American literature.

4463.1(2) Imagining the North in Canadian Literature

An interdisciplinary course that explores the representation of Canada as “true north” in literature and media. Beginning with Glenn Gould’s “The Idea of North” and working through representative texts, including selections of Inuit literature written in English, the course emphasizes the mutual influence of the various genres through which Canadians imagine the north. The course exposes students to the effects of the post-modern “blurring of genres” and to the possibilities and problems of interdisciplinary study.

4464.1(2) Postcolonial Literature: Special Topics

Prerequisite: English 1205.1(2) and either ENGL 2261.1(2) or ENGL 2262.1(2)

This course examines the literatures of specific postcolonial regions. These regions may include Canada, the Caribbean, Africa, New Zealand, Australia and South Asia.

4470.1(2) The Rise and Fall of the Printed Book

This course focuses on the history of the printed book and examines the phenomenon of mass literacy and its implications in the development of different types of literature.

4475.0 Writing Fiction - Advanced

Additional prerequisite: written permission of Creative Writing Coordinator.

A course designed for students with some experience in writing fiction. Many aspects of the writer’s craft, from the germination of a story to the polishing of a final draft, will be explored in workshops. Students who have not completed either ENGL 3375.1(2) or 3376.1(2) will be asked to submit a sample portfolio of their work before registration.

4477.1(2) Writing Poetry (Advanced)

Prerequisite: ENGL 3381.0 or, prior to registration, submission of portfolio to creative writing coordinator.

An advanced creative-writing course, which provides students with opportunities to develop their craft beyond its beginning stages and to have their poems discussed in workshops. The course may include emphasis on poem sequences, long poems, and poets’ poetics, including their prose commentaries on subjects ranging from sources of inspiration to arguments about technique.

4485.1(2) Victorian Literature – Advanced Study

The subject of the course will vary from year to year. It allows the opportunity to explore an aspect of Victorian literature in more depth than is possible in other courses. The following are some examples of possible topics: a single major author or group of authors from the period (e.g., Charles Dickens or the Brontës); a literary movement or form (e.g., the aesthetic movement or the sensation novel); a social or cultural issue (e.g., the “woman question” or industrialism in literature); or the literature of a narrowly defined historical period (e.g., the novel in the 1840’s or the literature of the fin de siècle).

ENGL 4493.1(2) Doing Discourse Analysis**[LING 4493.1(2)]**

Prerequisite: At least twelve (12) credit hours at the 3000 level in English or Linguistics (or permission of the instructor)

The focus is on learning how to do discourse analysis. We will focus on developing skills in the analysis of talk and text using models drawn from linguistics, structuralism and semiotics. The course will explicitly develop skills in analyzing discourse functions as configurations of interaction, experience and organization meaning.

ENGL 4494.1(2) Approaches to Discourse Analysis**[LING 4494.1(2)]**

Prerequisite: At least eighteen (18) credit hours at the 3000 level in English or Linguistics (or permission of the instructor)

Linguistic, structural, post-structural, and semiotic perspectives on discourse analysis are addressed through reading and discussion of key works by authors of “landmark” texts such as R. Jakobsen, J. L. Austen, H. P. Grice, etc. The goals of the course are to (a) familiarize students with some of the “landmark” texts and perspectives on discourse analysis and (b) to develop abilities to develop abilities to relate analyses to cultural and situationally relevant contexts

4552.0; 4555.1(2)/4556.1(2) Honours Seminar

Topics chosen will be of a general nature in order to permit the representation of a diversity of historical periods, genres, and the various literary traditions of the English-speaking world. Students will be required to present papers on aspects of the chosen topic and members of the English Department will conduct seminars in their areas of expertise.

4800.0 – 4825.0 Special Author, Special Subject

Additional prerequisite: enrolment in the English honours program or special recommendation of the Department.

These courses provides the opportunity to study a particular author in considerable depth and detail, and requires some measure of independence and initiative in the student.

Tutorials by arrangement with supervisor. 2 semesters

4826.1(2) -4849.1(2) Special Author, Special Subject

These courses provide the opportunity to study a particular author, subject, or period in considerable depth and detail and will require some measure of independence and initiative in the student.

English As A Second Language (EGSL)

The following course is offered by the Department of Modern Languages and Classics.

1100.0 English as a Second Language

Prerequisite: native language other than English; recommendation of the English, Modern Languages and Classics, or other academic department; and permission of instructor.

The aim of the course is to help students function effectively in university by improving reading and listening comprehension, fluency of speech, and accuracy in writing.

Entrepreneurship

A major in Entrepreneurship is offered within the Bachelor of Commerce. The major is administered by the Department of Management.

In addition to all other requirements for the major, a minimum GPA of 2.2 is required in ACCT 3332, MGMT 2383, MGMT 2384, MGMT 2380, MGMT 3389, MGMT 4487, MGMT 4494, and MGMT 4495 (as indicated below by *).

Year 3

*ACCT 3332.1(.2) Planning and Control – see Note (i)
FINA 2360.1(.2) Business Finance I
FINA 3361.1(.2) Business Finance II
*MGMT 2380.1(.2) Family Business
*MGMT 3389.1(.2) Structuring the Start-Up
MGMT 3480.1(.2) Ethical Responsibilities of Organizations
Six (6) credit hours in non-Commerce electives
Six (6) credit hours in free electives

Year 4

*MGMT 4487.1(.2) New Venture Opportunities
MGMT 4489.1(.2) Strategic Management
*MGMT 4494.1(.2) Entrepreneurship: Theory and Concepts
*MGMT 4495.1(.2) Small Business Performance Improvement
Six (6) credit hours in non-Commerce electives
Twelve (12) credit hours in free electives

Note: (i) Students cannot receive credit for both ACCT 3332 and Acct 3333.

Environmental Studies (ENVS)

Executive

G. Pe-Piper	Co-ordinator, Geology
T. Charles	Management Science/ Environmental Studies
J. Clyburne	Chemistry/Environmental Studies
J. Lundholm	Biology/Environmental Studies
C. Suteanu	Geography/Environmental Studies
R. Richardson	Environmental Studies

Adjunct Professors

D. Walmsley	Environmental Studies
H.P. White	Environmental Studies

Program website:

<http://www.smu.ca/academic/science/envstud>

This program offers a major, honours and minor in Environmental Studies. The program leads to a Bachelor of Science in Environmental Studies and is a rigorous multidisciplinary program combining core sciences with management, social sciences and humanities. Students majoring in a Bachelor of Arts or Commerce may also combine a minor in Environmental Studies.

A major or minor in Environmental Studies will provide students with the necessary academic preparation to understand environmental and resource-oriented issues and to prepare them to contribute to an environmentally sound future. Students have the options to declare a major, double major, dual degree, honours, double honours, minor and/or co-op. Graduates of the honours program may be qualified for admission to graduate programs in Environmental Studies or related subjects, see the *Graduate Academic Calendar* for details.

Students may pursue a cooperative education option. See the Co-operative Education Office for details.

Major in Environmental Studies

Environmental Studies is an interdisciplinary program, drawing upon courses from departments in the Faculty of Science, as well as those in Arts and Commerce. As such, students fulfill the breadth requirements of the Bachelor of Science (regulations 6c and 6e) implicitly within the major requirements. Students are encouraged to follow the recommended sequence in arranging their courses.

Year 1:

- MATH 1210.1(.2) Intro Calculus I and either MATH 1211.1(.2) Intro Calculus II or MATH 1216.1(.2) Intro to Mathematical Statistics or CSCI 1226.1(.2) Intro to Computing Science and either CSCI 1227.1(.2) Intermediate Programming or CSCI 1228.1(.2) Accelerated Programming
- CHEM 1210.1(.2) General Chemistry I
- One of CHEM 1211.1(.2), 1212.1(.2) or 1213.1(.2) General Chemistry II
- BIOL 1201.1(.2) Molecular and Cell Biology
- BIOL 1202.1(.2) Organismal and Ecological Biology

- ENVS 1200.1(.2) Environmental Challenges
- ECON 1201.1(.2) Principles of Economics: micro
- ENGL 1205.1(.2) Introduction to Literature
- GEOG 1200.1(.2) People, Place and Environment

Year 2:

- BIOL 2308.1(.2) Biostatistics or GEOG 3326.1(.2) Statistical Methods for Geographers
- ENVS 2300.1(.2) Environmental Science: Populations and Ecosystems
- ENVS 2310.1(.2) Environmental Science: Resources and Pollution
- GEOL 1214.1(.2) Intro to Geology: Earth Materials
- GEOL 1215.1(.2) Intro to Geology: Earth Processes
- GEOG 2100.1(.2) Fundamentals of Physical Geography
- CISO 1225.1(.2) Intro to Computer Application
- ECON 3363.1(.2) Environmental Economics
- Six (6) credit hours from Group B

Year 3:

- Nine (9) credit hours from Group A
- Six (6) credit hours from group B
- Nine (9) credit hours from group C
- Three (3) credit hours from the Humanities (Classics, English, History, Philosophy, Religious Studies and Modern Language courses with a focus on literature and culture).
- Three (3) credit hours of electives

Year 4:

- ENVS 4499.0 Seminar in Environmental Science
- Six (6) credit hours from Group C
- Twelve (12) credit hours from Group C at the 4000 level
- Six (6) credit hours of electives

Group A

ENVS 1200.1(.2)	Environmental Challenges
ENVS 2100.1(.2)	Green Chemistry
ENVS 2300.1(.2)	Environmental Science: Populations & Ecosystems
ENVS 2310.1(.2)	Environmental Science: Energy, Resources & Pollution
ENVS 3410.1(.2)	Environmental Impact Assessment
ENVS 3420.1(.2)	Environmental Monitoring and Auditing
ENVS 3430.1(.2)	Environmental Information Management
ENVS 4440.1(.2)	Environmental Policy
ENVS 4450.1(.2)	Natural Resource Management
ENVS 4460.1(.2)	Methods of Environmental and Natural Resource Analysis

Group B

Environment related courses:

ANTH 4306.1(.2)	Foraging Adaptation
ECON 3361.1(.2)	Fisheries Economics
ENGL 2318.1(.2)	The Writer and Nature
GEOG 1100.1(.2)	Global Perspectives on Land & Life
GEOG 2200.1(.2)	Fundamentals of Human Geography

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GEOG 2315.1(.2)	The Oceans
GEOG 3304.1(.2)	Environmental Management
GEOG 3329.1(.2)	Cultural Ecology
GEOG 3454.1(.2)	Bay of Fundy: Environment and Issues
Geog 4434.1(.2)	Watershed Management
IDST 4470.1(.2)	Environment and Development
MGMT 3388.1(.2)	Business and Society
PHIL 2305.1(.2)	Environmental Ethics
POLI 2304.0	Canadian Politics in the 21 st Century
POLI 2305.0	International Relations
POLI 2307.0	Provincial Government and Politics
POLI 3321.1(.2)	International Organization
POLI 3322.1(.2)	Global Political Economy
POLI 4493.1(.2)	Global Social Movements
PSYC 4414.1(.2)	Environmental Perception and Cognition
PSYC 4418.1(.2)	Environmental Psychology
RELS 2347.1(.2)	Ecology and Religion
RELS 3348.1(.2)	Religion and Ecological Issues in the Developing World [IDST 3348.1(.2)]
SOCI 3391.0	Rural Sociology
SOCI 4419.0	Sociology of the Environment

Background/Techniques courses:

COMM 2293.1(.2)	Communication
COMM 3394.1(.2)	Oral Communication and Presentation Techniques
ECON 1202.1(.2)	Principles of Economics: Macro
ECON 3364.1(.2)	Cost Benefit Analysis
MGMT 3392.1(.2)	Occupational Health & Safety
PHIL 2302.0	Ethics
PHIL 2318.1(.2)	Science and Society
PHIL 3448.1(.2)	Philosophy of Science
PSYC 1250.1(.2)	Social Behaviour
PSYC 3309.1(.2)	Human Factors and Performance
PSYC 4497.1(.2)	Community Psychology
RELS 3349.1(.2)	Science & Religion
SOCI 3387.1(.2)	Women & Development [WMST 3387.1(.2)]

Any language courses, up to six (6) credit hours.

Group C

BIOL 2303.1(.2)	Introduction to Plant Form and Function
BIOL 2324.1(.2)	Ecology
BIOL 2326.1(.2)	Invertebrate Zoology
BIOL 2398.1(.2)	Introduction to Microbiology
BIOL 2427.1(.2)	Introductory Entomology
BIOL 3002.1(.2)	Insect Ecology
BIOL 3414.1(.2)	Environmental Microbiology
BIOL 3421.1 (.2)	Applied Plant Biology
BIOL 3424.1(.2)	Diversity & Ecology of Fishes
BIOL 4003.1(.2)	Molecular Ecology
BIOL 4005.1(.2)	Advanced Population & Community Ecology
BIOL 4331.1(.2)	Ecosystems
BIOL 4404.1(.2)	Behavioural Ecology
BIOL 4410.1 (.2)	Plant Ecology
BIOL 4422.1(.2)	Conservation Biology
BIOL 4430.1(.2)	Ornithology
BIOL 4431.1(.2)	Herpetology
BIOL 4433.1(.2)	Ecotoxicology
BIOL 4448.1(.2)	Biology Field Course
BIOL 4451.1(.2)	Ecology in the Tropics

CHEM 2332.1(.2)	Introductory Analytical Chemistry: Wet Methods [GEOL 2332.1(.2)]
CHEM 2333.1(.2)	Introductory Analytical Chemistry: Instrumental Methods [GEOL 2333.1(.2)]
CHEM 2344.1(.2)	Organic Chemistry I
CHEM 2346.1(.2)	Organic Chemistry IIB (or IIA if double major in Chemistry)
CHEM 2373.1(.2)	Environmental Chemistry I
CHEM 2374.1(.2)	Environmental Chemistry II
CHEM 3451.1(.2)	Introductory Biochemistry
CHEM 4452.1(.2)	Biochemistry: Metabolism
ENVS 3310.1(.2)	Field Course in Environmental Studies
ENVS 3410.1(.2)	Environmental Impact Assessment
ENVS 3420.1(.2)	Environmental Monitoring and Auditing
ENVS 4430.1(.2)	Directed Research
ENVS 4440.1(.2)	Environmental Policy
ENVS 4450.1(.2)	Natural Resource Management
ENVS 4460.1(.2)	Methods of Environmental and Natural Resource Analysis
GEOG 2316.1(.2)	Map and Air Photo Interpretation
GEOG 2336.1 (.2)	Principles of Cartography
GEOG 3313.1(.2)	Geomorphology [GEOL 3373.1(.2)]
GEOG 3333.1(.2)	Biogeography
GEOG 3343.1(.2)	Weather & Climate
GEOG 3356.1(.2)	Remote Sensing of the Environment
GEOG 3366.1(.2)	Field Techniques and Research Methods
GEOG 3386.1(.2)	Concepts of Geographical Information Systems
GEOG 4413.1(.2)	Coastal Geomorphology [GEOL 4476]
GEOG 4414.1(.2)	Integrated Coastal Zone Management
GEOG 4423.1(.2)	Glacial Geomorphology [GEOL 4475]
GEOG 4433.1(.2)	Fluvial Geomorphology
GEOG 4443.1(.2)	Natural Hazards
GEOG 4496.1(.2)	Applications in GIS
GEOL 1206.1 (.2)	Global Change
GEOL 2301.1(.2)	Mineralogy
GEOL 2325.1(.2)	Sedimentology [GEOG 2325.1(.2)]
GEOL 3340.1(.2)	Surface and Groundwater Hydrology
GEOL 3453.1(.2)	Principles of Geochemistry
GEOL 3454.1(.2)	Applied Geochemistry
PHYS 1000.1(.2)	Physics for Life Sciences I
PHYS 1001.1(.2)	Physics for Life Sciences II
PHYS 1100.1 (.2)	University Physics I
PHYS 1101.1 (.2)	University Physics II

Honours or Double Honours in Environmental Studies

For the Bachelor of Science (Honours) degree in Environmental Studies, students must:

- satisfy the requirements for a major
- complete ENVS 4599.0 Honours Research Project
- achieve a degree GPA of at least 3.00

Concentration in Environmental Studies

A 3 year (90 credit hour) Bachelor of Science with a concentration in Environmental Studies is not available.

Minor in Environmental Studies

Students may combine a minor in Environmental Studies with a major in another discipline as part of a Bachelor of Science, Arts or Commerce.

Completion of the minor requires thirty (30) credit hours with a minimum grade of C in the following courses:

- Nine (9) credit hours from:
 - ENVS 1200.1(.2) Environmental Challenges
 - ENVS 1203.0 Biology and the Human Environment [BIOL 1203.0]
 - ENVS 2300.1(.2) Environmental Science: Populations and Ecosystems
 - ENVS 2310.1(.2) Environmental Science: Energy, Resources and Pollution
- Nine (9) credit hours from:
 - ENVS 3310.1(.2) Field Course in Environmental Studies
 - ENVS 3410.1(.2) Environmental Impact Assessment
 - ENVS 3420.1(.2) Environmental Monitoring and Auditing
 - ENVS 3430.1(.2) Environmental Information Management
 - ENVS 4430.1(.2) Directed Research
 - ENVS 4440.1(.2) Environmental Policy
 - ENVS 4450.1(.2) Natural Resource Management
 - ENVS 4460.1(.2) Methods of Environmental and Natural Resource Analysis
 - ENVS 4499.0 Seminar in Environmental Science
- Twelve (12) credit hours from:
 - CHEM 2373.1(.2) Environmental Chemistry I
 - CHEM 2374.1(.2) Environmental Chemistry II
 - ECON 3363.1(.2) Environmental Economics
 - ECON 3361.1(.2) Fisheries Economics
 - ENGL 2318.1(.2) The Writer and Nature
 - GEOG 2200.1(.2) Fundamentals of Human Geography
 - GEOG 2315.1(.2) The Oceans
 - GEOG 3304.1(.2) Environmental Management
 - GEOG 3454.1(.2) Bay of Fundy: Environment and Issues
 - GEOG 4414.1(.2) Integrated Coastal Zone Management
 - GEOG 4433.1(.2) Fluvial Geomorphology
 - GEOL 1206.1 (.2) Global Change
 - IDST 4470.1(.2) Environment and Development
 - PHIL 2305.1(.2) Environmental Ethics
 - PSYC 4414.1(.2) Environmental Perception and Cognition
 - PSYC 4418.1(.2) Environmental Psychology
 - RELS 3348.1(.2) Religion and Ecological Issues in the Developing World
 - SOCI 4419.0 Sociology of the Environment

Classes 3 hrs and lab 3 hrs a week. 1 semester.

1203.0 Biology and the Human Environment (for non-science students) [BIOL 1203.0]

The importance of biology in today's world is discussed with particular emphasis on human ecology and the impact of human activity on other living things. This course will not include laboratory work, but rather two lecture hours per week, and discussion sessions averaging one hour per week where demonstrations will sometimes be presented.

Note: This is a natural science course intended for Arts students and may not be used by B. Sc. Students to satisfy the requirement of a science elective under regulations 3.e., 6.e., 10.c., and 12.b. for B.Sc. degrees.

2100.1(.2) Green Chemistry [CHEM 2100.1(.2)]

Prerequisite: six (6) credit hours in CHEM at the 1000 level.

Green chemistry, or environmentally benign chemistry, is the design of chemical products and processes that reduce or eliminate the use and generation of hazardous substances. This course will examine the chemical principles and processes in the development of technology and in the effects that this technology has on the environment. The course will avoid traditional approaches that only consider the treatment of pollution after it was created, and will focus on alternative routes that limit the production of waste.

Classes 3 hrs and lab 3 hrs a week. 1 semester.

2300.1(.2) Environmental Science: Populations & Ecosystems

Prerequisite: ENVS 1200.1(.2); BIOL 1202.1(.2); one university-level chemistry course or permission of program coordinator.

This course provides a scientific introduction to environmental problems and their solutions. The emphasis is on biological and ecological processes and their importance to global sustainability. Labs include hands on experience sampling local environments, participation on real research projects, and field trips to local environmental industry facilities.

Classes 3 hrs. and lab 3 hrs. 1 semester.

2310.1(.2) Environmental Science: Energy, Resources and Pollution

Prerequisites: ENVS 2300.1(.2)

This course expands the scientific introduction to environmental problems and their solutions to the atmospheric and geophysical realms. Topics include evolving patterns of resource identification, exploration, and consumption, environmental pollution, climate change and their implications for the dynamics of human-environment relations from the local to the global scale. Labs offer a hands-on approach to concrete environmental problems, including the practical evaluation of patterns of environmental change based on real data.

Classes 3 hrs. and lab 3 hrs. 1 semester.

Course Descriptions

1200.1(.2) Environmental Challenges

This course is an interdisciplinary introduction to environmental studies. It considers scientific methods, the scale and magnitude of environmental variables, societal pathways and impediments to solving environmental problems, and critical thinking about environmental issues. Topics include: hypothesis testing, social and scientific causation, linear and non-linear processes, temporal and spatial scales, feedback cycles, biodegradation and accumulation, and the social and organizational context of environmental activities.

3310.1.(2) Field Course in Environmental Studies

Prerequisite: ENVS 1203.0, or 2300.1(.2) or 2310.1(.2)

An examination of natural, urban and industrial ecosystems based on integrative study from the biological, geological, geographical, management, social and economic perspectives. Relationships among the physical environment, biota, and human population will be illustrated and discussed. Sampling design and techniques, treatment of data, and interdisciplinary approaches to resource management will be incorporated in field work, labs, lecture-discussion, and projects.

Presented at Acadia University and in the Halifax Metropolitan Area this course is being offered in cooperation with the B.Sc. Environmental Science Program at Acadia University, Wolfville, Nova Scotia.

Classes 72 hrs, including lab and field work. Normally this course is offered in the spring.

3410.1.(2) Environmental Impact Assessment

Prerequisite: ENVS 1203.0, or ENVS 2300.1(.2), or 2310.1(.2).

This course describes the legislative background and techniques for the prediction of impacts on biophysical and socio-economic environments. This course will cover screening, scoping, baseline studies, impact prediction, mitigation, monitoring and auditing.

Classes 3 hrs. and lab 3 hrs. 1 semester.

3420.1.(2) Environmental Monitoring and Auditing

Prerequisite: ENVS 1203.0, or 2300.1(.2), or 2310.1(.2) and 45 credit hours

This course describes the principles and applications of environmental auditing and monitoring. Techniques for environmental audit of facilities, organizations and projects will be covered, together with the design of monitoring programs and techniques for atmospheric, biological, hydrological, and socio-economic monitoring.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

3430.1.(2) Environmental Information Management

Prerequisites: ENVS 1203.0, or 2300.1(.2), or 2310.1(.2) and 45 credit hours.

This course provides concepts, methods, and practical training with respect to environmental information acquisition, interpretation and processing, and environmental communication. It concentrates on qualitative and quantitative environmental data handling, sign systems detection and interpretation, geographical pattern identification, context-adapted information preparation, graphical representations, and interdisciplinary interactions. Laboratory sessions will include practical patterns evaluation, case simulations, and real-world applications. Students will thus develop information management skills which are required for an effective approach to environmental problems.

Classes 3 hrs., and lab 3 hrs a week 1 semester.

4430.1.(2) Directed Research

Prerequisite: ENVS 2300.1(.2) or 2310.1(.2) or permission of Environmental Studies Co-ordinator.

Students will pursue a short term research project in such areas as: oceanographic sampling and analysis, policy development or environmental impact assessment. Students must identify an appropriate supervisor; provide a project proposal; and at the end of the project, submit a written report.

Lab 6 hrs. a week. 1 semester.

4440.1.(2) Environmental Policy

Prerequisite: ENVS 1203.0, or ENVS 2300.1(.2), or ENVS 2310.1(.2).

This course focuses on environmental and natural resource policy in Canada and the world. Attention is paid to all scales at which policy is developed – local, provincial, national and international. The process of policy making is examined, including aspects of legislation and regulations participatory and stakeholder approaches, and conflict resolution. Interactions between policy, management measures and compliance are explored, including the role of standards and environmental management systems, and the circumstances under which organizations and businesses comply with regulations concerning environmental impacts and natural resource use.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

4450.1.(2) Natural Resource Management

[GEOG 4424.1(.2)]

Prerequisite: ENVS 1203.0, or 2300.1(.2), or 2310.1(.2), or GEOG 3304.1(.2), and 45 credit hours.

This interdisciplinary course examines the management of natural resource industries such as fisheries, forestry, mining and energy, focusing on interactions between biophysical, ecological, socioeconomic, and technological components. The course will cover such topics as sustainable development and environment-economy interactions in the resource sector; approaches to integrated natural resource development; theoretical and practical aspects of managing resources and resource industries; economics of sustainable resource use; methods for analysing the impacts of resource use.

Classes 3 hrs. and lab 3hrs. a week. 1 semester.

4460.1.(2) Methods of Environmental and Natural Resource Analysis [GEOG 4444.1(.2)]

Prerequisites: ENVS 1203.0, or 2300.1(.2), or 2310.1(.2), or GEOG 3304.1(.2), and one of MATH 1207.1(.2), or GEOG 3326.1(.2), or MGSC 2207.1(.2), or BIOL 2308.1(.2)

This interdisciplinary course provides a “tool-kit” of methods for planning and evaluation in natural resource and environmental management. Emphasis is placed on methods to assess dynamics of change in biophysical, ecological, socioeconomic, and technological aspects of resource and

environmental systems, and for analysing the impacts of management interventions. Topics to be covered include computer-based techniques to acquire and manage information; bio-economic and simulation models; statistical and forecasting methods; economic valuation and ecological economics; sustainability indicators in resource and environmental systems; analysis of real-world case studies.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

4499.0 Seminar in Environmental Science

Prerequisite: ENVS 1203.0, or 2300.1(.2) or 2310.1(.2) and 45 credit hours. Restricted to students in the honours program or permission of the Coordinator of Environmental Studies.

The course deals with selected topics in environmental science. Specific topics vary depending on current issues, new developments, availability of speakers and the interests of students and instructor.

Seminar 3 hrs. a week. 2 semesters.

4599.0 Honours Research Project

Prerequisite: Honours standing in Environmental Studies.

Honours students will work with a research advisor who will guide the students in the formulation of research proposals, the methodology to be followed during the course of the research, and in the analysis and write-up of the research findings. The thesis will also be presented orally.

Lab 6 hrs. (minimum) per week. 2 semesters.

4876.1(.2) - 4899.1(.2) Directed Studies in Environmental Science

Prerequisite: restricted to students in the honours program or permission of the Coordinator of Environmental Studies.

The course provides an opportunity for ENVS honours students to study a particular subject in detail. It requires independence and initiative from the student. It involves discussion of research papers and lab work. This course is intended particularly to meet the special needs and interests of honours students. Major students may be admitted with permission of the Environmental Studies Co-ordinator.

Classes and labs 6 hrs. a week. 1 semester.

Film Studies (FILM)

Program Coordinator: J. MacKinnon, Philosophy

A minor in Film Studies is available to undergraduate students in all three faculties.

This minor offers students an opportunity to become familiar with the history of filmmaking, the language employed in discourse about film, and styles of artistic and social commentary about film. The courses pertaining to particular national or regional cinema allow for an understanding of the role of film in creating/expressing social identity; other courses pertain to other courses pertain to the creation of gender identity, and yet others are concerned with film production. This is an Inter-university program which allows students to obtain credit from any of the four participating institutions - Saint Mary's, Dalhousie, Mount Saint Vincent Universities, and the Nova Scotia College of Art and Design.

Requirements: twenty-four (24) credit hours [twelve (12) required credit hours and twelve (12) elective credit hours].

Required courses [twelve (12) credit hours]

(a) six (6) credit hours from NSCADU
AHIS 2800.03L: Film History and Criticism, 1890-1940,
and AHIS 2801.03L: Film History and Criticism, 1940-to
the present

OR

six (6) credit hours from Dalhousie

THEA 2300.6: Film Study (Students enrolled in this course attend the same lectures as students enrolled in THEA 1300.6: Introduction to Film, but are expected to complete different and more difficult assignments)

AND

(b) six (6) credit hours of the following:
CULS 2293: Introduction to Film Language, from MSVU
OR THEA 2311: Introduction to Film Study from
Dalhousie;
and
CULS 2295 Aesthetics of Film from MSVU **OR**
THEA 2312.03: Issues in Film Aesthetics from Dalhousie

AND

(c) **Elective courses [twelve (12) credit hours]** currently available from the four cooperating institutions.

Regulations for Concentrations

To obtain a concentration in Film Studies in partial fulfillment of the B.A. General Degree (i.e., one with Double Arts Concentrations and a minimum of ninety (90) credit hours), a minimum of twenty-four (24) credit hours in FILM is required; also a minimum program grade point average of 2.00. Further details are available from the coordinator.

Saint Mary's University

ACST 3305.1(.2): Moving Images of Atlantic Canada
ENGL 3313.0: Narrative in Fiction and Film
HIST 3450.1(.2): Film and History
RELS 3356.1(.2): Religions in Film

Dalhousie University

ENGL 2095.03 [three (3) credit hours] Narrative in the Cinema
FREN 2800.03 [three (3) credit hours] Cinema, the French Phenomenon I
RUSS 2033.03 [three (3) credit hours] Survey of Russian Film
MUSC 2015.06 ([six (6) credit hours] Music and Cinema
SPAN 3800.03 [three (3) credit hours] Seminar in Spanish Film
SPAN 3810.03 ([three (3) credit hours] Seminar in Latin American Film (In Spanish)
THEA 2310.03 [three (3) credit hours] Film Genres

Mount Saint Vincent University

CULS/WOMS 3330 [three (3) credit hours] Canadian Women Film Directors
CULS/WOMS 3333 [three (3) credit hours] International Women Film Directors
ENGL 2213 [three (3) credit hours] Contemporary Film

Nova Scotia College of Art and Design

3000 [three (3) credit hours] Topics: Twentieth Century Art
3850 [three (3) credit hours] History and Criticism of Documentary Film
4800 [three (3) credit hours] Independent Studies in Film History, Theory, and Criticism

Students are advised to consult the individual institutions' current *Academic Calendars* for up-to-date course listings.

At Saint Mary's, further information is available from the Film Studies Committee Coordinator John MacKinnon – Tel: 420-5821.

The regular "Declaration of Major/Minor/Concentration" form is used to declare a minor. Students must fulfill all requirements for any minor(s) which they officially declared in order to qualify for graduation, or officially (i.e., in writing) withdraw their declaration of a minor(s).

Finance (FINA)

Chairperson, Professor	D. Jutla
Professors	F. Boabang, J.C. Dodds, G. MacKinnon,
Associate Professors	N. Attig, M. Moh'd, G. Ye
Assistant Professors	J. Dai, A. Zaman

Finance courses are offered by the Department of Finance, Information Systems, and Management Science.

The requirements for the Finance major within the Bachelor of Commerce program are described below and in Section 3 of the *Calendar*. A Master of Finance degree is offered, as well as a graduate concentration in Finance within the MBA program. These two graduate programs are described in the Graduate Studies Academic Calendar.

Upon completion of 45 credit hours, Commerce students with a cumulative grade point average of 2.0 may elect to declare a major in Finance. (In exceptional circumstances, students can also be admitted to the major by permission of the Chairperson.)

To assist students, the Year 3 and Year 4 course requirements for a Finance major and the core BComm degree program requirements are listed below. Course descriptions follow.

To complete a major in Finance, students must attain a minimum grade point average of 2.2 in FINA 4463, FINA 4466, FINA 4467 and the six (6) credit hours used to satisfy the 4000 level Finance electives requirement (as indicated below by *).

Year 3

ACCT 3343.1(.2) Financial Accounting Analysis
 FINA 2360.1(.2) Business Finance I
 FINA 3361.1(.2) Business Finance II
 MGMT 3480.1(.2) Ethical Responsibilities of Organizations
 Three (3) credit hours in Commerce electives at 3000 level or above
 Six (6) credit hours in non-Commerce electives
 Nine (9) credit hours in free electives

Year 4

*FINA 4463.1(.2) Financial Management
 *FINA 4466.1(.2) Investments
 *FINA 4467.1(.2) Portfolio Management
 MGMT 4489.1(.2) Strategic Management
 *Six (6) credit hours in Finance electives at 4000 level except FINA 4491.1(.2) [ACCT 4445.1(.2) and ECON 4403.1(.2) may be used to satisfy this requirement.]
 Six (6) credit hours in non-Commerce electives
 Six (6) credit hours in free electives

Course Descriptions

2360.1(.2) Business Finance I

Prerequisite: ECON 1201.1(.2) and 1202.1(.2); ACCT 2241.1(.2); and MGSC 1205.1(.2).

A basic course in business finance introducing the student to the discipline and presenting financial analysis, working capital management, capital budgeting, the tax environment and the role of financial intermediaries. Microcomputers will be used to perform analyses.

3361.1(.2) Business Finance II

Prerequisite: FINA 2360.1(.2) and MGSC 2207.1(.2).

A continuation from FINA 2360.1(.2) covering cost of capital, capital mix, capital and money markets, dividend policy, financial instruments and mergers, consolidations and bankruptcy. Microcomputers will be used to perform analyses.

3362.1(.2) Principles of Real Estate and Appraisal

Prerequisite: FINA 3361.1(.2) (or concurrently)

An introduction to the study of real estate investment analysis and valuation. The course relates financial and economic principles to the examination of investment and financing decisions in real estate and mortgage markets. Topics include a discussion of the unique characteristics of real estate assets and markets, the investment process, appraisal, financing and market analysis.

3363.1(.2) Principles of Insurance

Prerequisite: FINA 3361.1(.2) (or concurrently)

This course introduces the student to the nature and management of risk. A survey of all types of insurance including life, general and liability are presented. Students will be introduced to the insurance industry from both an internal and external point of view. Special topics of consumer interest will also be addressed.

3364.1(.2) Canadian Securities

Prerequisite: FINA 2360.1(.2) or permission of instructor.

The topics covered in this course include an overview of capital markets and the financial services industry; financial statement analysis; an overview of the Canadian economy; fixed income securities; equity securities; investment funds; derivatives; security analysis; financing, listing and regulation; financial planning and taxation issues; and portfolio management. These topics are based on the curriculum of the Canadian Securities Course™ (CSC). Substantial additional fees are required for this course.

4463.1(.2) Financial Management

Prerequisite: FINA 3361.1(.2) and COMM 2293.1 (.2).

This course expands on the three basic corporate finance decisions: capital investment, capital structure and dividend policy. It also examines current practices in short and long-term financing as well as financial planning. Finally, the course examines issues in topics such as lease financing, mergers and acquisitions and hedging risk. Case studies may be utilized to apply different concepts and techniques learned in the class to real world problems.

4464.1(.2) Issues in Corporate Finance

Prerequisite: FINA 4463.1(.2) and COMM 2293.1 (.2).

This is a senior level case-study based course in financial management. It integrates the tools learned in earlier courses in finance and applies them to comprehensive cases. By understanding the complexity of and relationship among different financial policies, students will be able to utilize finance theory to make reasonable financial decisions under realistic environments. The course will also emphasize the importance of undertaking research through information gathering for case analysis. Finally, it encourages group discussion and team work, enhances students' presentation skills and their ability to compose a well-structured, meaningful report. Data bases, spreadsheets and some financial analysis software will be used in this course.

4465.1(.2) Mergers, Restructuring and Corporate Control

Prerequisite: FINA 3361.1(.2) and COMM 2293.1 (.2).

The course examines financial and economic aspects of corporate mergers, acquisitions, joint ventures, restructuring, and financial distress. Relations between corporate control and performance are explored.

4466.1(.2) Investments

Prerequisite: FINA 3361.1(.2) and COMM 2293.1 (.2).

This course presents an overview of the Canadian investment environment. A framework is developed for assessing the merits of various securities that trade in the money and capital markets. Topics covered in this course include sources of financial information, Canadian market indicators, risk and return and market efficiency, the analysis of fixed income and equity securities, derivatives and margin trading on securities. A brief introduction to portfolio management is given.

4467.1(.2) Portfolio Management

Prerequisite: FINA 4466.1(.2) and COMM 2293.1 (.2).

A comprehensive analysis of the decision-making process of portfolio management. Major subject areas include the different types of funds, their objectives and performance evaluation; an analysis of the aggregate stock market, industry, and company; bond portfolio analysis and interest rate risk management.

4468.1(.2) Financial Innovations

Prerequisite: FINA 4466.1(.2) and COMM 2293.1 (.2).

This course provides a comprehensive analysis of the types of financial innovations taking place in the marketplace, focusing on derivative securities such as the futures, options, and swap markets. Topics covered include stock and index option strategies, currency options, and interest rate options; commodity futures; currency, interest rate, and commodity swaps. Applications to hedging strategies will be emphasized.

4470.1(.2) Fixed Income Securities

Prerequisite: FINA 4466.1(.2) and COMM 2293.1 (.2).

This course provides a detailed analysis of the bond market and the instruments available therein. Although the emphasis is on North American securities, global portfolios are also examined. Bond valuation and bond portfolio strategies are covered in depth. Treasury securities, corporate bonds, municipal bonds, mortgages, mortgage backed securities, CMO's and interest rate options are addressed.

4471.1(.2) Financial Institutions

Prerequisite: FINA 3361.1(.2) and COMM 2293.1 (.2).

This course will deal with the structure and function of Canadian financial institutions such as: banks, brokers and investment banks, insurance companies and mutual funds. The role of each type of institution in the economy will be discussed as well as regulation of the industry. The main emphasis of the course will be on the institutions as businesses; their profit and risk structure.

4472.1(.2) Computerized Portfolio Analysis

Prerequisites: FINA 3361.1(.2); COMM 2293.1(.2); and ACCT 2242.1(.2)

This course will provide students with exposure to the use of various software packages in analyzing and tracking investment decisions. Emphasis will be on the gathering of financial and economic data, analysis of data in making investment decisions, and tracking and analyzing investment performance. In addition to common tools such as spreadsheets, the course will make use of state-of-the art software currently used in the financial services industry.

4473.1(.2) Current Trends in Capital Markets

Prerequisites: COMM 2293.1(.2), ACCT 2242.1(.2), and FINA 3361.1(.2)

The purpose of this course is to provide a broad overview of the various financial instruments available and their role within investment strategies, as well as to examine current trends in the global capital markets. While some time will be allocated to the traditional asset classes (equities, bonds), the emphasis of the course is on the non-traditional, or alternative, assets classes that have recently been developed or gained popularity, such as mortgages backed securities and other fixed income securities, the myriad forms of swaps, other derivatives, real estate, private equity, etc. The emphasis is on the structure of these instruments and their risk-return characteristics. The usual

context will be that of a large institutional investor such as a pension plan, insurance company or hedge fund. Also the linkages amongst the various markets in a global context will be discussed.

4476.1(.2) International Financial Management

Prerequisite: FINA 3361.1(.2) and COMM 2293.1 (.2).

This course is divided into three major parts. The first part provides a basic understanding of the forces that determine the relative values of currencies in the foreign exchange markets. Parts two and three focus on the firm with the financing of international operations and capital budgeting decisions.

4490.1(.2) Seminar in Finance

Prerequisite: COMM 2293.1 (.2) and permission of Chairperson.

This course deals with selected topics in finance. It is offered when in sufficient demand, and specific topics covered may vary depending on the interests of students and instructor.

4491.1(.2) Small Business Consultancy

Prerequisite: COMM 2293.1 (.2) and permission of Chairperson.

This course allows students to gain hands-on business experience by working with clients of the Saint Mary's University Business Development Centre. Student groups receive a project proposal outlining the requirements, information needs and services they will provide the client during the semester. Projects generally take the form of a business plan, market study, or other business-related

function and often involve financial projections. Each project provides students an opportunity to use skills learned in business courses and to understand the interrelationship between marketing, accounting, finance, and management in a practical business setting. Under supervision, students prepare a professional report and final presentation that communicate the project's result for the client.

Work groups often include students from different disciplines and are assigned based upon the needs of the project. Groups schedule their preferred meeting times but are required to meet a minimum of three hours each week. For more information see <http://www.smu.ca/smubdc>.

Internship 1 semester.

4876.1(.2) – 4899.1(.2) Directed Study

Prerequisite: COMM 2293.1 (.2) and permission of Chairperson.

Intended to supplement or provide an alternative to the regular finance courses in order to meet the special needs and interests of students, the course provides an opportunity to study a particular subject in detail and requires from the student some measure of independence and initiative. Prior to undertaking registration for this course, students must have a detailed course proposal approved by the appropriate instructor. Proof of this approval must be submitted at the time of registration for the course. Students are encouraged to obtain this approval prior to leaving campus in the spring.

Tutorial and independent study. 1 semester.

Certificate in Financial Instrument Analysis

The Certificate in Financial Instrument Analysis is designed to meet the demand for skilled labour in the financial services sector. Capital markets, and the financial instruments traded in them, have become increasingly complex. The rapid pace of change creates the need for advanced knowledge of world capital markets and complex financial instruments. Concurrent with this, has been an increasing demand among the accounting profession for individuals with traditional accounting training and knowledge, as well as more specialized knowledge of financial instruments, their uses and effects, and capital markets in general.

The Certificate in Financial Instrument Analysis uses a combination of finance and accounting courses to provide graduates with skills necessary for courses in a wide range of jobs in the financial services sector. The Certificate will also be of interest to students intending to pursue an accounting designation, but who desire more advanced knowledge of financial instruments than is currently available through existing universities or professional association curricula.

Program Structure

The Certificate in Financial Instrument Analysis can be completed in conjunction with a Bachelor of Commerce degree or as a stand alone certification for those seeking professional development in their disciplinary areas.

There are two streams within the Certificate in Financial Instrument Analysis, the Accounting stream and the Finance stream. Students may choose either the Accounting or the Financial Stream (**cannot qualify for both**). The required courses for each stream are as follows:

Accounting Stream (CFIA)

ACCT 2241	Introductory Financial Accounting
ACCT 2242	Introductory Managerial Accounting
ACCT 3341	Intermediate Financial Accounting I
ACCT 3342	Intermediate Financial Accounting II
ACCT 3345	Financial Accounting Theory
ACCT 4443	Advanced Financial Accounting
ACCT 4455	Financial Accounting Seminar
ACCT 4465	Accounting for Financial Instruments
FINA 2360	Business Finance I
FINA 3361	Business Finance II
FINA 4472	Computerized Portfolio Analysis and Reporting Systems
FINA 4473	Current Trends in Capital Markets

Financial Stream (CFIF)

ACCT 2241	Introductory Financial Accounting
ACCT 2242	Introductory Managerial Accounting
ACCT 3341	Intermediate Financial Accounting I
ACCT 3342	Intermediate Financial Accounting II
ACCT 4465	Accounting for Financial Instruments
FINA 2360	Business Finance I
FINA 3361	Business Finance II
FINA 4466	Investments

FINA 4467	Portfolio Management
FINA 4468	Financial Innovations
FINA 4472	Computerized Portfolio Analysis and Reporting Systems
FINA 4473	Current Trends in Capital Markets

Admission Requirements

For current Bachelor of Commerce students, the Certificate of Financial Instrument Analysis requires a formal application to the Office of the B.Comm Program. Students must have completed a minimum of forty-five (45) credit hours of undergraduate study, and possess a minimum CGPA of 2.0.

Students wishing to complete the Certificate without pursuing an undergraduate degree at Saint Mary's University must meet, at a minimum, the mature admission requirement for the Bachelor of Commerce program. Application for the Certificate should be made through the Admissions Office.

Prerequisite Courses (24 credit hours)

Students pursuing only the Certificate in Financial Instrument Analysis (accounting or finance stream) will require the following courses (or their equivalents) as prerequisites. It is the student's responsibility to ensure appropriate prerequisites have been taken.

MGMT 1281	Introduction to Business Management
ECON 1201	Principles of Economics: Micro
ECON 1202	Principles of Economics: Macro
MGSC 1205	Introduction to Quantitative Methods I
MGSC 1206	Introduction to Quantitative Methods II
MGSC 2207	Introductory Statistics
CISY 1225	Introduction to Computer Applications
COMM 2293	Communications

Advanced Standing

Students with courses from previous postsecondary educational institutions will be assessed upon admission to the Certificate by the Office of the B.Comm Program. Students must complete at least 50% of all credit hours for any academic program (18 credit hours for the Certificate in Financial Instrument Analysis).

Credit will not automatically be recognized for university courses completed ten (10) or more years prior to the student's return to university study.

Requirements for Graduation

To graduate with the Certificate in Financial Instrument Analysis, students must attain a minimum GPA of 2.0 on the required courses.

Academic Requirements

All academic regulations governing students in degree and diploma courses also apply to students enrolled in this Certificate Program.

Forensic Sciences (FRSC)

Coordinator: Dr. Colleen Barber, Biology

Forensic Sciences encompasses the methodology and interpretation of data collected in the investigation of deaths, or other events, which could be criminal in nature. In Canada, police forces are regularly involved in forensic investigations, but there are others, (e.g., medical personnel, dentists, biologists, criminologists and anthropologists), who are interested in, or can benefit from, training in forensic sciences.

This program is designed to give the student a strong grounding in the different science disciplines (e.g., biology, chemistry, and physics) that form the basis of the techniques used in forensic investigations. This science basis is provided through introductory and specialty courses offered from Departments in the Science Faculty. Students may broaden their knowledge by choosing from a list of complementary courses offered by Departments in the other Faculties (e.g., anthropology, sociology). Experts in forensic techniques will expose students to the application of this knowledge, primarily through the Application of Forensic Techniques course [FRSC 3300.1(.2)].

Admission to the Diploma in Forensic Sciences

Admission to the Diploma in Forensic Sciences is by permission of the Program Coordinator in consultation with members of the Forensic Sciences Executive. There are three streams of students who may apply.

Stream One - Students who are currently pursuing an undergraduate degree at Saint Mary's University or are transferring from a recognized university degree program and intend to pursue the Diploma in Forensic Sciences concurrently with their degree program, have completed thirty (30) credit hours with a minimum GPA of at least 3.0, and have declared a major. Those admitted to this diploma program from this stream are regarded as being in a dual academic program and are required, therefore, to follow the rules and regulations stipulated for this status (Reference Academic Regulation 24).

Stream Two - Students who have completed an undergraduate degree program from a recognized university and intend to pursue only the Diploma in Forensic Sciences may be eligible for admission to the diploma program alone provided they have a minimum GPA of at least 3.0. Students may transfer up to half the required credit hours (30) from their previous degree, provided the courses are equivalent to courses applicable to the diploma (Reference Academic Regulation 20).

Stream Three - Students who are members of the RCMP, police officers, or those having work-related experience in forensic science, who intend to pursue only the Diploma in Forensic Sciences do not need to have an undergraduate degree or previous university courses.

In addition to submitting an application, students should ensure that all official college or university transcripts, as

well as a brief statement describing the reasons for choosing the Diploma in Forensic Sciences program, and any work-related experience or goals accompany their application.

Students in Stream 1 who are currently enrolled at Saint Mary's University should apply directly to Dr. Colleen Barber. However, students who wish to transfer to Saint Mary's University need to apply to Admissions at Saint Mary's University.

Students in Streams 2 and 3 should complete the downloadable application "Form C" located at http://www.smu.ca/web_applications/ and apply to Admissions at Saint Mary's University.

All interested people need to apply by **May 1st**.

Graduation

The requirement of a minimum cumulative grade point average of 3.00 applies to all students in this Diploma program.

Requirements for the Diploma in Forensic Sciences [sixty (60) credit hours]

1. Required courses [twenty-seven (27)]

*FRSC 2200.1(.2) Basic Sciences for Forensics I
 *FRSC 2201.1(.2) Basic Sciences for Forensics II
 BIOL 1201.1(.2) Molecular and Cell Biology
 BIOL 1202.1 (.2) Organismal and Ecological Biology
 CHEM 1210.1(.2) General Chemistry and
 CHEM 1212.1(.2) Chemistry for Life Sciences
 *FRSC 3300.1(.2) Application of Forensic Techniques
 *BIOL 2307.1(.2) Genetics
 BIOL 4419.1(.2) Molecular Biology

2. Science-intensive courses [twenty-one (21) to twenty-four (24) credit hours]

ANTH 3373.1(.2) Fieldwork in Archeology
 ANTH 4464.1(.2) Advanced Fieldwork in Archeology
 ANTH 3471.1(.2) Forensic Skeletal Identification
 ANTH 3472.1(.2) Forensic Skeletal Analysis
 ANTH 4701.0 Internship in Forensic Anthropology
 *BIOL 2322.1(.2) General Physiology I
 *BIOL 2323.1(.2) General Physiology II
 BIOL 3327.1(.2) Anatomy and Functional Morphology of Vertebrates
 BIOL 2398.1(.2) Introduction to Microbiology
 BIOL 3426.1(.2) Animal Tissues
 *BIOL 2427.1(.2) Introductory Entomology
 CHEM 2332.1(.2) Introductory Analytical Chemistry: Wet Methods
 CHEM 2333.1(.2) Introductory Analytical Chemistry: Instrumental Methods
 CHEM 2344.1(.2) Organic Chemistry I
 CHEM 2345.1(.2) Organic Chemistry IIA
 or CHEM 2346.1(.2) Organic Chemistry IIB
 CHEM 3451.1(.2) Introductory Biochemistry
 PHYS 1000.1(.2) Physics for Life Sciences I

PHYS 1001.1(.2) Physics for Life Sciences II

**3. Electives [nine (9) - twelve (12) credit hours].
Diploma students may qualify for up to six (6) credit hours based on prior training.**

ANTH 3374.1(.2) Archeology Laboratory
 ANTH 4465.1(.2) Advanced Archeology Laboratory
 BIOL 2308.1 (.2) Biostatistics
 BIOL 4408.1(.2) Animal Developmental Biology
 CRIM 2303.1(.2) Crime and Society, entry to this course may be restricted
 CRIM 2304.1(.2) Canadian Criminal Justice System, entry to this course may be restricted
 GEOG 2316.1 (.2) Map and Air Photo Interpretation
 GEOG 3386.1(.2) Concepts in Geographical Information Systems (G.I.S.)
 PSYC 1210.1(.2) Mind and Brain
 PSYC 1230.1(.2) Memory
 PSYC 3320.1(.2) Psychology and Law
 *PSYC 3355.1(.2) Cognitive Psychology
 *PSYC 1260 Personality: Normal and Abnormal

Note: students must satisfy all prerequisites for entry into these courses.

Courses marked * may be offered on-line. For more information contact the Department of Continuing Education.

The following courses are reserved exclusively for students officially accepted in the Diploma in Forensic Sciences Program at Saint Mary's. Courses in Forensic Science cannot be used to satisfy course requirements for the major or honours in Biology.

All the following courses have 3 hrs. classes and 3 hrs. lab/tutorial per week.

Course Descriptions

FRSC 2200.1(.2) Basic Sciences for Forensics I

Prerequisite: acceptance into Diploma in Forensic Sciences Program.

This course will provide students with an introduction to the biology and chemistry that forms the basic scientific background applicable to the study of forensic science. Topics covered will include basic cell biology and genetics, anatomy, physiology, embryological development of humans, organic, and analytical chemistry.

Note: Please note that this course may not be used by B. Sc. Students to satisfy the requirement of a science elective under regulations 3.e., 6.e., 10.c., and 12.b. for B.Sc. degrees.

FRSC 2201.1(.2) Basic Sciences for Forensics II

Prerequisite: acceptance into Diploma in Forensic Sciences Program.

This course is a continuation of Basic Sciences for Forensics I and will cover such topics as principles of physics, entomology, microbiology, psychology, and anthropology relevant to forensics.

Note: Please note that this course may not be used by B. Sc. Students to satisfy the requirement of a science elective under regulations 3.e., 6.e., 10.c., and 12.b. for B.Sc. degrees.

FRSC 3300.1(.2) Application of Forensic Techniques

Prerequisite: FRSC 2200.1(.2) and 2201.1(.2).

This course will provide students with an introduction to the procedures for conducting a forensic investigation. Students will learn how to retrieve and document potential evidence and identify victims and suspects. Topics such as fingerprinting, forensic odontology and entomology, bloodstain pattern analysis, DNA collection, toxicology, and non-biological trace evidence collection will be included.

French (FREN)

Chairperson, Modern Languages and Classics
 Associate Professor G. Nahrebecky

Professor J. Cauville
 Associate Professors S. Beaulé, P. Bernard
 Assistant Professors R. Bannerjee, E. Tsedryk

For student advising and information on our French program, please contact any of the professors listed above.

Courses and programs in French are offered by the Department of Modern Languages and Classics

Department Policy - Modern Languages and Classics

1. Enrollment in some language courses involves the following formal placement procedures.

All students seeking entry into language courses who have not previously taken a language course at Saint Mary's University must complete and return the Language Profile Form to the Department of Modern Languages and Classics.

Based on the information provided in the Language Profile Form, students may receive notification from the

Department to appear for an oral interview and/or a written placement test at a designated time.

The Department of Modern Languages determines the appropriate course placement for each student.

- (i) Permission to register or remain in a particular language course can be refused if the Department judges that the student's knowledge exceeds the level for that course.
- (ii) Native speakers are not eligible to receive advanced credit for language courses.
- (iii) Completion of Advanced Standing (transfer) courses does not exempt a student from taking the placement test.

2. The student's eligibility to enroll in language, culture, and literature courses, and in specific sections of those courses, is determined by the Chairperson in consultation with the instructor in light of the student's ability level in the language concerned, previous course work completed at university or elsewhere, and overall size of the course or section of a course. In matters of placement, the decision of the Chairperson is final.

3. In order to ensure the academic integrity in language courses, especially at the lower levels of instruction, the Department of Modern Languages and Classics does not allow native or near-native speakers of a particular target language to enroll in courses at the 2000 level or lower.

Students who misrepresent their knowledge of any given language by providing inaccurate or incomplete information about their linguistic educational history will be subject to disciplinary action as laid out in Academic Regulation 19.

4. The Department of Modern Languages and Classics supports a policy of regular class attendance by students. Frequent, unexplained absences from class will result in a lowering of the final grade in a manner to be determined by each faculty member.

5. Students enrolling in any French course below the 3000 level are required to take a placement test (unless they have previously successfully completed a French course at this University at the 3000 level).

6. Students should note that courses in literature and/or culture fulfill the BA Humanities requirement 3(c) but do not fulfill the 3(b) requirement. The courses designated with an * in front of the number satisfy the 3(c) requirement.

Programs in French

The following programs are available in French: Honours, a major, a minor, a concentration, study abroad, and a certificate of proficiency. See below for details. The Department offers a balanced program involving courses in language, culture and literature.

Those with a solid background in French, especially Francophones or those having attended a French school, are to begin their studies with courses beyond FREN

2235.1(.2)/2236.1(.2) This condition may also apply to certain high school immersion graduates. Native, near-native, or fluent speakers of French may not enroll in courses at the 2000 level or below. Courses at the 2000 and 3000 levels cannot be taken concurrently.

FREN 2235.1 is the normal starting point for majors. High school graduates having completed the "Core" program should enroll in FREN 2201.1. Students who have taken French at another university are asked to consult with the Chairperson before registering.

Normally, a placement test is administered on the first day of classes in FREN 1111.1, 2201.1, and 2235.1, and a short composition in 3307.1(.2) and 3308.1(.2), in order to provide students with the course that best suits their needs. Students having previously taken FREN 1111.1 and 1112.1(.2) or 2201.1 and 2202.1(.2) at Saint Mary's are not required to take the placement test. Since the test is administered on the first day of classes, attendance at this first class is required.

Students interested in teaching French as a career are strongly advised to seek assistance from the Department on course selection and teacher training programs as early as possible.

Honours in French

All prospective honours students in French should refer to the section of this *Calendar* pertaining to honours degrees. Students with a minimum cumulative grade point average of 3.00 can apply to the Registrar for admission to the honours program after having satisfied the requirements of the major program.

Honours degrees in French consist of sixty (60) credit hours. Beyond the requirements for the French major, eighteen (18) additional credit hours in French are required: FREN 5501.1(.2) and FREN 5502.1(.2), The Honours Essay, and twelve (12) credit hours at the 3000-4000 level (other than FREN 3307.1(.2), 3308.1(.2) and FREN 3350.1(.2) and 3351.1(.2).

Students should discuss the topic and nature of the honours essay with the appropriate faculty member prior to their entry into the program.

Major in French

A major in French normally consists of at least forty-two (42) credit hours in French beyond FREN 2231.1(.2) with the following requirements:
 FREN 3307.1(.2); 3308.1(.2) and 3350.1(.2); 3351.1(.2)
 Six (6) credit hours at the 3000 or 4000 level in culture;
 Six (6) credit hours at the 4000 level in literature;
 Six (6) credit hours at the 4000 level in language;
 Six (6) credit hours at the 4000 level in FREN electives.

Language Courses	Culture Courses	Literature Courses
1111.1(.2)	3310.1(.2)	3350.1(.2)
1112.1(.2)	3312.1(.2)	3351.1(.2)
2201.1(.2)	4410.1(.2)	4405.1(.2)
2202.1(.2)	4440.1(.2)	4410.1(.2)
2235.1(.2)		4412.1(.2)
2236.1(.2)		4418.1(.2)
3307.1(.2)		4422.1(.2)
3308.1(.2)		4433.1(.2)
3320.1(.2)		4451.1(.2)
3321.1(.2)		4455.1(.2)
3331.1(.2)		4460.1(.2)
3335.1(.2)		4461.1(.20)
4400.1(.2)		
4435.1(.2)		
4436.1(.2)		
4437.1(.2)		
4438.1(.2)		

Concentration in French

To obtain a concentration in French in partial fulfillment of the B.A. General Degree (i.e. one with a Double Arts Concentration and a minimum of ninety (90) credit hours), a minimum of twenty-four (24) credit hours in French is required. At most 6 credit hours can be at the 1000 level. Also, the minimum grade point average is 2.00.

Minor in French

A minor in French consists of twenty-four (24) credit hours in French beyond FREN 1111.1 with at least twelve (12) of these being at the 3000 level or above.

Year Abroad at the Université Catholique d'Angers, France

This study abroad program consists of two semesters: a Fall semester (October - January), and a Spring semester (February – June), during which course work in language, culture and literature is offered. One-month programs are also available in the summer during the months of July, August, and September. These are strictly language courses. Students who successfully complete their programs receive credit recognition at Saint Mary's University: fifteen (15) credit hours per semester and six (6) credit hours each for the months of July, August or September. To be eligible to participate in this Study Abroad program, students must have the approval of the Coordinator of the program and the Chairperson, and must have a QPA of 2.00 or above. Although students will take a placement test upon their arrival in France, it is strongly advised that they complete at least six (6) credit hours in French at Saint Mary's in the year prior to their departure.

Information sessions about the Study Abroad program will be held in the months of October and February every year. Please inquire at the secretary's office, 902-420-5808.

With the Department's approval, a student may undertake a year of study at another French-speaking university.

Certificate of Proficiency in French for Non-Majors (CPF)

This certificate signifies that the student has earned twenty-four (24) credit hours beyond FREN 2201.1(.2) and

2202.1(.2), has passed an oral and written examination and, in so doing, has demonstrated an acceptable level of proficiency in understanding, speaking, reading and writing. Students interested in the certificate program should consult with the Chairperson in order to determine their program of study and to register for the examination which is usually given in the spring. The student's transcript will bear an entry signifying that the certificate has been awarded.

Course Descriptions

1111.1(.2) Beginners' French Level I

Prerequisite: placement test.

An introductory course for students who have had some formal training in French but not enough to justify their admission to FREN 2201.1(.2) and 2202.1(.2) as demonstrated on the placement test. Students who have completed two (2) years of senior high Core French or equivalent are not eligible for enrollment in this course.

1112.1(.2) Beginners French Level II

Prerequisite: FREN 1111.1(.2) with a minimum grade of C and taken within the previous twelve (12) months. and/or placement test in french.

This course continues the elementary skill development started in Level I, and is intended for students who have not completed Grade 12 French.

Note: This course does not count toward the French major and is not intended for immersion students or those having had enriched or extended French programs, or students from a francophone background.

2201.1(.2) Basic University French Level I

Prerequisite: placement test or FREN 1111.1(.2) and 1112.1(.2) with a minimum grade of C.

A student enrolling in this course should have completed three (3) years of senior high "core" French or already possess an equivalent knowledge of French, as demonstrated on the placement test. This is a general language course for non- or pre-majors with emphasis placed on developing communicative skills. Taught in French.

Note: This course cannot be counted for the French major and is not intended for immersion students or those having had enriched or extended French programs, or students with a francophone background.

2202.1(.2) Basic University French Level II

Prerequisite: FREN 2201.1(.2) with a minimum grade of C and taken within the previous twelve (12) months and/or placement test in french.

Taught in French, this general language course continues in the development of the basic skill set studied in Level I, with emphasis on oral functional ability.

Note: FREN 2202.1(.2) must be taken within twelve (12) months of completing Level I. This course cannot be

counted for the French major and is not intended for immersion students or those having had enriched or extended French programs, or students with a francophone background.

2235.1(.2) Intermediate French Level I

Prerequisite: placement test or six (6) credit hours in FREN at the 2000 level or equivalent with a minimum grade of C.

Taught in French, this is a general language development course at a more intensive level involving oral and written practice and a review of grammar. This is the normal starting point for majors, immersion students, and those having had enriched or extended French programs. Students with more developed skills, including Francophones, start at the 3000 level.

2236.1(.2) Intermediate French Level II

Prerequisite: FREN 235.1(.2) or equivalent with a minimum grade of C and/or placement test.

This intensive course further expands the oral and written proficiency standards covered in Level I. Level II must be taken within twelve (12) months of completing Level I. Students with more developed skills, including Francophones, start at the 3000 level.

3307.1(.2) Advanced French Language Skills I

Prerequisite: FREN 2235.1(.2) and 2236.1(.2) with a minimum grade of C.

A practical course intended to continue the development of the student's Linguistic abilities. This course focuses on writing skills, yet also includes the aural/oral practice necessary for advanced studies in French. Knowledge of intermediate level grammar is assumed. Grammatical points will be reviewed as required.

Note: This course is compulsory for all students who intend to major in French.

3308.1(.2) Advanced French Language Skills II

Prerequisite: FREN 3307.1(.2) with a minimum grade of C.

Taught in French, this is a language development course focusing on written and oral communication at an advanced level and in formal contexts. Grammar points may be reviewed as required but do not form the focal point of the course. This course is compulsory for French majors. A practical course intended to continue the development of the student's Linguistic abilities. This course focuses on writing skills, yet also includes the aural/oral practice necessary for advanced studies in French. Contemporary texts as well as audio-visual material will provide a basis for discussion and writing. Knowledge of intermediate level grammar is assumed. Grammatical points will be reviewed as required.

Note: This course is compulsory for all students who intend to major in French.

***3310.1(.2) Introduction to French Culture**

Prerequisite: FREN 2235.1(.2) and 2236.1(.2) with a minimum grade of C

This course focuses on contemporary French culture, France's role in the European Union and the country's efforts to reconcile modern developments and ethnic diversity with tradition. Topics covered include history, politics, education, the arts and gastronomy. Films, TV broadcasts, slides, and magazine and newspaper articles will assist students in developing informed perspectives on French culture. This course is of particular interest to current or prospective French teachers.

***3312.1(.2) Introduction to Quebec Culture**

Prerequisite: FREN 2235.1(.2) and 2236.1(.2) with a minimum grade of C

This course informs students about present-day life in Quebec. Topics covered include bilingualism, politics, education, the arts and leisure. Students will gain a deeper understanding of and appreciation for contemporary Quebec culture. This course is of particular interest to current or prospective teachers of French.

3320.1(.2) French Phonetics [LING 2321.1(.2)]

Prerequisite: FREN 2235.1(.2) and 2236.1(.2) with a minimum grade of C

A course for students beyond the intermediate level who wish to improve their pronunciation. Knowledge of intermediate level grammar is assumed.

3321.1(.2) Writing in French

Prerequisite: FREN 2235.1(.2) and 2236.1(.2) with a minimum grade of C

A course for students beyond the intermediate level who wish to improve their command of written French by engaging in a variety of writing activities involving the production of different types of texts. Knowledge of intermediate level grammar is assumed.

3331.1(.2) French Review Grammar

Prerequisite: FREN 2235.1(.2) and 2236.1(.2) with a minimum grade of C

Is your grammar rusty? This intensive review of French grammar covers the basic points and those aspects of language use that are particularly difficult for English speakers. This course is of interest to those wanting to perfect their accuracy, to broaden their knowledge of French structure.

3335.1(.2) French for Business

Prerequisite: FREN 2235.1(.2) and 2236.1(.2) with a minimum grade of C or placement test.

Students will acquire the basic vocabulary and reading skills necessary to understand business correspondence, reports, and articles in French, as well as writing skills to allow written communication in French in a Canadian commercial context.

***3350.1(.2) Introduction to Literature Written in French, I**

Prerequisite: FREN 2235.1(.2) and 2236.1(.2) with a minimum grade of C

A selection of modern writing in French drawn from poetry, fables, short stories, drama and novels. The purpose of this course is to teach students to read literary language, to grasp structural relationships, and to interact with various works in terms of theme, character portrayal and style.

Note: This course is required of all students who intend to major or take honours in French.

***3351.1(.2) Introduction to Literature Written in French, II**

Prerequisite: FREN 2235.1(.2) and 2236.1(.2) with a minimum grade of C

A selection of modern writing in French drawn from poetry, fables, short stories, drama and novels. The purpose of this course is to teach students to read literary language, to grasp structural relationships, and to interact with various works in terms of theme, character portrayal and rhetorical devices.

Note: This course is required of all students who intend to major or take honours in French.

4400.1(.2) French Speech Strategies: Perfecting Oral Skills

Prerequisite: Six (6) credit hours in FREN credit at the 3000 level with a minimum grade of C.

An examination of speech acts and discursive features of language use found in real situations. Students practice how to structure and manage conversations at an advanced level in order to attain a higher level of oral proficiency. Discussions, debates and oral reports on current events form the central point of this course. Of particular interest to current or prospective teachers of French.

***4410.1(.2) La France en Chansons**

Prerequisite: FREN 3350.1(.2) and 3351.1(.2) with a minimum grade of C. FREN 3310.1(.2) is recommended.

Songs are part of daily life and reflect the evolution of the society in which they are rooted. They also have a genuine poetical value and in this respect, they are timeless. The purpose of this course is two-fold; first, to examine the cultural and historical background behind the works of France's most prestigious songwriters; second, to analyze the literary value of the lyrics. This course is of particular interest to prospective teachers of French.

4418.1(.2) Realism and Naturalism

Prerequisite: FREN 3350.1(.2) and 3351.1(.2) with a minimum grade of C.

A study of some of the major novels of the second half of the nineteenth century and the literary movements which gave them form.

4422.1(.2) Introduction to Literary Analysis

Prerequisite: FREN 3350.1(.2) and 3351.1(.2) with a minimum grade of C.

The purpose of this course is to provide an understanding of contemporary francophone literature and thought through exposure to theatre, short stories and film scripts. The course will serve as an introduction to formal critical analysis of literature. We will examine how a text functions at various levels: intellectual, formal and symbolic, and how the coherence of a literary work reveals itself. In addition, this course will provide opportunities for the student to learn how to organize a literature assignment (oral and written) and how to ground his/her thinking in the text.

***4433.1(.2) Women's Literature in France**

[WMST 4433.1(.2)]

Prerequisite: For FREN students, FREN 3307.1(.2), 3308.1(.2), and 3350.1(.2), 3351.1(.2) with a minimum grade of C. For WMST students, three (3) credit hours in WMST and six (6) credit hours in FREN at the 3000 level with a minimum grade of C.

This course will provide an introduction to French women's writing emphasizing the plurality of women's voices. The course contains an historical overview of women's writing in France and an analysis of individual texts based on feminine perspectives.

4435.1(.2) Advanced Grammar I

Prerequisite: FREN 3307.1(.2) and 3308.1(.2) and 3321.1(.2) or 3331.1(.2), each with a minimum grade of C.

A systematic review of the main points of French grammar within the context of a theoretical framework describing the nature and function of different parts of speech and the structure of simple and compound sentences. Strongly recommended for majors.

4436.1(.2) Advanced Grammar II

Prerequisite: FREN 4435.1(.2) with a minimum grade of C.

A systematic review of the main points of French grammar within the context of a theoretical framework describing the nature and function of different parts of speech and the structure of simple and compound sentences. Strongly recommended for majors.

4437.1(.2) Comparison of English and French Stylistics I

Prerequisite: FREN 3307.1(.2) and 3308.1(.2) a minimum grade of C.

A course designed to increase the students' knowledge of French beyond vocabulary and grammar and to enable them to grasp the similarities and divergences between French and English. The course involves practice in French/English translation and emphasizes the theoretical aspects of French and English stylistics which aid in establishing a method for translation.

4438.1.(2) Comparison of English and French Stylistics II

Prerequisite: FREN 3307.1.(2) and 3308.1.(2) a minimum grade of C.

A course designed to increase the students' knowledge of French beyond vocabulary and grammar and to enable them to grasp the similarities and divergences between French and English. The course involves practice in French/English translation and emphasizes the theoretical aspects of French and English stylistics which aid in establishing a method of translation.

4440.1.(2) Canadian French: Sociolinguistic Perspectives [LING 4440.1.(2)]

Prerequisite: six (6) credit hours of FREN at the 3000 level or equivalent a minimum grade of C.

This course will examine the major features which distinguish Canadian French from European French, as well as the characteristics of the different varieties of French spoken in Canada, in particular Acadian and Quebecois French. The relationship between language and society will be studied both as a source of linguistic change and as a determining factor in current speech patterns. Authentic recorded speech samples will be used to illustrate the various aspects studied and will also serve to familiarize students with the French language as spoken in Canada.

***4451.1.(2) Quebecois Literature I**

Prerequisite: FREN 3350.1.(2) and 3351.1.(2) with a minimum grade of C.

A study of selected major works in Quebec literature from 1935 to 1960 in the context of their socio-cultural background.

***4452.1.(2) Quebecois Literature II**

Prerequisite: FREN 3350.1.(2) and 3351.1.(2) with a minimum grade of C.

A study of selected major works in Quebec literature from 1960 to the present in the context of their socio-cultural background.

4457.1.(2) Litterature jeunesse

Prerequisite: FREN 3351.1.(2) and FREN 3352.1.(2) or permission of the instructor

A study of a representative sample of "litterature jeunesse", that is, works in French for children and teenagers that are widely read in Quebec and other francophone areas. The course will contain a variety of genres which will be studied for their content, artistic merit and sociocultural

manifestations. This course is of particular interest to future French teachers and it may be counted towards either a literature or culture requirement for French majors

***4460.1.(2) 20th Century French Literature**

Prerequisite: FREN 3350.1.(2) and 3351.1.(2) with minimum grade of C.

A study of the important literary movements in French literature from 1900 to the New Novel of the 1950's.

***4461.1.(2) Contemporary French Literature**

Prerequisite: FREN 3350.1.(2), 3351.1.(2) and 3307.1.(2) and 3308.1.(2), with a minimum grade of C.

The course focuses on France's major authors from the 1980s to the present. The course explores how the traditional literary genres of theatre, poetry and the novel are often replaced by free-form genres, especially in the works of women writers.

4826.1.(2) - 4849.1.(2) Special Topics in Francophone Studies

Prerequisite: French 3350.1.(2) and French 3351.1.(2)

The purpose of these courses is to introduce students to the riches and variety of voices and contemporary Francophone cultures throughout the world, outside France and Québec. Topics to be considered include: issues of history, resistance, identity, gender and race. Students will discover the Francophone world through the media of literature, newspaper articles, art, music and film, which will enable them to develop informed perspectives on the emergence of diverse French-speaking cultures.

4876.1.(2) – 4899.1.(2) Directed Study

A three (3) credit hour course open to students who wish to study a special author or subject through tutorials, independent study and research. The availability of this course depends upon the agreement of a particular faculty member who is prepared to direct the readings and study.

4501.1.(2) Honours Essay I

French Honours' students are required to submit a substantial essay or complete a research project selected and prepared in conjunction with a faculty advisor.

4502.1.(2) Honours Essay II

French Honours' students are required to submit a substantial essay or complete a research project selected and prepared in conjunction with a faculty advisor.

Geography (GEOG)

Chairperson,	
Associate Professor	C. Conrad
Professors	R. McCalla, H. Millward
Associate Professors	P. Giles, C. Suteanu, D. van Proosdij,
Assistant Professor	J. Grek Martin
Professor Emeritus	D. Day

General Information

Geography is the study of the Earth's surface, and of the spatial distribution and patterns of its physical and human characteristics. Geographers study how nature and culture work to create distinct spaces, places, landscapes, and regions. Geography is a subject of practical importance in such fields as urban and regional planning, industrial location, marketing, resource development, environmental monitoring and management, and geomatics. It is possible to obtain a major or honours in geography in either a Bachelor of Arts or Bachelor of Science degree program.

Departmental Policy

1. The Department regards 1000-level courses as both service courses for the university in general and basic introductory courses for geography majors.
2. The course content in most geography courses is cumulative.
3. Where a prerequisite is specified, a student wishing to take the course must have obtained at least a C grade in the stated prerequisite.
4. Normally 2000, 3000, and 4000-level courses are not open to students in their first year at university.
5. Because program changes occur from time to time with renumbered or restructured courses, students are advised that they are not eligible to take a course for credit if they already have a credit for a comparable course, even if that course was taken at a different level or under a different number.
6. Majors and honours students must normally complete GEOG 2316.1(.2) and GEOG 2336.1(.2) before the end of their second year or, in the case of part-time students, before proceeding to other upper level courses.
7. All majors and honours students are assigned a faculty advisor with whom they should consult each year to review their progress and course selection.
8. The Department of Geography recognizes the importance of developing students' communication skills in preparation for participating in the work force and/or continuing their education at an advanced level. Therefore, in addition to addressing geographical content, the department is committed to improving the written and oral communication skills of students in Geography courses by

including evaluation of these communication skills in course work...

9. For more complete information on geography programs, students should contact the Chairperson.

10. Geography courses are divided into four groups:

Group A -human geography courses;

Group B -physical geography courses;

Group C -techniques or methods courses;

Group D -integrative courses which may combine aspects of human geography, physical geography or techniques.

Depending on the degree program, Bachelor of Arts or Bachelor of Science, the required courses from each group vary. The group to which each course belongs is shown beside each course's title.

General Requirements for a Major

Geography is both a social science as well as a natural science. Students may major in geography and obtain a Bachelor of Arts or Bachelor of Science degree. In either case forty-eight (48) geography credit hours are required. Not only must students meet the geography requirements to qualify for a major in geography in either a Bachelor of Arts or Bachelor of Science degree, they must also meet individual Faculty requirements to qualify for the degree (see relevant sections of the Calendar). Students in the Faculty of Arts must maintain a minimum cumulative grade point average of 2.00 (an average grade of C) in courses used to meet the minimum credit requirements for the major. Students in the Faculty of Science must obtain a grade of not less than C in every course used to meet the minimum credit requirements for the major. Students wishing to major in geography in the B.Sc. program are strongly encouraged to take at least six (6) credit hours in geography.

General Requirements for a Major in Bachelor of Arts Program

- i. GEOG 1100.1(.2), GEOG 1200.1(.2), and one of 2100.1(.2) or 2200.1(.2);
- ii. GEOG 2316.1(.2), 2336.1(.2) and three (3) credit hours from GEOG 3326.1(.2), 3356.1(.2), 3366.1(.2), or 3386.1(.2);
- iii. Students must attain a grade of C or higher in GEOG 2316.1(.2) and GEOG 2336.1(.2);
- iv. Nine (9) credit hours in GEOG at the 4000-level; and
- v. Twenty-one (21) credit hours in GEOG.

Note: In addition to the eighteen (18) credit hours defined in (i) and (ii), the thirty (30) additional credit hours in GEOG may be taken from any group (A, B, C, D). After the student attains forty-eight (48) credit hours in GEOG, only Group A, C, and D courses count towards the "sixty-six (66) credit hours in Arts subjects as the 2000-level or above" (Faculty of Arts Regulation 1a). Additional Group B courses could be taken as electives.

General Requirements for a Major in Bachelor of Science Program

- i. GEOG 1100.1(.2), GEOG 1200.1(.2), and GEOG 2100.1(.2)
- ii. GEOG 2316.1(.2), 2336.1(.2) and three (3) credit hours from GEOG 3326.1(.2), 3356.1(.2), 3366.1(.2), or 3386.1(.2);
- iii. At least fifteen (15) other credit hours from Group B courses, of which at least six (6) credit hours must be at the 4000-level; and
- iv. Fifteen (15) credit hours from any group.
- v. A total of nine (9) credit hours in GEOG must be at the 4000-level.

Note: After the student has attained the required forty-eight (48) credit hours in GEOG, any additional GEOG credits would be taken as free electives in the Faculty of Science.

Concentration in GEOG Requirements

Students registered in the ninety (90) credit hour Bachelor of Arts General Program may complete the concentration requirement in Geography by taking twenty-four (24) credit hours in Geography, to include:

- i. GEOG 1100.1(.2) and GEOG 1200.1(.2)
- ii. GEOG 2100.1(.2) or 2200.1(.2)
- iii. Fifteen (15) credit hours in GEOG.

Students registered in the ninety (90) credit hour Bachelor of Science General Program may complete the concentration requirement in Geography by taking thirty (30) credit hours in Geography credits, to include:

- i. GEOG 1100.1(.2), GEOG 1200.1(.2), and GEOG 2100.1(.2)
- ii. nine (9) credit hours from Group B or C courses
- iii. twelve (12) credit hours of GEOG that are not designated.

Double Majors and Geology/Geography Combined Programs

Bachelor of Arts and Bachelor of Commerce double major students would complete the requirements for a geography major in Bachelor of Arts program; Bachelor of Science double major students would complete requirements for a geography major in the Bachelor of Science program.

Note: See the Geology section of the *Academic Calendar* for particular course requirements to complete the Geology/Geography Combined program which allows students to complete either a major or honours.

Geography Major (Bachelor of Arts) with a Minor in Geology

1. A Bachelor of Arts degree student may major in geography with a minor in geology by fulfilling the requirements for a minor as listed in the geology section of the *Academic Calendar*.

2. Students accepted into the geology minor program will be allowed to count twenty-four (24) credit hours in geology towards their Arts degree requirements.

Honours Program

1. Depending on whether the student is undertaking a Bachelor of Arts or a Bachelor of Science degree, the regulations of the respective Faculty apply to admission, continuance and graduation from honours program.

2. To be admitted to the honours program, a student must have at least a B standing in geography courses and have obtained satisfactory grades in non-geography courses. Possession of the minimum requirements does not establish the right of an applicant to be admitted, or readmitted, to the program.

3. Each year students should seek advice on their program of courses from the Honours Program Coordinator.

4. Students admitted to the program are responsible for finding a member of the Department to act as their Honours Research Project supervisor.

5. Complete details regarding the Honours Research Project are contained in *Regulations for the Honours Research Project (Geography 4526.0)* available from the Departmental secretary.

6. Besides meeting the respective Faculty credit hours and grade level requirements, students must complete a total of seventy-two (72) credit hours in geography to qualify for graduation with honours.

For the Bachelor of Arts degree, the seventy-two (72) credit hours are:

- i. GEOG 1100.1(.2), GEOG 1200.1(.2) and either GEOG 2100.1(.2) or GEOG 2200.1(.2);
- ii. GEOG 2316.1(.2), 2336.1(.2), and 3326.1(.2);
- iii. Students must attain a grade of C or higher in GEOG 2316.1(.2) and GEOG 2336.1(.2);
- iv. One of GEOG 3356.1(.2), 3366.1(.2), or 3386.1(.2);
- v. GEOG 4406.1(.2) and 4416.1(.2);
- vi. GEOG 4526.0; and
- vii. Thirty-nine (39) other GEOG credit hours from any group of which at least six (6) credit hours must be at the 4000-level.

For the Bachelor of Science degree, the seventy-two (72) credit hours are:

- i. GEOG 1100.1(.2), GEOG 1200.1(.2), and GEOG 2100.1(.2);
- ii. GEOG 2316.1(.2), 2336.1(.2), 3326.1(.2), and one of GEOG 3356.1(.2), 3366.1(.2), or 3386.1(.2);
- iii. At least eighteen (18) other credit hours from Group B courses, of which at least six (6) credit hours must be at the 4000-level;
- iv. GEOG 4406.1(.2) and 4416.1(.2);
- v. GEOG 4526.0; and
- vi. Twenty-one (21) other GEOG credit hours from any group.

Minor Program in Geography

Students in a Bachelor of Arts or Bachelor of Commerce program wishing to complete a Minor in Geography are required to complete at least twenty-four (24) credit hours in geography, including:

- i. GEOG 1100.1(.2) and GEOG 1200.1(.2)
- ii. GEOG 2100.1(.2) or 2200.1(.2)
- iii. Fifteen (15) other GEOG credit hours

Students in a Bachelor of Science program wishing to complete a Minor in geography are required to complete at least thirty (30) credit hours in geography, including:

- i. GEOG 1100.1(.2), 1200.1(.2), and 2100.1(.2)
- ii. nine (9) credit hours from Group B and C courses
- iii. twelve (12) other GEOG credit hours that are not designated.

In addition to the programs cited above, information on graduate courses, may be found in *the Graduate Academic Calendar*.

Course Descriptions

GEOG 1100.1(.2) Global Perspectives on Land and Life (Group D)

An introduction to the world and its major regions, focusing on traits, processes, and geographical patterns which give regions their distinctive character. These elements are derived from the complex interrelationships between human activity and the environment. Regional case studies may include: Europe, monsoon Asia, sub-Saharan Africa, the Middle East, and others.

GEOG 1200.1(.2) People, Place and Environment (Group D)

This course introduces environmental geography through an integrative approach that explores how humans have impacted and been impacted by earth's physical systems. Human linkages with the atmosphere, biosphere, hydrosphere and solid earth will be explored. Emphasis will be placed on geographical problems and interaction between humans and environment of varying scales in order to better understand the complexity of our natural world. Where appropriate, case studies will be used to highlight specific methods of geographical analysis.

2100.1(.2) Fundamentals of Physical Geography (Group B)

Prerequisite: Either GEOG 1100.1(.2) or GEOG 1200.1(.2)

This course explains fundamental patterns and phenomena in physical geography by investigating the underlying causes and processes with a quantitative approach. The concepts of systems, equilibrium, stability, and feedback will be incorporated as principal themes. Major topics include: effects of Earth-Sun cycles, radiation and water budgets, atmospheric and oceanic circulation systems, weather and climate controls, and principles of landscape and landform development.

Classes 2 hrs. and lab 2 hrs. a week

GEOG 2200.1(.2) Fundamentals of Human Geography (Group A)

Prerequisite: GEOG 1100.1(.2) or GEOG 1200.1(.2).

This course introduces student to concepts and techniques that define geographical analysis of human landscapes. Particular attention will be paid to ways in which geographical patterns both shape and are shaped by cultural, political and economic processes. A lab component introduces students to some of the basic techniques of geographical inquiry. Topics for discussion may include: cultural identities and landscapes, colonialism, state formation, geopolitics, food production, rural settlement patterns, urbanization, industrialization, transportation, economic development, and globalization.

Classes 2 hrs. and lab 2 hrs. a week

2303.1(.2) The Geography of World Affairs (Group D)

Prerequisite: at least thirty (30) credit hours.

The course introduces students to various facets of geography and to different approaches to geographical analysis, through a study of major world problems including conflicts over the division of land, sea and outer space; relationships between population growth and resources; food supply and health problems; natural hazards; the effects of climatic change; levels of economic development; ethnic and religious conflicts.

2310.1(.2) Geography of Canada: Overview (Group D)

Prerequisite: at least thirty (30) credit hours.

This course provides an overview of the physical, social, cultural and economic geographical characteristics of Canada taken as a whole and within its distinct regions. How humans affect and are affected by the physical environment will be a recurrent theme. The course serves as a prerequisite for GEOG 3310.1(.2).

2311.1(.2) Rural Geography (Group A)

Prerequisite: GEOG 1100.1(.2) or GEOG 1200.1(.2).

Examines the nature of rural settlement and land use in various cultural and technological settings. Emphasis is placed on agricultural patterns, and the changing organization of the countryside in modern societies. Topics include frontier settlement; land surveys; village morphology; land abandonment; farm enlargement and fragmentation; forestry, mining, and recreational uses; commuting; and conflicts over multiple land use and scenic preservation.

GEOG 2315.1(.2) The Oceans (Group B)

Prerequisite: GEOG 1100.1(.2) or GEOG 1200.1(.2)

A geographic study of the physical, environmental, economic and societal aspects of the world's oceans. Examination of the development of traditional and new uses of the oceans will focus attention on management issues. Regional case studies will be used to illustrate evolving

concepts of oceanic management, including marine protected areas, territorial seas, and conflict of use issues.

2316.1(.2) Map and Air Photo Interpretation (Group C)

Prerequisite: GEOG 1100.1(.2) and 1200.1(.2).

The first part of the course will focus on the properties, interpretation, and analysis of official series maps such as topographic maps, land capability maps, and nautical charts. This will be followed by an analysis of the properties of aerial photographs and the principles of air photo interpretation.

Classes 2 hrs. and lab 2 hrs. a week.

2325.1(.2) Sedimentology (Group B) [GEOL 2325.1(.2)]

Prerequisite: GEOG 2100.1(.2) or GEOL 1200.1(.2) or GEOL 1201.1(.2).

2336.1(.2) Principles of Cartography (Group C)

Prerequisite: GEOG 1100.1(.2) and 1200.1(.2).

An introduction to the design, compilation, and construction of maps as a medium for communication and research. Topics include the history of map making, cartographic critique, generalization, lettering, symbolization, and colour. The major types of thematic mapping (proportional symbols, isopleths and choropleths) are studied. Geographic Information Systems (GIS) are introduced.

Classes 2 hrs. and lab 2 hrs. a week.

2390.1(.2) Geography of Ireland (Group D) [IRST 2391.1(.2)]

Prerequisite: at least thirty (30) credit hours.

An examination of the physical, social, cultural, economic, and political geography. Special emphasis will be given to the nature of past and present internal population movements and emigration patterns, regional variations in economic development, and the effects of membership in the European Union.

3100.1(.2) Geography Field School (Group D)

Prerequisite: GEOG 1100.1(.2) and 1200.1(.2), and either GEOG 2100.1(.2) or 2200.1(.2), plus permission of the Department Chairperson.

The physical and human geography of a selected region will be studied primarily in the field in this experiential learning course. Trip destinations may vary in different years according to faculty interests and collaborative opportunities that may arise. An integrative regional geography perspective will be taken. Students will be required to attend orientation and preparation classes before the trip, and to complete assigned course work after the trip.

3304.1(.2) Environmental Management (Group D)

Prerequisite: GEOG 2100.1(.2) and 2200.1(.2), and at least 30 credit hours.

This course provides a framework for effective identification, analysis, and management of environmental

systems at different scales. It introduces concepts and methods designed to address real-world problems characterized by complexity, uncertainty, and change. Specific geographical environments and selected management issues (such as water pollution, soil erosion, and waste management), are examined, together with methods of environmental planning and impact assessment, including practical aspects of environmental management standards.

3312.1(.2) Urban Land Use (Group A)

Prerequisite: GEOG 2200.1(.2).

The course analyzes the pattern of land use and the process of land use change in the city. Topics include: measurement and classification of land use; land use mix; models of the internal structure of cities; land values and land use zoning; the characteristics and use of residential, commercial, manufacturing land in cities; public and semi-public land; the impact of public policies on urban land use.

3313.1(.2) Geomorphology (Group B) [GEOL 3373.1(.2)]

Prerequisite: GEOG 2100.1(.2); or GEOL 1214.1(.2) and 1215.1(.2).

Geomorphology is the scientific study of landforms and landscapes. This course explores the basic principles of geomorphology, with an emphasis on Canadian landscapes, and prepares students for advanced studies in coastal, fluvial, and glacial geomorphology. A field trip will normally be offered.

Classes 2 hrs. and lab 2 hrs. a week. Some field work may be required.

GEOG 3319.1(.2) Geographic Perspectives on Culture (Group A)

Prerequisite: GEOG 2200.1(.2)

This course critically examines the complexities of culture by exploring the various ways in which culture both shapes and is shaped by geographic landscapes. Potential topics will include: landscapes of consumption, cultural imperialism in the colonial past and postcolonial present, geographies of multiculturalism, sites of heritage and commemoration, and geographic dimensions of identity formation (e.g. gender, sexuality, race, religion, nationality).

3321.1(.2) Geography of Manufacturing (Group A)

Prerequisite: GEOG 2200.1(.2).

The course concerns the identification of key factors, and a discussion of their influence, in the geographical distribution and location of manufacturing industries. Both location theory and case studies are used to analyze the location of these industries. Examples include iron and steel, motor vehicles, and oil refining.

3326.1(.2) Statistical Methods for Geographers (Group C)

Prerequisite: GEOG 2100.1(.2) or 2200.1(.2).

This course introduces students to methods and problems in the collection, description, and analysis of geographic data.

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Included are descriptive and inferential statistics for spatial data, regression and correlation, analysis of patterns, and use of statistical package programs.

Classes 2 hrs. and lab 2 hrs. a week.

3329.1(.2) Cultural Ecology (Group A)

Prerequisite: GEOG 2200.1(.2).

Introduction to the study of the relationship between people and their environment, ranging from hunting and gathering societies to the industrial revolution. The aim of the course is to examine nature-culture relationships in the contexts of specific environments with an emphasis on both the environments and the range of cultures involved.

3332.1(.2) Geography of Transportation (Group A)

Prerequisite: GEOG 2200.1(.2).

This course provides an overview of the geographic study of transportation. Topics for consideration include: the causes of movement, measurement of distance, the cost of transportation and its influence in economic geography, the analysis of transportation networks, and the modeling of transportation flows. All transport modes are considered but emphasis is placed on land and air transport.

3333.1(.2) Biogeography (Group B)

Prerequisite: GEOG 2100.1(.2).

A study of the spatial and temporal distribution of plants and animals on Earth. Local to global scale patterns of species distribution in terrestrial and marine environments are explained by examining physical controls, ecological principles, and human impacts. Species changes over space and time are described by covering evolution, migration, succession, and extinction. Examples are drawn from Atlantic Canada where possible.

3340.1(.2) Geography of Nova Scotia (Group D)

Prerequisite: at least thirty (30) credit hours.

This course explores the geographical diversity of the province, with particular emphasis on interrelationships between physical and human patterns. A section on the physical environment is followed by a discussion of settlement, cultural patterns, and economic development. Current issues of resource development, industrial reorganization, environmental management, and land use planning are addressed.

3343.1(.2) Weather and Climate (Group B)

Prerequisite: GEOG 2100.1(.2).

An investigation of weather and climate systems on Earth across a wide range of spatial and temporal scales. Topics include: the atmosphere, energy balances, microclimates, regional weather, and global climate processes. The focus is on describing and explaining current weather and climates, but past Earth climates will also be examined.

3353.1(.2) Nature and Development of Physical Geography (Group B)

Prerequisite: GEOG 2100.1(.2).

This course surveys the important ideas and advances in the growth of the discipline of physical geography. Developments and major contributors to the fields of geomorphology, atmospheric studies, biogeography, and ocean studies will be considered. The objective of the course is to understand the current framework and nature of physical geography by investigating the historical context of the subject.

3356.1(.2) Remote Sensing of the Environment (Group C)

Prerequisite: GEOG 2316.1(.2)

This course is a study of the acquisition, storage, manipulation, analysis, interpretation, and applications of remotely sensed digital imagery. A range of sensors and spatial scales of imagery are introduced. Image interpretation and processing skills are developed using current image processing software.

Classes 2 hrs. and lab 2 hrs. a week.

3360.1(.2) Geography of Japan (Group D)

Prerequisite: at least thirty (30) credit hours.

This course stresses relationships between Japan's diverse physical environments and patterns of human occupation and land use. A section on the physical setting is followed by discussion of rural settlement, cultural patterns, urban development, and industrial geography. Current issues of land use planning and environmental management are addressed.

3366.1(.2) Field Techniques and Research Methods (Group C)

Prerequisite: GEOG 2100.1(.2) or 2200.1(.2).

Addresses questions in the design and conduct of geographic research, including field techniques. Topics include: formulating a research plan, developing hypotheses, locating and measuring field phenomena, sampling designs, levelling techniques, questionnaires, and presenting results. Students will be expected to attend sessions in the field outside regular classes and labs.

Classes 2 hrs. and lab 2 hrs. a week.

3380.1(.2) Geography of China (Group D)

Prerequisite: at least thirty (30) credit hours.

An analysis of the physical, social, cultural and economic characteristics and problems of the region. Consideration will be given to external and internal relationships of the region and to the problems of and prospects for the region's economic development.

3386.1(.2) Concepts in Geographical Information Systems (GIS) (Group C)

Prerequisite: GEOG 2336.1(.2).

This course provides an introduction to geographic information systems (GIS). Consideration is given to GIS data structure, data input, quality, storage and editing, GIS analysis functions and an introduction to the implementation of a GIS. Although the course has a strong technical component, the central underlying theme is using GIS to improve decision making in natural, human and management sciences.

Classes 2 hrs. and lab 2 hrs. a week.

3454.1(.2) Bay of Fundy: Environments and Issues (Group D)

Prerequisite: GEOG 1100.1(.2) or 1200.1(.2) and at least thirty (30) credit hours..

This interdisciplinary course examines physical, biological and human environments, processes and issues in the Bay of Fundy region from both a historical and a contemporary view. Topics include physical and biological processes such as tides and biological productivity, ecosystems such as tidal flats and salt marshes, settlement patterns, and resource use. Emphasis is placed on current issues and solutions.

4394.1(.2) Geography of Maritime Transportation (Group A)

Prerequisite: GEOG 3332.1(.2).

The course considers the spatial dynamics of world maritime transport. Topics include: theories of trade, shipping's contributions to world trade, the world merchant marine, changing time-space relationships with increasing ship size and specialization, containerization and intermodality, locational characteristics of ports, hinterland penetration and foreland development, port development and competition.

4406.1(.2) Seminar in Theoretical Geography (Group D)

Prerequisite: Registered major or honours students in Geography, or Geology/Geography combined program, with at least 60 university credit hours.

Students will be made familiar with major advances in theoretical and philosophical aspects of geography.

4413.1(.2) Coastal Geomorphology (Group B) [GEOL 4476.1(.2)]

Prerequisite: GEOG 3313.1(.2) [GEOL 3373.1(.2)] or GEOL 2325.1(.2) [GEOG 2325.1(.2)].

This course discusses both the physical processes that operate in the coastal zone and the resulting landforms. The actions of waves, tides, currents, sea level changes, wind, and humans in the formation of coastal features are considered. Additional topics include the long-term development and classification of coasts.

Classes 2 hrs. and lab 2 hrs. a week. Some field work may be required.

4414.1(.2) Integrated Coastal Zone Management (Group D)

Prerequisite: GEOG 2336.1(.2) and either GEOG 3304.1(.2) or GEOG 2315.1(.2).

Spatial approaches to the integrated planning and management of the coastal zone within a sustainable development framework will be discussed and analyzed using case studies from intensively developed coastal zones in Europe, the Mediterranean, Southeast Asia, and North America. Emphasis will be placed on the use of geographical information systems as management and planning tools.

Classes 2 hrs. and 2 hrs. lab or field work a week.

4416.1(.2) Seminar in Applied Geography (Group D)

Prerequisite: Registered major or honours students in Geography, or Geology/Geography combined program, with at least 60 university credit hours.

Role of the geographer and geographical studies in fields such as environmental, regional and urban planning; resource management; mapping and surveys; and marketing.

4423.1(.2) Glacial Geomorphology (Group B) [GEOL 4475.1(.2)]

Prerequisite: GEOG 3313.1(.2) [GEOL 3373.1(.2)] or GEOL 2325.1(.2) [GEOG 2325.1(.2)].

The study of geomorphological processes and landforms in glaciated environments. Emphasis will be placed on descriptions and explanations of glacial processes and glacial landform development. Glacial history will form a minor component of the course.

Classes 2 hrs. and lab 2 hrs. a week.

4424.1(.2) Cross-listed as ENVS 4450.1(.2) Natural Resource Management (Group D)

Prerequisite: GEOG 3304.1(.2) or ENVS 2300.0 and one of MATH 1207.1(.2) or GEOG 3326.1(.2) or BIOL 2308.1(.2).

4432.1(.2) Social Geography of the City (Group A)

Prerequisite: GEOG 2200.1(.2).

Examines the location of residential areas in cities, and the differentiation and segregation of those areas by income, occupation, race, ethnic status, and religion. Emphasis is placed on the historical evolution of social patterns, on the link between social areas and the physical fabric of the city, on competition between groups for amenity locations and facilities, and on the conflicts over noxious facilities.

4433.1(.2) Fluvial Geomorphology (Group B)

Prerequisite: GEOG 3313.1(.2) [GEOL 3373.1(.2)] or GEOL 2325.1(.2) [GEOG 2325.1(.2)].

This course examines processes and landforms associated with rivers. Topics include channel processes and morphology, sedimentology and depositional environments. Case studies of human impacts on river systems are also presented.

Classes 2 hrs. and lab 2 hrs. a week.

GEOG 4434.1(.2) Watershed Management (Group D)

Prerequisite: GEOG 3304.1(.2) and GEOG 2100.1(.2)

This course explores the concept of integrated watershed management. This will include assessments of biophysical freshwater systems, implications for natural resource development and land use on water quality and quantity, as well as institutional arrangements and the role of stakeholder involvement in watershed-scale decision-making. Field trips to local watersheds will be incorporated into the course syllabus.

4439.1(.2) Urban Historical Geography (Group A)

Prerequisite: six (6) Group A Geography credit hours at the 2000 or 3000 level.

The geography of the city (its morphology and function) is employed as an indication of the landscape impression produced by various historical periods (conceived as cultures) during the evolution of urban forms in Europe and North America. Examples are taken in historical sequence from Greek to Industrial times.

4442.1(.2) Urban Planning (Group A)

Prerequisite: GEOG 2200.1(.2).

Examines the physical and environmental planning of urban areas, with special reference to current practice in Nova Scotia. Topics include the emergence of modern town planning, the Planning Act, planning process, structure plans, general and partial urban allocation models, municipal plans, zoning, subdivision control, site planning, urban renewal, and new towns. The costs and benefits of planning are appraised.

4443.1(.2) Natural Hazards (Group B)

Prerequisite: GEOG 2100.1(.2) and at least 6 credits hours in GEOG courses at 3000 level or above.

This course considers natural hazards as a part of human-environment relations characterized by changing geographical patterns. Earthquakes, volcanic eruptions, landslides, severe weather, floods, coastal hazards, extraterrestrial body impacts are analyzed in a multi-scale perspective, along with their functional relationships. The human impact of natural hazards is discussed, with an emphasis on environmental perception, public awareness and action. Possibilities of forecasting are examined, as well as risk assessment and mitigation strategies.

4444.1(.2) Methods of Environmental and Natural Resource Analysis (Group D) [ENV 4460.1(.2)]

Prerequisite: GEOG 3304.1(.2) or ENVS 2300.0 and one of MATH 1207.1(.2) or GEOG 3326.1(.2) or BIOL 2308.1(.2) and either MATH 1210.1(.2) or CPSC 1226.1(.2).

4449.1(.2) Tourist Geographies (Group A)

Prerequisite: GEOG 3319.1(.2).

The course is concerned with the meanings of tourist places. "Meaning" refers to the symbolic, historic, or natural significance of the geographies involved in attracting people

to some places rather than others. The course examples range from theme parks like Disneyland to world heritage sites like Lunenburg. As many examples as possible are taken from Nova Scotia areas.

4452.1(.2) The Geography of Urban Transportation (Group A)

Prerequisite: GEOG 2312.1(.2) or GEOG 3332.1(.2).

This course focuses on patterns and processes of movement within cities. Topics for consideration include: the role of transportation in shaping urban form, transportation problems in cities today, the urban transportation planning process, patterns of public transit and automobile use, environmental impacts of urban transportation, the communications-transportation trade-off.

GEOG 4459.1(.2) The Power of Maps: A Social History of Cartography (Group A)

Prerequisite: GEOG 2200.1(.2) or at least sixty (60) credit hours.

Maps offer useful windows on their contemporary worlds, telling us a great deal about the technical proficiencies, economic structures, social relations, political objectives and overarching belief systems of the societies that call them forth. This course critically examines the map-society relationship in selected historical contexts as well as in our contemporary society. Possible topics for discussion will include: mapping in the Ancient world, Medieval cosmological cartography, imperial/colonial cartography, cartographies of indigenous resistance, maps and national identity, cartography and literature, and mapping in the digital age.

4465.1(.2) Advanced Sedimentology (Group B) [GEOL 4465.1(.2)]

Prerequisite: GEOL 2325.1(.2) [GEOG 2325.1(.2)] and GEOL 3326.1(.2).

4496.1(.2) Applications in Geographical Information Systems (Group C)

Prerequisite: GEOG 3386.1(.2).

This course allows students to develop further their understanding of GIS and its applications. The course allows students to further develop their understanding of GIS and its applications. This course is project-oriented, focusing on the use of geographic information systems (GIS) to address practical problems in areas such as resource management, marketing, regional planning, natural hazards and geomorphology. Students will undertake a major research project using various GIS analytical functions, and develop skills relating to data creation, manipulation, quality assessment and presentation.

Classes 2 hrs. and lab 2 hrs. a week.

4526.0 Honours Research Project (Group D)

Prerequisite: Honours standing in geography.

Honours students will be assigned to a research advisor who will guide the student in the formulation of the research proposal, the methodology to be followed during the course

of the research and in the analysis and write-up of the research findings.

4800.0 – 4825.0 and 4826.1(.2) – 4849.1(.2) Selected Topics in Geography

Prerequisite: Vary depending on the nature of the Selected Topic

These courses will cover topics not represented by other courses in Geography. The subject matter will be selected

by the instructor. If appropriate to the material, a class and lab mode of presentation may be used instead of classes alone.

4850.1(.2) – 4875.1(.2) and 4876.0 - 4899.0 - Directed Study (Group D)

Geology (GEOL)

Chairperson,	
Associate Professor	P. Jutras
Professors	V. Owen, G. Pe-Piper
Assistant Professors	J. Hanley, A. MacRae
Adjunct Professors	M. Parsons, D. Piper
Professor Emeritus	J. Dostal

We are directly dependent on the Earth for our survival. Geology is the study of the Earth, its materials, the processes that affect its surface and interior, and the history of change that it has undergone. For students enrolled in the degree of Bachelor of Science with a concentration, major, or Honours in geology, the department offers a full program of courses. Many of these courses may also be taken by students majoring in other science subjects. A combined geology/geography program emphasizes environmental aspects of geology and a program combining geology and business studies emphasize the economic aspects of the Earth. In addition, a number of courses are offered for non-science students, emphasizing global aspects of geology, Earth history, and the interactions between the Earth and human society.

Science students interested in geology, including those who are entering the double majors and Honours programs in geology, should take GEOL 1214.1(.2) and GEOL 1215.1(.2). This course provides a broad survey of the discipline, with practical experience provided through labs and field trips. Courses in mineralogy (GEOL 2301.1, GEOL 2302.2) and the history of life and sedimentary environments [GEOL 2323.1(.2) and GEOL 2325.1(.2)] are also recommended as supporting science subjects for students majoring in other sciences.

GEOL 1202.1(.2), 1203.1(.2), 1206.1(.2), 1207.1(.2), 1208.1(.2) and GEOL 1210.1(.2) are designed chiefly for students in Commerce and Arts, including Atlantic Canada Studies. Of these, only GEOL 1206.1(.2), 1207.1(.2) and 1208.1(.2) can be used as Science credits. In exceptional cases where a student has taken GEOL 1202.1(.2) and GEOL 1203.1(.2) (previously GEOL 204.0) with high standing, those courses may, with the permission of the Department, be accepted in the geology major or Honours program in lieu of GEOL 1214.1(.2) and GEOL 1215.1(.2).

Students in the major and Honours programs should seek the advice of the Department as to their elective and supporting courses. Year 4 students are encouraged to participate in the research projects being carried out in the Department. Under special circumstances, some prerequisites for 3000 and 4000-level courses may be waived with the permission of the Department.

The Geoscience Profession Act was proclaimed in Nova Scotia in March 2003. This Act requires that one be a member in good standing of The Association of Professional Geoscientists of Nova Scotia (or another provincial counterpart) in order to work in geoscience-related fields in this province. Consequently, when choosing Science electives to fulfill Faculty of Science regulation 6(e),

Geology major and honours students should consult Association of Professional Geologists of Nova Scotia (APGNS) requirements, which are revised every five years by the Canadian Council of Professional Geoscientists (CCPG). For the 2008-2012 period, the CCPG requirements for professional geologists are:

Three credit hours (one course) in each of the following fields:

Chemistry
Mathematics
Physics

An additional 18 credit hours (six courses) distributed in the following fields (no more than two per individual field):

Biology
Chemistry
Mathematics
Computer Programming
Physics
Statistics

Three credit hours (one course) in each of the following geoscience topics:

Field Methods
Mineralogy
Sedimentology
Structural Geology

An additional 15 credit hours (five courses) distributed in the following geoscience topics (a minimum of one per sub-group):

Principles of Geochemistry
Applied Geochemistry
Geophysics

Igneous Petrology
Metamorphic Petrology
Sedimentary Petrology

Advanced Sedimentology
Glacial Geomorphology
Remote Sensing

An additional 28 credit hours (9 courses) must be taken in courses at the second-year level or higher in geosciences (Geology, Physical Geography or Environmental Studies). Also eligible are additional courses from the previously mentioned lists, or courses in Technical Writing or computer Programming. For more information, please consult the following website:

http://ccpg.ca/guidelines/recommended_minimum_requirements.html

1. Geology Major

The courses of the core program for a student majoring in geology are:

GEOL 1214.1(.2)	Introduction to Geology: Earth Materials
GEOL 1215.1(.2)	Introduction to Geology: Earth Processes
GEOL 2301.1(.2)	Mineralogy
GEOL 2302.1(.2)	Optical Mineralogy
GEOL 2305.1(.2)	Geophysics
GEOL 2325.1(.2)	Sedimentology
GEOL 3312.1(.2)	Igneous Petrology
GEOL 3313.1(.2)	Metamorphic Petrology
GEOL 3326.1(.2)	Sedimentary Petrology and Stratigraphy
GEOL 3413.1(.2)	Structural Geology
GEOL 3453.1(.2)	Principles of Geochemistry

At least six credit hours, (two courses) from the following list:

GEOL 3323.1(.2)	Palaeontology: History of Life
GEOL 3300.1(.2)	Field Methods
GEOL 3454.1(.2)	Applied Geochemistry
GEOL 4441.1(.2)	Mineral Resources
GEOL 4466.1(.2)	Petroleum Geology

At least three additional credit hours (one course) from the previous list or from the following:

GEOL 3340.1(.2)	Surface and Groundwater Hydrology
GEOL 4414.1(.2)	Tectonics
GEOL 4465.1(.2)	Advanced Sedimentology

It is strongly recommended that all geology major and Honours students take GEOL 3300.1(.2) Field Methods, which is required by the CGSB and the APGNS (see above).

The following first and second year course selections are recommended for students in the major and Honours programs in geology:

Year 1

1. GEOL 1214.1(.2) and GEOL 1215.1(.2)
2. MATH requirement (see Faculty of Science regulations, Section 3 of this *Academic Calendar*)
3. non-geology science elective [six (6) credit hours]
4. ENGL 205.1(.2) and three (3) credit hours in humanities
5. non-science elective [six (6) credit hours]

Year 2

1. GEOL 2301.1(.2) and 2302.1(.2) [six (6) credit hours]
2. GEOL 2325.1(.2) [three (3) credit hours]
3. GEOL 2305.1(.2) [three (3) credit hours]
4. 3000 or 4000 level geology course with lab [six (6) credit hours]
5. non-geology science elective [six (6) credit hours]
6. non-science elective [six (6) credit hours]

For subsequent years, students should consult the Departmental Chairperson.

2. Geology Honours

The Honours program requires GEOL 4550.0 in addition to the core courses for majors, supplemented by sufficient geology courses for a minimum of sixty (60) credit hours.

3. Double Major and Honours

Students may pursue a double major in geology and another science subject, as outlined in Section 3 of this *Calendar*.

Students taking a double major are required to take at least thirty-six (36) credit hours in geology from the following list:

GEOL 1214.1(.2) and GEOL 1215.1(.2)	Introduction to Earth Science
GEOL 2301.1(.2)	Mineralogy
GEOL 2302.1(.2)	Optical Mineralogy
GEOL 2305.1(.2)	Geophysics
GEOL 2325.1(.2)	*Sedimentology or GEOL 3373.1 (.2)
GEOL 3300.1	Field Methods
GEOL 3312.1(.2)	Igneous Petrology
GEOL 3313.1(.2)	Metamorphic Petrology
GEOL 3323.1(.2)	Palaeontology: History of Life
GEOL 3326.1(.2)	Sedimentary Petrology and Stratigraphy
GEOL 3340.1(.2)	Surface and Groundwater Hydrology
GEOL 3413.1(.2)	Structural Geology
GEOL 3453.1(.2)	Principles of Geochemistry
GEOL 3454.1(.2)	Applied Geochemistry
GEOL 4414.1(.2)	Tectonics
GEOL 4441.1(.2)	Mineral Resources
GEOL 4465.1(.2)	Advanced Sedimentology
GEOL 4466.1(.2)	Petroleum Geology
GEOL 4475.1(.2)	Glacial Geomorphology

***Note:** GEOL 2325.1 (.2) [cross-listed as GEOG 2325.1 (.2)] or GEOL 3373.1 (.2) [cross-listed as GEOG 3313.1 (.2)] cannot both be taken for credit.

4. Geology/Geography Combined Programs

a. Geology/Geography Major Program (Bachelor of Science)

i. At least thirty-six (36) credit hours from the list of geology courses under 'Double Major and Honours', above.

ii. At least thirty-six (36) geography credit hours including:

GEOG 1200.1(.2)	People, Place and Environment
GEOG 1100.1(.2)	Global Perspectives on Land and Life
GEOG 2100.1(.2)	Fundamentals of Physical Geography
GEOG 2325.1(.2)	*Sedimentology
GEOG 2316.1(.2)	Map and Air Photo Interpretation
GEOG 2336.1(.2)	Principles of Cartography
GEOG 3313.1(.2)	*Geomorphology

iii. At least twelve (12) credit hours from:

GEOG 2305.1(.2)	The Oceans: A Physical Geography
GEOG 2333.1(.2)	Biogeography
GEOG 3343.1(.2)	Weather and Climate
GEOG 4413.1(.2)	Coastal Geomorphology
GEOG 4423.1(.2)	Glacial Geomorphology
GEOG 4433.1(.2)	Fluvial Geomorphology
GEOG 4443.1(.2)	Natural Hazards

Six (6) additional credit hours in geography from Group B or C courses.

b. Geology/Geography Honours Program (Bachelor of Science: Honours)

In addition to the above requirements, Honours students must complete:

- i. GEOL 4550.0 Honours Project or GEOG 4526.0 Honours Research Project;
- ii. six (6) additional credit hours in geology from the list of geology courses under “Double Major and Honours” above; and
- iii. GEOG 4406.1(.2) Seminar in Theoretical Geography and GEOG 4416.1(.2) Seminar in Applied Geography.

In the Honours Bachelor of Science geology/geography program, topics for Honours projects should be approved by both Departments and may be carried out in either Department.

5. Geology/Business Studies Combined Programs

The Department of Geology and the Faculty of Commerce offer a double major/Honours science degree combining a major/Honours program in geology with a major program of business studies in the Faculty of Commerce.

This program offers Bachelor of Science major and Bachelor of Science Honours degrees, under the general requirements of the Faculty of Science. For a combined major degree, students will be required to take a minimum of forty-two (42) credit hours in the Faculty of Commerce in addition to at least thirty-six (36) credit hours in geology. In the Honours program, a thesis on a field interrelating the two disciplines will be required. Students enrolled in the combined geology/business studies major/Honours may also pursue a co-op option in this dual program. The program appeals to geology students with an interest in the business-related aspects of their major. The geology/business studies major program requires a minimum grade of C in all geology and commerce courses while the geology/business studies Honours program requires (a) a minimum grade of C in all geology and commerce courses; and (b) a minimum quality point average of 3.00 in these same courses.

The following courses are required for the Geology/Business Studies Major (B.Sc.)

a. Commerce Faculty Requirements [total of forty-two (42) credit hours]

ACCT 2241.1(.2) Introductory Accounting I
 ACCT 2242.1(.2) Introductory Accounting II
 ACCT 3332.1(.2) Planning and Control
 CMLW 2201.1(.2) Legal Aspects of Business - Part I
 COMM 2293.1(.2) Managerial Communications
 ECON 1201.1(.2) Principles of Economics: Micro
 ECON 1202.1(.2) Principles of Economics: Macro
 FINA 2360.1(.2) Business Finance I
 FINA 3361.1(.2) Business Finance II
 MGMT 1281.1(.2) Introduction to Business Management
 MGMT 3383.1(.2) Organizational Behaviour I
 MGMT 3384.1(.2) Organizational Behaviour II
 MGMT 4489.1(.2) Strategic Management
 MKTG 2270.1(.2) Introduction to Marketing

b. Geology Requirements [at least thirty-six (36) credit hours]

GEOL 1214.1(.2) and 1215.1(.2) Introduction to Earth Science
 GEOL 1208.1(.2) Environmental Geology
 GEOL 2301.1(.2) Mineralogy
 GEOL 2305.1(.2) Geophysics
 GEOL 2325.1(.2) Sedimentology
 GEOL 3300.1(.2) Field Methods
 GEOL 3312.1(.2) Igneous Petrology
 GEOL 3323.1(.2) Palaeontology: History of Life
 GEOL 3340.1(.2) Surface and Groundwater Hydrology
 GEOL 3373.1(.2) Geomorphology
 GEOL 3413.1(.2) Structural Geology
 GEOL 3453.1(.2) Principles of Geochemistry
 GEOL 3454.1(.2) Applied Geochemistry
 GEOL 4414.1(.2) Tectonics
 GEOL 4441.1(.2) Mineral Resources
 GEOL 4465.1(.2) Advanced Sedimentology
 GEOL 4466.1(.2) Petroleum Geology
 GEOL 4475.1(.2) Glacial Geomorphology

c. Other Requirements

- i. ENGL 1205.1(.2) and three (3) credit hours in humanities.
- ii. MATH requirement (see Faculty of Science regulations, Section 3 of this *Academic Calendar*).
- iii. twelve (12) credit hours in science other than Geology, e.g., Biology, Psychology, Chemistry, Physics, and Mathematics excluding MATH 1207.1(.2), and BIOL 2308.1(.2).
- iv. three (3) credit hours in statistics that covers probability theory including MATH 1207.1(.2), MGSC 2207.1(.2), GEOG 3326.1(.2), BIOL 2308.1(.2) and ECON 3303.1(.2).
- v. six (6) credit hours from Faculty of Arts' offering including GEOG 3326.1(.2) and ECON 3303.1(.2).
- vi. nine (9) credit hours in electives from any faculty.

Notes:

- (i) Students must take FINA 2361.1(.2), MKTG 2270.1(.2) and MGMT 3384.1(.2) before registering for MGMT 4489.1(.2). The other prerequisites for this course are waived for students in this combined program.
- (ii) Students must register no later than the beginning of Year 2 in the science program and will be under the general requirements of the Faculty of Science.

In addition to the above requirements, Geology/Business Studies Honours students must complete GEOL 4550.0 Honours Project as one of the Geology requirements.

6. Cooperative Education Programs**a. Co-operative Education in Geology**

This program, which is available at both the major and Honours level, integrates on-the-job experience and academic studies. Upon completion of one of the Co-operative Education programs, the student receives the Bachelor of Science degree in geology, at the major or Honours level, with the added qualification of “Co-operative Education”.

Further details and regulations on the Faculty of Science Co-operative Education program are found in *the Graduate Academic Calendar*.

b. Combined Co-operative Education in Geology/Geography

The students enrolled in the combined geology/geography major/Honours may also pursue a Co-op option in this dual program. Application to and completion of this combined option is the same as those for other Science Co-op major programs.

Further details and regulations on the Faculty of Science Co-operative Education program are found in *the Graduate Academic Calendar*.

c. Combined Co-operative Education Program in General Business Studies/Geology

The students enrolled in the combined geology/business studies major/Honours programs may pursue a Co-op option in these dual programs. Applications to and completion of this combined option is the same as those for other Science Co-op major/Honours programs.

7. Minor in Geology

It is possible to combine a minor in Geology with a major in another discipline within or outside the Faculty of Science. A minor in Geology requires thirty (30) credit hours, including GEOL 1214.1(.2) and GEOL 1215.1(.2); no more than twelve (12) credit hours below the 2000-level can be counted toward the minor in Geology.

Course Descriptions

1202.1(.2) Planet Earth: Atlantic Canada Perspective

Why is the Atlantic Ocean getting wider? Where in Atlantic Canada are there remnants of huge volcanic explosions and lava flows? How did a fault as big as the San Andreas cut through Nova Scotia? This course will provide an understanding of the Earth and the processes which affect it, using examples drawn from the geology of our region. You will study plate tectonics, learn to recognize and interpret Earth materials, and understand their impact on Atlantic Canada. Sections of this course may be offered via world-wide web. This course is intended mainly for non-science students including those in Atlantic Canada Studies.

Note: Please note that this course may not be used by B. Sc. Students to satisfy the requirement of a science elective under regulations 3.e., 6.e., 10.c., and 12.b. for B.Sc. degrees. This course may not be taken concurrently or subsequently to GEOL 1214.1(.2) or 1215.1(.2).

1203.1(.2) Earth History: Atlantic Canada Perspective

What was the origin of the Earth and when did life develop? When did dinosaurs and other fossil groups appear in our region, and how did they disappear? How have ancient deserts, rivers, oceans, and ice ages influenced our landscape? You will trace four billion years of Earth history using examples from the rock and fossil record of Atlantic Canada. Sections of this course may be offered via world-

wide web. This course is intended mainly for non-science students including those in Atlantic Canada Studies.

Note: Please note that this course may not be used by B. Sc. Students to satisfy the requirement of a science elective under regulations 3.e., 6.e., 10.c., and 12.b. for B.Sc. degrees. This course may not be taken concurrently or subsequently to GEOL 1214.1(.2) or 1215.1(.2).

1206.1(.2) Global Change

This course examines global changes in the Earth's crust, oceans, biota and atmosphere caused by natural processes and human activity. Topics covered include the reconstruction of ancient environments, some of which were dramatically changed by meteorite impacts, volcanic activity and glaciation, and the evaluation of accelerating environmental change caused by phenomena such as ozone depletion and greenhouse gas emissions.

1207.1(.2) Environment, Radiation and Society

Radioactivity has an impact on our society and environment. Radiation given off during the process of radioactive decay is harmful, but is accompanied by the release of energy that can be harvested. The course reviews radioactive decay and explores geological sources of radiation, uranium deposits and mining, economics of nuclear power and the geological aspects of radioactive waste disposal. The course will foster an understanding of issues that surround the use of nuclear technology in our society.

1208.1(.2) Environmental Geology: Atlantic Canada Perspective

This course examines geological principles that lie behind environmental problems facing society. Topics considered may include geological hazards such as volcanoes, earthquakes, slope instability, and pollution and waste disposal, as well as energy and mineral resources, and the quality of water. The course will include examples of environmental geology in the Atlantic Provinces.

1210.1(.2) Dinosaurs and Their World

This course focuses on dinosaurs and the world in which they flourished for 135 million years, up to the time of their (near) extinction. Spectacular and sometimes controversial evidence indicates how dinosaurs and other creatures lived, died, and were preserved as fossils over geological time. Nova Scotian dinosaur localities will receive special attention in the class.

Note: Please note that this course may not be used by B. Sc. Students to satisfy the requirement of a science elective under regulations 3.e., 6.e., 10.c., and 12.b. for B.Sc. degrees.

1214.1(.2) Introduction to Geology: Earth Materials

Everything that is known about the history of the solid Earth has been determined from studying rocks and minerals. This course introduces the student to major types of rocks and minerals, how they are described, classified and interpreted, and how their age can be determined. Gemstones, fossils and other Earth materials will also be described.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

1215.1.(2) Introduction to Geology: Earth Processes

The study of the Earth as a dynamic and evolving planet that has been in constant transformation since the beginning of its formation. This course introduces the students to both surface and subsurface processes which will be described using many geological examples from Atlantic Canada.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

2301.1.(2) Mineralogy

An introduction to a systematic study of the major mineral groups, including their crystal structure, chemical composition, physical properties, identification and practical use.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

2302.1.(2) Optical Mineralogy

Prerequisite: GEOL 2301.1.(2) or permission of Department.

Optical properties of minerals. Determinative mineralogy with emphasis on the optical methods of mineral identification. Petrography of the more common rocks.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

2305.1.(2) Geophysics

Prerequisite: GEOL 1214.1.(2) and 1215.1.(2)

The physics of the Earth, including rotation, gravity, seismology and internal structure, magnetic and electrical properties, radioactivity, and the Earth's heat. Geophysical exploration of the Earth's crust, including seismic refraction, seismic reflection, magnetic, gravity and electrical methods.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

2325.1.(2) Sedimentology [GEOG 2325.1.(2)]

Weathering and the origin of sedimentary materials. Introduction to sediments and sedimentary rocks. Processes of sedimentation and the origin of sedimentary structures. Interpretation of clastic and carbonate sedimentary rocks in the light of comparison with modern environments in non-marine, marginal marine and marine settings.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

2332.1.(2) Introductory Analytical Chemistry: Wet Methods [CHEM 2332.1.(2)]**2333.1.(2) Introductory Analytical Chemistry: Instrumental Methods [CHEM 2333.1.(2)]****2335.1.(2) Paleobotany**

Prerequisite: GEOL 1214.1.(2) and 1215.1.(2) or BIOL 1202.1.(2).

The course will trace the two billion year fossil record of plant evolution in the context of adaptation to Earth's changing geography and climate through geologic time. Particular attention will be paid to the development of terrestrial ecosystems in the Paleozoic and to the world class fossil sites of Nova Scotia, including the paleobotany of coal. Ontogeny and paleoecology will be linked as will taphonomy and paleoenvironments. Laboratories will

acquaint the student with the taxonomy of fossil floras, their modes of preservation and practical problems in the interpretation of their record.

Classes 3 hrs. and lab 3 hrs. a week. Field trips. 1 semester.

3300.1 Field Methods

Prerequisites: GEOL 1214.1.(2), 1215.1.(2), 2325.1.(2), and attendance at Field Camp, held prior to the semester, or permission of instructor.

This course introduces the student to basic field techniques used by geologists. Field observations and measurements collected during a one week field camp and during the course are summarized by the student as a series of reports.

Classes 3 hrs. a week plus field work. 1 semester.

3312.1.(2) Igneous Petrology

Prerequisite: GEOL 2302.1.(2).

This course emphasises the mineralogical and chemical characteristics of igneous rocks, and their classification, petrography, and tectonic setting. The processes responsible for the evolution of diverse igneous rock associations are also considered. Laboratory work involves the study of igneous rocks in hand sample and thin section.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

3313.1.(2) Metamorphic Petrology

Prerequisite: GEOL 2302.1.(2).

This course introduces aspects of the description and interpretation of metamorphic rocks by citing the effects of the progressive metamorphism of mafic, pelitic and carbonate rocks. Other topics include the use of composition-assemblage diagrams, methods of quantitative geothermobarometry, and the interpretation of pressure-temperature-time trajectories for metamorphic rocks. Laboratory work involves the study of metamorphic rocks in hand sample and thin section.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

3323.1.(2) Palaeontology: History of Life

Prerequisite: one of GEOL 1214.1.(2) or 1215.1.(2), GEOL 1202.1.(2), 1208.1.(2); or BIOL 201.1.(2) and 202.1.(2); or GEOG 2213.1.(2).

An account of the 3800 million-year history of life on Earth, including theories of the origin of life, and modes of preservation of organisms as fossils, and the practical use of fossils for geological age, paleogeographic, and paleoenvironment determinations. The course covers the expression of biological evolution in the fossil record, and the major patterns and crises in the history of life, such as mass extinctions. Although the main focus is on the paleontology of invertebrate macrofossils, there will be some coverage of fossil plants, vertebrates, and microfossils.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

3326.1(2) Sedimentary Petrology and Stratigraphy

Prerequisite: GEOL 2302.1(.2) and 2325.1(.2) (which may be taken concurrently).

Composition, provenance, and diagenesis of clastic sedimentary rocks, including conglomerates, sandstones and shales. Components and diagenesis of the main classes of non-clastic sedimentary rocks including carbonates, evaporites, siliceous and iron-rich sediments. Stratigraphy: correlation and the definition of stratigraphic units in outcrop and in the subsurface. Unconformities, sequences, sea-level change, and the interpretation of the stratigraphic record.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

3340.1(2) Surface and Groundwater Hydrology

Prerequisite: one of GEOL 1214.1(.2) or 1215.1(.2), 1202.1(.2), 1208.1(.2); or GEOG 2213.1(.2).

The course examines the fundamentals of hydrology, including the precipitation, infiltration and storage of water. It emphasizes practical approaches to the examination of water supply, the movement of groundwater through various geological materials, groundwater exploration, contaminant modelling and water resource management.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

3373.1(2) Geomorphology [GEOG 3313.1(.2)]

Prerequisite: GEOL 1214.1(.2) or 1215.1(.2) or GEOG 2213.1(.2).

The study of geomorphological processes and related landforms, with an emphasis on fluvial activity. Processes of weathering, soil formation, slope development and river action will be discussed. Laboratory work will include methods of field and data interpretation, soil analysis, sediment analysis and geomorphological mapping.

Classes 2 hrs. and lab 2 hrs. a week. 1 semester. Some field work may be required.

3413.1(2) Structural Geology

Prerequisite: GEOL 1214.1(.2) and 1215.1(.2)

Structures produced by deformation in the Earth's crust, including fabrics, folds, faults, and shear zones. Geometric, kinematic, and dynamic analysis of structures. Use of geometric and stereographic projection techniques in the interpretation of geological structures and geological maps. Introduction to stress and strain. Structures characteristic of selected tectonic environments, including rifts, thrust belts, and zones of strike-slip movement.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

3453.1(2) Principles of Geochemistry

Prerequisite: GEOL 1214.1(.2) and 1215.1(.2).

This course exposes students to the application of chemical thermodynamics for the prediction of geochemical processes in surficial and hydrothermal systems, igneous environments of the Earth and of the rest of the Solar system. Mineral

formation and mineral stability are examined through the construction and use of phase and mineral stability diagrams for aqueous environments. The geochemical basis for the origins of life on Earth, the carbon cycle, and the evolution of the most important reservoirs of Earth materials are evaluated through problem sets and laboratories.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

Note: This course may be used as either a geosciences course or as a second chemistry course to fulfill the CCPG requirements for professional geologists.

3454.1 Applied Geochemistry

Prerequisite: GEOL 1214.1(.2), 1215.1(.2) and 3453.1(.2).

The application of graphical and numerical tools for classifying Earth materials according to their chemical composition is studied through field-based and computer-based laboratories. This course examines geochemical sampling, instrumental analysis, statistical evaluation of real geochemical data, and the methods of proper reporting and quality control. The students are introduced to novel methods (fluid inclusion microanalysis, alteration mapping in ore deposits, reaction path modeling, stable and radiogenic isotopes) and their application in characterizing geochemical processes on Earth.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

Note: this course may be used as either a geosciences course or as a second chemistry course to fulfill the CCPG requirements for professional geologists.

4400.1(2) International Field Camp

Prerequisite: GEOL 3300.1(.2), and permission of the Department.

This course is offered on an irregular basis in the form of a Geology field trip abroad, allowing the students to be exposed to geological features that cannot be found in Canada. In practical terms, this course will acquaint the student with modern methods of structural, stratigraphic, petrologic and/or geophysical analysis. After mastering these skills, students will undertake an independent geological report project. Students may be required to travel at their own expense.

4414.1(2) Tectonics

Prerequisite: GEOL 1214.1(.2) and 1215.1(.2); and at least one of GEOL 2325.1(.2), 3312.1(.2), or 3413.1(.2) (which may be taken concurrently).

This course describes the major features of the Earth and its place in the solar system. It introduces the evidence for plate tectonics, the analysis of plate movements, and the characteristic rock associations formed in different tectonic environments. Aspects of global change will be considered, including the evolution of tectonic processes through geologic time, changes in the atmosphere and oceans, and the importance of meteorite impacts.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

4441.1(.2) Mineral Resources

Prerequisite: GEOL 1214.1(.2), 1215.1(.2) and 2301.1(.2)

A study of Earth's mineral resources, particularly metallic and some non-metallic mineral deposits, their classification, genesis and distribution in time and space. Important examples from Canada and abroad will be discussed. Topics will also include mineral exploration techniques, mining methods, metallurgical recovery, net smelter return, and ore reserve estimation. Laboratories will examine a variety of base and precious metal ore deposit types in hand sample and thin section. Mining/exploration practice and resource exploitation are also examined in terms of their environmental impacts.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

4450.1(.2) Advanced Igneous and Metamorphic Petrology

Prerequisite: GEOL 3312.1(.2) and 3313.1(.2).

The topics covered in this course include magmatic petrogenesis; magma types; petrographic provinces and their relations to their tectonic setting; differentiation indices; variation diagrams; distribution trends of major and trace elements; equilibrium and fractional crystallization in selected synthetic systems; phase equilibria in metamorphic systems; reaction balancing methods; porphyroblast-matrix relations; quantification of pressure-temperature-time trajectories. Laboratory work is centered on the acquisition and manipulation of microprobe data.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

4465.1(.2) Advanced Sedimentology [GEOG 4465.1(.2)]

Prerequisite: GEOL 2325.1(.2) or GEOG 2325.1(.2) and GEOL 3326.1(.2).

This course examines current research on sedimentary rocks and basins and the methods used to understand them. Among the topics to be covered are modern carbonate and evaporite environments, exotic chemical sedimentary rocks and diagenetic cements, volcanogenic sedimentary rocks, sequence stratigraphy in carbonate and siliciclastic successions, applications of ichnology (trace fossils), the use of stable isotopes in the study of terrestrial carbonates, and the use of detrital minerals to interpret basin evolution.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

4466.1(.2) Petroleum Geology

Prerequisite: GEOL 1214.1(.2), 1215.1(.2), 2305.1(.2) or 2325.1(.2).

The origin, migration and accumulation of oil and natural gas. Types of oil bearing structures and basic principles in oil exploration.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

4475.1(.2) Glacial Geomorphology [GEOG 4423.1(.2)]

Prerequisite: GEOL 3373.1(.2) or GEOG 3313.1(.2).

4476.1(.2) Coastal Geomorphology [GEOG 4413.1(.2)]

4550.0 Honours Project

Prerequisite: Honours standing and permission of Department.

Research project carried out under the supervision of one member of the Department or jointly by more than one faculty member. Originality of the research project is emphasized.

4826.1(.2) – 4849.1(.2) Special Topics in Geology

Prerequisite: restricted to Year 4 students in the Honours program or permission of Department.

Readings and discussions of current literature in geology on selected topics. Such topics as plate tectonics, geochemistry, statistics in geology, isotope geochemistry, petrogenesis, ore genesis, may be included.

Classes 72 hrs. per semester; classes and labs.

4876.1(.2) – 4899.1(.2) Directed Study in Geology

Prerequisite: restricted to Year 4 students in the Honours program or permission of Department.

Intended to supplement or provide an alternative to the regular geology courses in order to meet the special needs and interests of students. The course provides an opportunity to study a particular subject in detail and requires from the student some measure of independence and initiative.

Classes 72 hrs. per semester; classes and labs.

German (GRMN)

Chairperson, Modern Languages and Classics

Associate Professor G. Nahrebecky

Professor E. Enns

Assistant Professor J. Plews

Courses and programs in German are offered by the Department of Modern Languages and Classics

Department Policy - Modern Languages and Classics

1. Enrollment in some language courses involves the following formal placement procedures.

All students seeking entry into language courses who have not previously taken a language course at Saint Mary's University must complete and return the Language Profile Form to the Department of Modern Languages and Classics.

Based on the information provided in the Language Profile Form, students may receive notification from the Department to appear for an oral interview and/or a written placement test at a designated time.

The Department of Modern Languages determines the appropriate course placement for each student

- (i) Permission to register or remain in a particular language course can be refused if the Department judges that the student's knowledge exceeds the level for that course.
- (ii) Native speakers are not eligible to receive advanced credit for language courses.
- (iii) Completion of Advanced Standing (transfer) courses does not exempt a student from taking the placement test.

2. The student's eligibility to enroll in language, culture, and literature courses, and in specific sections of those courses, is determined by the Chairperson in consultation with the instructor in light of the student's ability level in the language concerned, previous course work completed at university or elsewhere, and overall size of the course or section of a course. In matters of placement, the decision of the Chairperson is final.

3. In order to ensure the academic integrity in language courses, especially at the lower levels of instruction, the Department of Modern Languages and Classics does not allow native or near-native speakers of a particular target language to enroll in courses at the 2000 level or lower.

Students who misrepresent their knowledge of any given language by providing inaccurate or incomplete information about their linguistic educational history will be subject to disciplinary action as laid out in Academic Regulation 19.

4. The Department of Modern Languages and Classics supports a policy of regular class attendance by students.

Frequent, unexplained absences from class will result in a lowering of the final grade in a manner to be determined by each faculty member.

5. Students should note that courses in literature and/or culture fulfill the BA Humanities requirement 3(c) but do not fulfill the 3(b) requirement. The courses designated with an * in front of the number satisfy the 3(c) requirement.

Programs in German

The following programs are available in German Studies: a major, a minor, a concentration, and a certificate in German Language and Culture.

Major in German Studies

A major in German Studies consists of at least thirty-six (36) credit hours. Twenty-four (24) compulsory credit hours in German language/literature. At least twelve (12) of those twenty-four (24) credit hours have to be at the 3000 or 4000 level. The remaining twelve (12) credit hours may be taken in German language, literature, culture or may be from courses given in English and taken from other departments. Those courses will stress German history, cultural roots, and civilization, and can only be taken after consultation with the Coordinator of German Studies or the Chairperson of Modern Languages and Classics.

Concentration in German Studies

To obtain a concentration in German Studies in partial fulfillment of the B.A. General Degree (i.e. one with a Double Arts Concentration and a minimum of ninety (90) credit hours), a minimum of twenty-four (24) credit hours in German Studies is required. At most 6 credit hours can be at the 1000 level. Also, the minimum grade point average is 2.00.

Minor in German Studies

A minor in German Studies consists of twenty-four (24) credit hours, with at least twelve (12) of these being at the 3000 level or above. Normally, the first twelve (12) credit hour courses for the minor will be 1000 and 2000 level German language courses, followed by twelve (12) credit hours to be chosen from offerings in literature and cultural studies. Students entering the minor program with previous knowledge of German must consult the Coordinator for German Studies or the Chairperson of Modern Languages and Classics. A minimum grade point average of 2.00 is required for courses in the minor program.

Certificate in German Language and Culture (Cert. GLC)

The certificate program in German language and culture is designed to provide linguistic and cultural knowledge to persons interested in studying and/or working in a German-speaking country. The program consists of twenty-four (24) credit hours.

Admission

Admission to the program leading to the Certificate in German Language and Culture requires a formal application for admission and the official approval of the Coordinator for German Studies. Application forms are available from the Registrar. Students majoring in German at Saint Mary's University are not eligible for this program. Eighteen (18) of the twenty-four (24) credit hours must be completed at Saint Mary's.

Program Courses

The program consists of twelve (12) required credit hours in language: GRMN 1101.1(.2) and 1102.1. (2) and/or 2201.1(.2) or 2202.1(.2), and/or 3311.1(.2) and a number of optional credit hours. These optional credit hours must be at the 3000 level or above, and will be chosen from among the following courses:

GRMN 3304.1(.2) German Culture and Civilization
GRMN 3307.1(.2) Introduction to German Literature
GRMN 3308.1(.2) Contemporary German Culture
HIST 2304.0 Europe 1848-1989
HIST 3405.1(.2) Society and Culture in Early Modern Europe
HIST 3406.1(.2) Ideas and Politics in Early Modern Europe

Requirements

A minimum cumulative grade point average of 2.00 in this certificate program is required. Students who have completed all the courses without being officially admitted to the program will not be accredited.

Course Descriptions**1101.1(.2) Introduction to the German Language I**

An introductory language course for those beginning the study of German. Basic linguistic structures will be studied with particular emphasis on the oral communications.

1102.1(.2) Introduction to the German Language II

Prerequisite: GRMN 1101.1(.2) or equivalent with a minimum grade of C.

This course continues the studies begun in GRMN 1101.

2201.1(.2) Intermediate German I

Prerequisite: GRMN 1102.1(.2) (or equivalent) with a minimum grade of C.

A intermediate German language course with emphasis on grammar in context, listening comprehension, reading and writing.

2202.1(.2) Intermediate German II

Prerequisite: GRMN 2201.1(.2) with a minimum grade of C.

A continuation of 2201.1(.2).

***3306.1(.2) German Culture and Civilization**

Readings, lectures, slide presentations, and film clips on the culture and civilization of Germany from the Germanic tribes to the present day. Discussions focus on literature,

visual art, history, politics and society. This course is taught in English and satisfies the Faculty of Arts humanities 3c requirement..

***3307.1(.2) Introduction to German Literature**

Prerequisite: None

A survey of German literature in translation from various periods. The course will provide the student with an introduction into literary analysis. This course is taught in English and satisfies the Faculty of Arts humanities 3c requirement.

***3308.1(.2) Modern German Culture**

Prerequisite: None

A study of trends in German literature since the First World War and up to 1989. Poetry, plays and short stories are read and analyzed. This course is taught in English and satisfies the Faculty of Arts humanities 3c requirement.

3309.1(.2) Contemporary German Culture

Prerequisite: None

Readings. Lecture, slide presentations, and film clips on contemporary ("Postwende") culture and society of Germany. Topics include new trends in German literature, poetry, plays, and short stories as well as popular culture, music, film, advertising, the Web, festivals, social and political movements. This course is taught in English and satisfies the Faculty of Arts humanities 3 c requirement

3311.1(.2) Advanced Oral and Written German I

Prerequisite: GRMN 2202.1(.2) or equivalent.

By combining readings, interactive tasks, and guided projects, this course offers students opportunities to expand and refine their ability to comprehend and to communicate effectively in German.

3312.1(.2) Advanced Oral and Written German II

Prerequisite: GRMN 3311.1(.2) or equivalent.

This course is a continuation of German 3311.1(.2).

3336.2 International Field Study in Cologne

Prerequisite: Prior or simultaneous enrolment in a 3000- or 4000-level German course, OR HIST 4508.1(.2).

This field study course enables students to examine insitu various aspects of German cultural history as exemplified by and in the city of Cologne. Following orientation classes on the significant position of Cologne in German culture and history, the students will depart for Germany where they will take part in educational tours of major cultural venues in and around Cologne. Further educational excursions may include a rococo palace in Brühl and Beethoven's house and the Museum of Contemporary German History in Bonn.

***4401.1(2) Post-1945 German Literature**

Prerequisite: GRMN 2202.1(2) with a minimum grade of C.

The study of the significant prose works and plays in German literature from 1945 to 1989. This course is taught in German.

4402.1(2) Contemporary Literature and Culture in German

Prerequisite: GRMN 2202.1(2) with a minimum grade of C

The study of significant aspects of German literature and culture from the fall of the Berlin Wall in 1989 to the present day. This course is taught in German.

4826.1(2) – 4849.1(2) Special Topics

Prerequisite: permission of the instructor.

This course is for students who have a good working knowledge of German, a special interest in German literature, and who want to study a particular area through directed, independent readings.

4876.1(2) – 4899.1(2) Independent Study

Prerequisite: permission of instructor prior to registration.

This course is for students who have a good working knowledge of German, a special interest in German literature, and who want to study a particular author through directed, independent readings.

Global Business Management

This program is administered by the Department of Management.

Committee on Global Business Management

P. Fitzgerald, Coordinator	Management
T. Charles	Management Science/ Environmental Studies
H. Das, J. Chamard	Management
A. Mukhopadhyay	Economics
H. Ogden	Marketing
J. Power	Accounting

Globalization has been a reality for Canadian businesses large and small for some time now. In order to survive, even small companies often have to compete directly with large international organizations. Most organizations are much more diverse than they were even a year or two ago. Many of our graduates will no doubt experience rewarding international placements and foreign travel as their careers develop. It will be unusual to work in firms without employees and clients who originate from different corners of the world. In order to develop synergy in this new business environment, it will be necessary to learn to work together, to communicate effectively, and to manage as a unit people coming from very different experiences, cultures, values, and expectations.

If managers wish to remain competitive, they must learn to adapt psychologically, to communicate effectively, and interact socially with other cultures. International managers are expected to speak more than one foreign language. The Bachelor of Commerce in Global Business Management offers the opportunity to study the skills essential for a successful international career.

Years 1, 2 are outlined in Section 3 of this academic calendar.

Note: In addition to all other requirements for the major, a minimum GPA of 2.2 is required in: ACCT 3357, MKTG 3375, FINA 4476, MGMT 4488, and the geographic and cognate electives completed in fulfillment of this major. (Courses included in the GPA calculation are indicated by *).

Year 3

- ACCT 3332.1(2) Planning and Control – See Note (e)
- *ACCT 3357.1(2) International Accounting
- FINA 2360.1(2) Business Finance I
- FINA 3361.1(2) Business Finance II
- *MKTG 3375.1(2) International Marketing
- MGMT 3480.1(2) Ethical Responsibilities in Organizations
- Language electives [six (6) credit hours] (same language as Year 4 elective)
- *Geographic electives [six (6) credit hours] [see note (a) below]

Year 4

- *FINA 4476.1(2) International Financial Management
- *MGMT 4488.1(2) International Business Management
- MGMT 4489.1(2) Strategic Management
- Language electives [six (6) credit hours] (same language as Year 3 elective)
- *Geographic electives [six (6) credit hours] [see note (a) below]
- *Cognate electives [six (6) credit hours] [see note (b) below]
- Free electives [three (3) credit hours]

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Notes: (a) Electives must be selected from the approved lists below for any of the following regions: Africa, Americas, Asia, or Europe.

(b) If ECON 3310.1(.2), ECON 3312.1(.2), ECON 3315.1(.2), ECON 3365.1(.2), ECON 4406.1(.2), ECON 4410.1(.2), ECON 4412.1(.2), ECON 4413.1(.2), or ECON 4414.1(.2) was used to satisfy the economics elective(s) in Year 2, the number of free electives is increased by three (3) credit hours.

(c) In cases where a student is fluent in two languages, other courses relevant to the major may be substituted for the language credits with the approval of the Program Coordinator.

(d) Notwithstanding the course substitutions possible in notes (b) and (c), all students must complete at least twenty-four (24) credit hours of non-commerce electives.

(e) Students cannot receive credit for both ACCT 3332 and 3333.

Approved Electives Offered at Saint Mary's University

Africa

HIST 2316.1(.2)	Africa in the 19th Century: Intrusion and Conquest
HIST 2317.1(.2)	Africa in the 20th Century: Colonialism and Independence
HIST 2322.0	South Africa
RELS 2323.1(.2)	The Islamic Religious Tradition

Americas

ANTH 2316.1(.2)	Native Peoples of Canada
ACST 2311.1(.2)	The Culture of Atlantic Canada I
ACST 3310.0	The Atlantic Fisheries
ACST 3312.1(.2)	The Culture of Atlantic Canada II
ACST 3321.1(.2)	African Nova Scotia Culture
ECON 3322.1(.2)	Canadian Economic Issues
ECON 3324.1(.2)	The Atlantic Economy
ECON 3325.1(.2)	Atlantic Economy Seminar
FREN 3312.1(.2)	Introduction to Quebec Culture
GEOG 2310.1(.2)	Geography of Canada: Overview
GEOG 3340.1(.2)	Geography of Nova Scotia
HIST 1252.1(.2)	Canada to Confederation
HIST 1253.1(.2)	Canada: Confederation to Present
HIST 1255.0	The United States: 1865 to the Present
HIST 2318.0	The United States in the 20th Century
HIST 2319.0	Canada-American Relations
HIST 2320.0	The Atlantic Provinces and New England
HIST 2327.1(.2)	France and New France
HIST 2340.0	History of Atlantic Provinces
HIST 2375.0	Modern Latin America
HIST 3100.1(.2)	Canadian Women
HIST 3401.1(.2)	The Invention of Canada
IDST 4421.1(.2)	Special Topics in Development Studies
MGMT 4493.1(.2)	Business-Government Relations in Canada
POLI 2312.1(.2)	American Government
POLI 2315.0	Canadian Foreign Policy
POLI 3440.0	Canadian-American Relations
RELS 3355.1(.2)	Religion and Social Issues in Canada

RELS 3358.1(.2)	Religious Diversity in Canada
SPAN 3304.1(.2)	Americas: The Changing Face of Latin America
SPAN 3305.1(.2)	Contemporary Spanish Society

Asia

ANTH 2311.1(.2)	Ethnology: Melanesia
ANTH 2326.1(.2)	Ethnology: East Asia
ANTH 2327.1(.2)	Ethnology: Japan
ASNT 3300.1(.2)	Multidisciplinary Study of Asia
ASNT 2303.1(.2)	Contemporary Japan: Institutions and Culture
ASNT 2305.1(.2)	Contemporary China: Institutions and Culture
ASNT 3302.1(.2)	Japan in Film and Literature
ASNT 3310.1(.2)	Chinese Film and Literature
ASNT 4400.1(.2)	Seminar in Asian Studies
ASNT 3407.0	Study Abroad: Japan
ASNT 3408.0	Study Abroad: China
ECON 3327.1(.2)	Asia Pacific Economics
GEOG 3360.1(.2)	Geography of Japan
GEOG 3380.1(.2)	Geography of China
HIST 1222.1(.2)	History of Asia: East Asia
HIST 1223.1(.2)	History of Asia: South and Southeast Asia
HIST 2354.1(.2)	Japan before 1800
HIST 2358.1(.2)	Mughal to Modern India: 500 Years of History
HIST 2368.1(.2)	Japan since 1800
HIST 2381.1(.2)	China before 1800
HIST 2372.1(.2)	China since 1800
HIST 2394.1(.2)	The Emergence of Modern Korea
IDST 4420.1(.2)	Special Topics in Development Studies
POLI 2314.1(.2)	Politics of the Developing Areas
RELS 2323.1(.2)	The Islamic Religious Tradition
RELS 2326.1(.2)	The Hindu Religious Tradition
RELS 2327.1(.2)	The Buddhist Religious Tradition
RELS 2340.1(.2)	Japanese Religious Traditions
RELS 2345.1(.2)	Chinese Religious Traditions
RELS 3372.1(.2)	Islamic Cultures and Civilizations
SOCI/WMST 4447.1(.2)	Work and the Empowerment of Women in India

Europe

FREN 3310.1(.2)	Introduction to French Culture
GEOG 2390.1(.2)	Geography of Ireland
GRMN 3306.1(.2)	German Culture and Civilization
GRMN 3307.1(.2)	Introduction to German Literature
GRMN 3308.1(.2)	Modern German Literature
HIST 2303.0	Tudor and Stuart Britain
HIST 2304.0	Europe 1848-1989
HIST 2336.1(.2)	Revolution, Reform and Respectability: Britain 1688-1870
HIST 2397.1(.2)	The Lingering Death of Imperial Britain: 1870-1982
HIST 3405.1(.2)	Society and Culture in Early Modern Europe
HIST 3460.1(.2)	Issues in Modern Irish History
POLI 3457.0	Politics and Government in Ireland

Cognate Electives

ANTH 1290.1(.2)	Introduction to Human Communication
ANTH 2401.1(.2)	Anthropology of Work
ANTH 3304.1(.2)	Egalitarian Societies

ANTH 3305.1(.2)	Chiefdoms	POLI 2305.0	International Relations
ANTH 3309.1(.2)	Peasant Society and Culture	POLI 3321.1(.2)	International Organization
ANTH 3329.1(.2)	The Arctic Culture Area	POLI 3322.1(.2)	Global Political Economy
ANTH 3338.1(.2)	Medicine as Culture	POLI 2330.0	Introduction to Public Administration
ANTH 3339.1(.2)	Medicine in Culture	POLI 3418.1(.2)	International Law
ANTH 4475.1(.2)	Seminar in Anthropology	POLI 2445.0	Introduction to Public Policy
ECON 3310.1(.2)	Development Economics	RELS 1220.1(.2)	Introduction to Comparative Religions, I
ECON 3312.1(.2)	History of Economic Thought	RELS 1221.1(.2)	Introduction to Comparative Religions, II
ECON 3315.1(.2)	Comparative Economic Systems	RELS 2341.1(.2)	Violence and Non-Violence: East and West
ECON 3365.1(.2)	International Economic Issues	RELS 2347.1(.2)	Ecology and Religion
ECON 4410.1(.2)	Issues in Economic Development	SOCI 3385.1(.2)/IDST 4485.1(.2)	Problems of Development
ECON 4413.1(.2)	International Macroeconomics and Finance	SOCI/IDST 3386.1(.2)	Sociology of Developing Societies
ECON 4414.1(.2)	International Trade	SOCI/WMST 3387.1(.2)	Women and Development
GEOG 1100.1(.2)	Global Perspectives on Land and Life	SOCI 3391.0	Rural Sociology
GEOG 1203.1(.2)	Physical Geography: Global Patterns	SOCI 4420.0	Comparative Regional Development
GEOG 2200.1(.2)	Fundamentals of Physical Geography	SOCI/IDST/WMST 4422.1(.2)	Gender and Development: Theory and Method
GEOG 2302.0	The Geography of World Affairs	SOCI/IDST/WMST 4423.1(.2)	Gender and Development: Policy and Practice
GEOG 3321.1(.2)	Geography of Manufacturing	SOCI 4425.0	Corporate Power
PHIL 2305.1(.2)	Environmental Ethics		
PHIL 2328.1(.2)	Philosophy of Mind: Contemporary Issues		
PHIL 2325.1(.2)	Philosophical Issues in International Development		

**Other on-campus courses may meet these requirements. In order to do so they must be approved by the coordinator of the program and this can be done only with the submission of appropriate course outlines.

*Courses may be taken at other institutions subject to the approval of the Program Coordinator and the Dean of Sobey School of Business.

History (HIST)

Chairperson, Associate Professor	B. Sewell
Professors	J. Morrison, J. Reid, R. Twomey
Associate Professors	N. Neatby, T. Stretton, M. Vance
Assistant Professors	R. Barbosa, B. Brown, K. Freeman, L. Warner
Adjunct Professors	L. Codignola, R. Perrins
Professors Emeriti	O. Carrigan, C. Howell, J. MacCormack, G.F. Young

Departmental Policy

To obtain a **major** in history, students must complete at least forty-two (42) credit hours in history, as follows:

- a. six (6) credit hours but no more than twelve (12) credit hours at the 1000 level;
- b. History 2370.1(.2) The Discipline of History;
- c. the remaining credit hours must be at the 2000 or 3000 level or above; and
- d. at least six (6) credit hours at the 4000 level.

Note: A minimum cumulative grade point average of 2.00 is required for courses designated for a major (see the general regulations concerning Arts Degree requirements).

All prospective honours students should refer to the section of this *Calendar* pertaining to honours degrees and apply to the Registrar for enrolment in that program after completing eighteen (18) credit hours or more of History courses.

For an **honours** degree, students must satisfy the requirements of the major program. They must also complete:

- a. six (6) additional credit hours in history at the 2000-3000 level;
- b. twelve (12) additional credit hours at the 4000 level, and
- c. HIST 4500.0 (the Honours Seminar). The program of each student must be approved by the Department.

Note: To qualify for the honours program, students must obtain and maintain a cumulative grade point average of 3.0 (see the general regulations governing honours degrees).

All students majoring in history are strongly advised to take twelve (12) credit hours in a foreign language. In the case of students concentrating in Canadian history, French is specified as the recommended language.

To **minor** in History, students are expected to follow the general requirements for a minor as outlined in Faculty of Arts Regulation 8, Section 3 of this *Calendar*.

To obtain a **concentration** in History in partial fulfillment of the B.A. General degree (i.e., one with Double Arts Concentrations), a minimum of twenty-four (24) credit hours in HIST is required with 18 or more credit hours at the 2000 level or above; at least 3 credit hours of which must be taken at the 4000 level; also a minimum grade point average of 2.00. Further details are available from the chairperson.

Cross-Listed Courses

Certain courses offered by the Departments of Modern Languages and Classics, Anthropology, and Religious Studies may, in special circumstances, be cross-listed and counted in a student's History concentration. In such cases, the student must obtain the Department's permission.

Graduate Students

Graduate students should refer to the material entitled "Master of Arts in History Degree," in the Graduate Academic *Calendar*.

General Course Description

- a. History courses numbered at the 1000 level are survey courses open to students with no university credits in the discipline. They are normally lecture courses; some combine lectures with small tutorial group meetings.
- b. In order to enroll in a 2000 or 3000 level-course, a student must have six (6) credit hours in history, or at least thirty (30) credit hours in university courses, or the permission of the Chairperson. 2000 and 3000-level courses are usually structured to include both lectures and seminars.
- c. History courses at the 4000 level are normally seminar courses designed for advanced work by history majors and honours students in Year 2 and above.
- d. With regard to renumbered or restructured courses, students are advised that they are not eligible to take a course for credit if they already have a credit for a comparable course, even if that course was taken at a different level.

Course Descriptions

1201.0 Civilization in the West

This course is designed to explore the origins and development of the characteristic political, legal, and cultural institutions of Western Civilization and its impact on other cultures.

1203.0 The Twentieth Century

An historical approach to the major problems of our time. Emphasis will be placed upon the backgrounds to World Wars I and II, the emergence of the United States as a world power, the Communist Revolution and its impact, and the problems of industrial society.

1208.0 Global History: 1450 to the Present

The integrated nature of the modern world is taken for granted. How did we arrive at this point? Global history provides a context for understanding this development as we move into the 21st century. This course will examine the initial links developed between the world's civilizations during the 15th century and will trace factors which led to contemporary global interaction and interdependence.

1215.1(2) Ireland: An Introduction [IRST 1215.1(2)]

1222.1(2) History of Asia: East Asia

This introductory course explores historical change and social transformation in China, Japan, Korea, and Vietnam from antiquity to the present. Emphasizing especially the Chinese and Japanese experiences, the class will examine some of the more salient social, intellectual, political, and economic features apparent in the heritage of these societies as well as some of the ways each society has influenced the others.

Note: No previous study of Asia is required but students who have taken HIST 1209.0 cannot receive another credit for this course.

1223.1(2) History of Asia: South and Southeast Asia

This course will provide an introduction to South and Southeast Asia from 1000 A.D. to the present. Major topics will include the spread of Islam, Buddhism, Hinduism and Christianity throughout the region, trade and commerce on the Indian Ocean, insular and mainland political developments, intra and inter regional relations (East and West), the ebb and flow of European imperialism and the impact of decolonization.

Note: No previous study of South or Southeast Asia is required but students who have taken HIST 2363.1(2), 2364.1(2) or 2358.1(2) cannot receive another credit for this course.

1252.1(2) Canada to Confederation

This course will examine early Canadian history from the time of the first native-European contact up to Confederation. Emphasis will be placed on the development of New France/Lower Canada, Upper Canada, and the West. Political, social, and economic themes will be considered.

1253.1(2) Canada: Confederation to the Present

This course will examine the shape of political culture in modern Canada; the debate between the advocates of the nation state and of federalism; and the impact of industrialization, regionalism, war, and depression on that debate.

1254.1.(2) The United States to 1877

This course deals primarily with the major themes of American history from the colonial period to the Civil War and Reconstruction; the origins and nature of American government, politics, and society; the origins of slavery and racism; and expansion. These themes will be approached through a study of the major groups and events in American history (the New England Puritans, the Founding Fathers, Southern slaveholders, the American Revolution, the Civil War), as well as major political figures from Thomas Jefferson to Abraham Lincoln.

1255.1.(2) The United States: 1865 to the Present

This course will examine American history from 1865 through the present day. Designed primarily as an introduction to the history of the United States, it will acquaint students with important events and documents of the American past. Lectures will explore such themes as industrialization, urbanization, immigration, foreign relations, and the ascendancy of the American nation-state, as well as the effects of race, class, gender, ethnicity, and region upon these larger processes. Using a wide variety of primary texts from the Civil War through the present day - including political speeches, films, and advertisements - students will explore modern American history and consider how historians have come to understand the past.

1260.1.(2) History of the Americas

This is an introductory survey of the history of the Americas, focusing on the era of European colonization and subsequent independence movements. This course is designed to help students understand the different historical experiences of the societies of this region and the ramifications of these differences for the present time.

IN ORDER TO ENROLL IN THE FOLLOWING COURSES A STUDENT MUST HAVE SIX (6) CREDIT HOURS IN HISTORY, OR AT LEAST THIRTY (30) CREDIT HOURS OF UNIVERSITY COURSES, OR THE PERMISSION OF THE CHAIRPERSON.

2303.0 Tudor and Stuart Britain

This lecture and seminar course provides a broad survey of the social, economic, cultural and political histories of Britain between 1485 and 1714, with a focus on original sources and images and how historians interpret them. It will examine how this small island nation on the fringes of Europe began its transformation into a dominant world power, while experiencing religious reformation, invasion threats, civil war, republican experiment, and the execution of one king and the forced exile of another. It will also examine some of the remarkable personalities of the age, from Mary Tudor and Queen Elizabeth to Christopher Marlowe, William Shakespeare, and Isaac Newton.

2316.1.(2) Africa in the 19th Century: Intrusion and Conquest

This course will outline the nature, values and history of traditional African societies; it will examine the intrusion, partition and conquest of those societies by Europeans in the 'Scramble for Africa'.

2317.1.(2) Africa in the 20th Century: Colonialism and Independence

An examination of the activities of the colonial powers in governing the territories and peoples which they acquired in the 'Scramble'. The course will also study the reactions of Africans to colonialism and the factors which led to independence.

2318.0 The United States in the 20th Century

Designed for students with six (6) credit hours in a university course in history, this course will look closely at the past American century. It will consider the rise of the United States as a political and cultural force, and examine such large-scale movements as progressivism, the Cold War, the ascendancy of the Presidency, national government, and mass culture. It will closely examine the relationship of individuals' lived experience to these larger social and political movements.

2322.0 South Africa

A study of the complex relationships and conflicts arising from different cultures, religions and skin colours from the 17th century to the apartheid state of the mid-20th century.

2327.1.(2) France and New France

What brought the French to North America? This course examines French perception of the New World, their shifting attitudes to the indigenous peoples, to the opportunities for settlement, to religious conversion, and to commercial exploitation. Through the examples of Acadia and New France, the course will examine the issues of culture and identify how these settlements forged identities, as well as how these colonies influenced ideas back in France.

2336.1.(2) Revolution, Reform and Respectability: Britain 1688 - 1870

The period examined in this course is not only associated with the creation of the British state, but also its rise, by the middle of the 19th century, to the leading world power. Yet recent literature has demonstrated that this development was accompanied by profound social and economic transformations that were highly contested. In order to appreciate the nature of these struggles, this course will cover such diverse topics as the impact of overseas expansion, warfare, agricultural and industrial change, migration, political radicalism, and 19th-century Victorian morality.

2340.0 History of the Atlantic Provinces

Commencing with the earliest European contact with the region, this course will concentrate on the period after the beginning of permanent settlement. Special emphasis will be given to Nova Scotia as an area of severe clashes between the Indian and European cultures, of intense English-French rivalry, and later of the problems in adapting traditional British models of government, settlement, and society to a colonial region.

2346.1.(2) Black Heritage in Maritime Canada

This course will provide an historical survey of the Black population in Maritime Canada, its origins, socio-economic conditions, and evolution to the present.

2350.0 History of Greece [CLAS 3303.0]

2351.0 History of Rome [CLAS 3304.0]

2354.1(.2) Japan before 1800

After a brief survey of prehistoric Japan, this course explores two formative eras in Japanese history: the era of courtly (or aristocratic) society and the era of the samurai (warriors). Although the course proceeds chronologically, in order to provide students with a more analytical understanding the course employs a topical approach, considering political, economic, intellectual, and social issues in each era. No previous study of Japan is required.

2358.1(.2) Mughal to Modern India: 500 Years of History

India is the largest democracy in the world. Over the last half millennium its history has been marked by architectural and intellectual achievement, conquest (notably by Islam and the West), the rise of nationalism in the late 19th century and the early 20th century, and the passive resistance campaign by Gandhi that led eventually to independence and freedom. This course will explore these and other aspects of Indian history and provide an understanding of India's role in the modern world.

2364.1(.2) Modern Southeast Asia: Colonialism to Independence

The course examines the vibrant and at times turbulent states of Southeast Asia. It examines European conquest and Asian resistance and looks in detail at European colonial administration and American and Japanese expansion. Finally, it accounts for the rise of various nationalist movements and the resultant nation-states in the region.

2368.1(.2) Japan since 1800

After a brief survey of the Tokugawa Shogunate, this course examines the evolution of Japanese society in the imperial and postwar periods. While chronological, the course follows a topical approach, considering political, economic, intellectual, and social change within the early modern, modern, and contemporary eras. No previous study of Japan is required, though HIST 1209.0, 1222.1 (.2) or 2354.1 (.2) are recommended.

2370.1(.2) The Discipline of History

This course addresses the nature of historical study, that is, the theories, methods, principles and problems associated with the discipline of history. It examines the following basic areas of historical inquiry: the purposes of historical study; the relevance of the past; the relationship between the past and present; the nature and validity of historical knowledge; the relationship of history to other disciplines; and the current state of historical explanations and of historical explanation as such.

Note: Students who have already earned credit for HIS 400.0 or HIST 3400.0 will not be permitted to enroll in this course.

2372.1(.2) China since 1800

This course explores the collapse of imperial China and the ensuing efforts to renew Chinese society. While chronological, the course follows a topical approach, considering the dynamics of political, economic, intellectual, and social change within the Late Imperial, Republican, and post-1949 eras. No previous study of China is required, though History 1209.0, 1222.1(.2), or 2381.1(.2) are recommended.

2375.0 Modern Latin America

A survey of the emergence and historical development of the Latin American nations since their independence from Spain and Portugal in the early 19th century. The course will focus especially on the political, economic and social evolution of the more populous nations.

2376.1(.2) Special Topics: U.S. History

Further details are available from the Chairperson of the Department.

2377.1(.2)-2379.1(.2) Selected Topics in History

The subject matter of particular three (3) credit hour courses will be announced from time to time. They will cover aspects of history in one or more of the major geographical areas of North America, Europe, Africa and Asia. The topics to be examined will be determined by the instructor.

2381.1(.2) China before 1800

This course explores roughly four millennia of Chinese history, from the distant origins of Chinese society to its zenith during the Qing Dynasty. Divided into three eras - Ancient, Early Imperial, and Late Imperial - the class follows a topical approach that considers the dynamics of political, economic, intellectual, and social change within each era. No previous study of China is required.

2394.1(.2) The Emergence of Modern Korea

After a brief survey of the rise of Korean civilization since antiquity, this course examines three turbulent eras in Korean history: (1) the long era of gradual change during the Yi dynasty that culminated in confrontation with imperialist powers, (2) the half-century of Japanese domination, and (3) the era of civil war and continuing division. Although the course proceeds chronologically, in order to provide students with a more analytical understanding the course employs a topical approach, considering political, economic, intellectual, and social issues in each era.

2397.1(.2) The Lingering Death of Imperial Britain, 1870-1982

Since the late nineteenth century, many Britons have been preoccupied with notions of imperial, economic, and social decline. This course will test the validity of these perceptions by surveying important changes which have affected British society from the height of British imperial power to the Falklands War. Some topics to be explored are: "new imperialism", the women's suffrage movement, decolonization, deindustrialization, mass unemployment, Labour socialism, Thatcherism, the impact of two world wars, and the rise of Celtic (Irish, Scottish, and Welsh) nationalisms.

2451.1(.2) Greek History I: From Minos to the Medes
[CLAS 2451.1(.2)]**2452.1(.2) Greek History II: The Golden Age of Greece**
[CLAS 2452.1(.2)]**2453.1(.2) Republic and Revolution: Roman History I**
[CLAS 2453.1(.2)]**2454.1(.2) Bloody Ceasars: Roman History II**
[CLAS 2454.1(.2)]**3100.1(.2) Canadian Women**

This course offers a survey of the historical experiences, status and activities of Canadian women in all their diversity from 1900 to the present. Topics will include women's economically valuable work in the household and the paid labour force, and family life and sexuality. Special emphasis will be placed on women's struggles for economic equality and full political and social participation in Canadian society

3401.0 American Social and Intellectual History

A study of the major social and intellectual developments in American history from the colonial era to the present. Special emphasis on the relationship of ideas to society and social change, on slavery and racism, and on class, ideology, and society, especially in the 18th and 19th centuries.

3403.1(.2) The Invention of Canada

Canada has been imagined in a number of ways throughout its history: as a storehouse of staples commodities, a raucous frontier society, a mature colony that evolved peacefully into nationhood, as a bicultural and/or multicultural society, a land of regions, a cultural appendage of the United States, and as a peacemaking middle power. How have these images been created, and whose interests did they serve? To what extent have these popular representations incorporated an appreciation of class, ethnic, gender, and racial differences? This course will look at the invention of national images from the 17th to the 20th century, using anthropological, architectural, literary, artistic, and cultural sources.

3405.1(.2) Society and Culture in Early Modern Europe

This course investigates the people, culture, and regions of Europe (England, France, Germany, Italy, Spain, and Holland) from the Renaissance to the late 17th century. Through topics such as witchcraft and literacy, students explore a variety of primary sources including painting, architecture, woodcuts, popular ballads, and literature.

3415.0 The Western Family: Sex, Marriage and Love, 1400-1800

This course considers the origins of the modern family and traces the shifts in attitude to celibacy, marriage, sexuality, adultery, love, childhood and death from Renaissance Italy through to the Reformation, the rise of the romantic novel, the French Revolution, and the Industrial Revolution. Students will read or be exposed to primary sources such as letters, ballads, diaries, paintings, woodcuts, and literature.

HIST 3417.1(.2) War and Memory in the Twentieth Century

This course will explore the experience of modern war and the ways in which various twentieth century conflicts have been remembered socially and culturally. The topics covered include the First and Second World Wars, the Holocaust, the Algerian War, the Vietnam War, and the Balkan Wars. The focus of our study of these events will be on their impact on the values, attitudes and collective memory of European and North American societies.

3420.1(.2) History of Sport and Leisure in the Modern World

This course looks at the development of sport in the modern world, its increasing specialization and bureaucratization, its commercialization, its ritualistic character, and its connection to issues of race, gender, ethnicity, and class. Although the focus is international, the course will draw heavily on Canadian, American, and British examples.

3450.1(.2) Film and History

Increasingly, historians have to make use of moving images as source material for their histories, while much of the public perception of the past is being shaped by documentaries and feature films. The first half of this course will examine the strengths and weaknesses of using moving images as historical documents and the second-half will examine the role of film in interpreting the past. The goal of the course is to provide students with the ability to critically "employ" and "read" film for the discipline of History. Films for study will be selected by the instructor.

3460.1(.2) Issues in Modern Irish History

[IRST 3460.1(.2)]

Prerequisite: none

This course will examine a range of topics that have been the focus of debate in Irish History. The issues to be explored will be selected by the instructor and may include such topics as: the history of the Irish Plantations, the affects of the Penal Laws, the consequences of the 1798 Rebellion, the rise of Irish Nationalism, the causes of the Great Famine, the consequences of mass Irish Emigration, the position of women in Irish society, and the significance of the Easter Rising. In addition to providing an understanding of some of the major issues in Modern Irish History, the course will also provide an overview of historical change in Ireland from the sixteenth to the twentieth centuries.

3490.1(.2) - 3496.1(.2); 3497.0 - 3499.0 Thematic Selected Topics

The subject matter of these courses will be announced from time to time. They will focus on particular historical themes and/or specific chronological periods. The topics to be examined will be determined by the course instructor.

4000-LEVEL COURSES ARE DESIGNED FOR THE ADVANCED STUDY OF HISTORY. STUDENTS SHOULD HAVE EXTENSIVE UNIVERSITY EXPERIENCE BEFORE THEY ATTEMPT THESE COURSES.

4500.0 The Honours Seminar

Prerequisite: admission to the final year of the honours program.

As part of this seminar, history honours students are required to submit and defend a substantial essay to be selected and prepared in conjunction with a faculty advisor.

4501.0 Public History

Prerequisite: Students are required to have completed 24 credit hours in History with an average of 3.3, or obtain permission from the instructor.

This course introduces students both to the field of public history and to the application of history and historical methods in a variety of workplace settings. Public history, which involves the practices and presentation of history outside academia, involves a wide range of practitioners including historians, museum curators, film makers, researchers, journalists, and archivists. This course will examine the evolution of public history as a discipline since the 1960s and focus on the presentation of history in various films, exhibits and historic sites. The course content will be primarily Canadian and American examining questions about ethics, standards and audience.

The course will have both a classroom and workplace component. Seminar three hours per week plus successful completion of eight hours weekly of mentored volunteer work in a public history work setting.

4508.1(.2) Seminar in Intellectual and Cultural History

This interdisciplinary seminar will adopt a thematic approach in order to explore ideas in history across borders, cultures and centuries. Intended for students in their graduating year, topics for exploration may include the media, the law, liberty, the family, gender and/or sexuality.

4511.0 Seminar in East Asian History

Prerequisite: six (6) credit hours in East Asian History.

This seminar course will examine selected topics in the history of East Asia. The topics to be studied will be chosen by the instructor. As part of the course requirements, students will write a major research paper and present it to the seminar.

4519.0 Seminar in Modern European History

A seminar on selected topics in the history of modern Europe, 1800 to present, intended for history majors in their graduating year, honours, and graduate students. Topics to be examined will be selected by the instructor; students will be required to research and write a major paper on the topic selected, and present it to the seminar for discussion and criticism.

4522.0 Seminar in American History

A seminar on American history from the origins to the present emphasizing major problems in historical interpretation. Special consideration to the Revolutionary and Early Republican eras, the American and transatlantic radical traditions, and the Age of Revolutions.

4525.0 Seminar in Irish and Scottish Emigration [IRST 5525.0]

This course provides students with an understanding of the relationship between emigration and social change within Ireland and Scotland, from about 1700 to 1900. The focus will be on emigration to North America, but within that broad subject area students will examine the issues of religion, crime, popular protest, gender roles, agricultural change, and industrialization in relation to the movement overseas. The seminar will meet on a weekly basis and students will be expected to give presentations based on assigned readings and one monograph analysis. In addition, a formal presentation of a research paper will be required in the second semester.

4527.1(.2) Biography and History

This course will examine the relationship between biography and history, beginning with consideration of how far the essentials of historical methodology can be followed in biographical study. A variety of forms of biography will then be examined, including private and public approaches to biography, autobiography, and popular biography. Specific biographical subjects will be explored in detail as case studies. The central question considered throughout will be whether biography, in any of its forms, can be considered either as a form of historical enquiry or as a valid historical source.

4535.0 Northeastern North America, 1480-1720

Prerequisite: enrolment in the major or honours program in History or permission of instructor.

This course will examine the history of native and Euro-American societies, and the interaction between them, in the era of early contact and colonization. "Northeastern North America" will be defined to include the territories known to Europeans by 1720 as Newfoundland, Acadia/Nova Scotia, New England, New York and Canada.

4560.0 History and Society: The Atlantic Provinces Seminar

Prerequisite: honours or graduate standing.

This course, intended for masters students in Atlantic Canada Studies and honours and masters students in history, addresses the nature of historical inquiry into issues relating to the social and economic history of the Atlantic region. Topics to be covered will include regional culture, gender and race, the family, processes of development and underdevelopment, scientism and professionalization, health, recreation and sport. Students who have completed HIS 560.0 are not eligible to enroll in ACST 6660.0.

4570.1(.2) - 4574.1(.2); 4575.0 Selected Topics Seminar

As with other selected topics courses, the subject matter of these seminars will be announced from time to time. Topics

to be examined will be determined by the course instructor. Seminars concentrate on group discussion and the presentation of research papers.

4589.1(.2) Reading Course in History - Selected Topics in Irish History

Prerequisite: permission of instructor.

An independent reading course in selected topics in Irish history, primarily social, political, and intellectual history in the 18th and 19th centuries. Topics include: Irish popular and radical movements and ideas in a transatlantic context; Ireland in the Age of the Democratic Revolutions; the Irish in America and Canada; Irish political institutions and political culture. Readings, consultations, and final paper.

4595.1(.2)-4599.1(.2) Reading Courses in History

Prerequisite: permission of instructor.

Each reading course will be organized by the instructor(s) involved. In general, each course will be centered round a specific theme, and the students will be expected, through their reading, to be familiar with all aspects of the chosen area. Examinations and/or papers will be required at the end of each course.

Human Resource Management

Management Chairperson R. Summers
Psychology Chairperson V. Catano

Students may pursue a certificate in Human Resource Management through the Faculty of Arts, Business or Science. The Certificate may be taken as part of a degree or as a stand-alone program. Students may enroll in a Certificate in Human Resource Management with either Management or Psychology options. The regulations for the different routes follow.

The certificate has been offered for over 30 years and has been developed in cooperation with professionals in Human Resource Management. It will prepare students for the Certified Human Resource Professional (CHRP) designation. Students should be aware that as of 2011, a bachelor's degree will be one of the requirements for the CHRP designation

Sobey School of Business

Bachelor of Commerce with Human Resource Management and Industrial Relations Major

Upon completion of 45 credit hours, Commerce students with a cumulative grade point average of 2.0 may elect to declare a major in Human Resource Management and Industrial Relations. This major is administered by the Department of Management. Successful completion of the major will automatically fulfill the requirements for the Certificate.

Year 1

CISY 1225 Introduction to Computer Applications
ECON 1201 Principles of Economics: Micro
ECON 1202 Principles of Economics: Macro
ENGL 1205 Introduction to Literature
MGMT 1281 Introduction to Business Management
MGSC 1205 Quantitative Methods I
MGSC 1206 Quantitative Methods II
Nine (9) credit hours in non-Commerce electives

Year 2

ACCT 2241 Introductory Financial Accounting
ACCT 2242 Introductory Managerial Accounting
CMLW 2201 Legal Aspects of Business - Part I
COMM 2293 Communications
MGSC 2207 Introductory Statistics
MGMT 2383 Organizational Behaviour Micro
MGMT 2384 Organizational Behaviour Macro
MKTG 2270 Introduction to Marketing
ECON 3340 Human Resource Economics
Three (3) credit hours in non-Commerce electives

Year 3

*ACCT 3332 Planning and Control
FINA 2360 Business Finance I
FINA 3361 Business Finance II
*MGMT 3385 Human Resource Management
*MGMT 3386 Industrial Relations
MGMT 3480 Ethical Responsibilities of Organizations
Twelve (12) credit hours in free electives

Year 4

*MGMT 4482 Staffing and Selection
*MGMT 4483 Management Skills I
*MGMT 4485 Wage and Salary Administration
*MGMT 4486 Training and Development
MGMT 4489 Strategic Management
Twelve (12) credit hours in non-Commerce electives
Three (3) credit hours in free electives

Note: A minimum GPA of 2.2 is required in ACCT 3332, MGMT 2383, MGMT 2384, MGMT 3385, MGMT 3386, MGMT 4482, MGMT4483, MGMT 4485 and MGMT 4486 (as indicated above by *).

Certificate in Human Resource Management - Management Option

Students may complete the Certificate alone. Students with courses from previous post-secondary study will be assessed according to the advanced standing procedures of the University (Academic Regulation 20). To be awarded the Certificate, at least twelve (12) credit hours of the compulsory courses and twelve (12) credit hours from the

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electives must be completed at Saint Mary's University. Credit will not automatically be recognized for university courses completed more than ten (10) years prior to the students return to university study.

A minimum cumulative grade point average of at least 2.00 in the Human Resource Management Certificate Program courses is required for graduation with the Certificate.

Students must complete the following 24 credit hours of core courses:

- MGMT 1281 Introduction to Business Management
- MGMT 2383 Micro Organizational Behavior
- MGMT 2384 Macro Organizational Behavior
- MGMT 3385 Human Resource Management
- MGMT 3386 Industrial Relations
- MGMT 4482 Staffing & Selection
- MGMT 4485 Wage & Salary Administration
- MGMT 4486 Training and Development

Students must also complete 24 credit hours (8 courses) from the following:

- ACCT 2241 Introductory Financial Accounting
- ACCT 2242 Introductory Managerial Accounting
- CMLW 2201 Legal Aspects of Business - Part I
- CISO 1225 Introduction to Computer Applications
- COMM 2293 Communications
- COMM 3394 Oral Communications and Presentation Techniques
- ECON 1201 Principles of Economics: Micro
- ECON 1202 Principles of Economics: Macro
- ECON 3340 Human Resource Economics
- ECON 3341 Labour Economics
- MGMT 3388 Business and Society
- MGMT 3392 Occupational Health and Safety
- MGMT 4481 Organization Theory: Structure Process, Analysis & Design
- MGMT 4483 Management Skills I
- MGMT 4488 International Business Management
- MGMT 4493 Business-Government Relations in Canada
- MGMT 4496 Collective Bargaining
- MGMT 4497 Issues in Industrial Relations
- MGMT 4499 Senior Management Perspectives
- PSYC 3309 Human Factors and Performance
- *PSYC 3399 Special Topics in Psychology
- PSYC 4417 Interpersonal Relationships
- PSYC 4425 Psychology of Organizational Development
- PSYC 4441 Psychological Measurement
- PSYC 4446 Seminar in Psychology

***Note:** Course must be directly related to the field of Human Resource Management.

Faculties of Arts and Science

Combined Major in Psychology and Certificate in Human Resource Management -Psychology Option

Students who major in Psychology as part of either a Bachelor of Arts or Bachelor of Science degree may also

obtain a certificate in Human Resource Management by selecting an appropriate set of multidisciplinary courses. The combined program offers students a sound foundation in basic and applied topics relevant to a career or graduate training in the field of Human Resource Management and related areas. Students who enrol in this program are required to take forty-eight (48) credit hours as specified below. Students should be aware that they may need to take appropriate prerequisite courses before pursuing several of the required courses.

Students who enrol in this combined program are advised to consult the Department of Psychology for detailed information on a prescribed sequence of courses that will allow them to satisfy both the major and certificate requirements within their specific degree program.

Certificate in Human Resource Management - Psychology Option

Students may enroll in the certificate program in Human Resource Management as a stand-alone program, either prior to completing or following completion of a bachelor's degree. The requirements for the stand-alone program are identical to those for the combined major and certificate program. Students without previous university coursework may have to complete prerequisites that are specified for each course, in addition to the required courses. Students with previous university experience may receive up to 24 credit hours for courses that are similar to those required for the certificate.

Please note that some core and elective courses may have prerequisites that are not part of the Certificate.

Students must complete the following thirty (30) credit hours of core courses.

- MGMT 1281 Introduction to Business Management
- MGMT 3385 Human Resource Management
- MGMT 3386 Industrial Relations
- MGMT 3392 or PSYC 3392 Occupational Health and Safety
- PSYC 3327 Industrial/Organizational Psychology
- PSYC 4425 The Psychology of Organizational Development
- PSYC 4426 Personnel Training and Development
- PSYC 4427 Organizational Psychology
- PSYC 4428 Personnel Psychology
- MGMT 4485 Wage & Salary Administration

Students must also complete 9 credit hours (3 courses) from the following Psychology electives:

- PSYC 3309 Human Factors and Performance
- PSYC 3317 Group Dynamics and Intergroup Relations
- PSYC 3393 The Psychology of Leadership
- *PSYC 3399 Special Topics in Psychology
- PSYC 4417 Interpersonal Relationships
- PSYC 4424 Vocational Psychology
- PSYC 4432 Attitudes and Persuasion
- PSYC 4441 Psychological Measurement
- *PSYC 4445 Directed Study in Psychology
- *PSYC 4446 Seminar in Psychology

*credit hours as an elective in the certificate program is available only when the content of the course, seminar, independent study, or directed research is directly related to the field of Human Resources Management. Students should contact the Department Office to determine if any sections of these courses are recognized as HRM/PSYC electives.

Students must also complete 9 credit hours (3 courses) from the following Business electives:

- ACCT 2241 Introductory Financial Accounting
- ACCT 2242 Introductory Managerial Accounting
- CMLW 2201 Legal Aspects of Business - Part I
- Cisy 1225 Introduction to Computer Applications
- COMM 2293 Communications
- COMM 3394 Oral Communications and Presentation Techniques
- ECON 1201 Principles of Economics: Micro
- ECON 1202 Principles of Economics: Macro
- ECON 3340 Human Resource Economics
- ECON 3341 Labour Economics
- MGMT 3388 Business and Society
- MGMT 4481 Organization Theory: Structure Process, Analysis & Design
- MGMT 4483 Management Skills I
- MGMT 4488 International Business Management
- MGMT 4493 Business-Government Relations in Canada
- MGMT 4496 Collective Bargaining
- MGMT 4497 Issues in Industrial Relations
- MGMT 4499 Senior Management Perspectives

International Development Studies (IDST)

Coordinator	A. O'Malley
Professor	H. Veltmeyer
Associate Professors	S. Dansereau, R. Isaakson, A O'Malley
Associate Professor and Canada Research Chair in International Development Studies	S. Borras
Adjunct Professors	W. Bello, D. Black, R. Delgado, J. Devlin, C. Kay, N. Giervan, L. Hovil, J. Kirk, E. MacLellan, K. Patel, J. Petras, T. Shaw, T. Teivainen, J. Tellez, J. Tharamangalam, R. Riessen

Note: In addition to the above, there are several other Saint Mary's faculty members teaching IDS related courses.

Graduate courses are available to students registered in the Master degree or Graduate Diploma programs. Other students must have approval of the IDST Coordinator. For information on graduate programs see the *Graduate Academic Calendar*.

International Development Studies is an interdisciplinary degree program which uses the concepts and research of many university disciplines to explain the startling and disturbing differences in human living conditions among the world's social groups, especially those found in what is commonly called the developing world.

Using the techniques and theories of social sciences and humanities disciplines, International Development Studies conducts research, assesses explanations, and engages in real world practices which seek to further our understanding and betterment of human living conditions in all countries throughout the world, but especially countries in the so-called developing world. International Development Studies has a strong orientation towards empirical research,

fieldwork, and other forms of primary data acquisition and practice. However, there is also an important emphasis on creating useful understandings and explanations which help us make sense of the current human condition around the globe .

A degree in international development studies may be combined with a degree in another discipline recognized by the International Development Studies Program. Joint majors, and minors, may be arranged through consultation with the University department involved and the Coordinator of International Development Studies Program, or his or her designate.

Students interested in IDS, including students contemplating IDS as a possible major, are encouraged to speak with the IDS Coordinator or Undergraduate Advisor.

The International Development Studies Program strongly recommends that students in IDS gain competency in a second language relevant to their studies. Students are especially referred to the Certificates offered by the Department of Modern Languages. For example, students wishing to focus on the Latin America region should note that a number of courses leading towards the Certificate of Spanish Language and Hispanic Culture may also be counted towards IDS degree.

In addition to the general and basic requirements for the Bachelor of Arts degree set out by the Faculty of Arts, students taking a degree within the International Development Studies Program must fulfill the following requirements:

The Major Program

- a. The appropriate first year courses, including Faculty of Arts basic requirements, and at least six (6) credit hours from the social science electives ANTH1202.1(.2),

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ECON1201.1(.2) or ECON1202.1(.2), POLI 1200.0, or SOCI 1210.1(.2), or SOCI 1211.1(.2), as appropriate;

- b. the equivalent of forty-two (42) credit hours approved for the program, of which:
- (i) twelve (12) credit hours must be IDST 2301.1(.2), 2302.1(.2), 3401.1(.2), and 3402.1(.2);
 - (ii) a further twelve (12) credit hours, of which three (3) credit hours must consist of SOCI3386.1 (.2) or SOCI3385.1 (.2); three (3) credit hours must consist of ECON1202.1 (.2); and three (3) credit hours must consist of POLI2314.1 (.2) or an approved Political Science course at the 2000 level or above. A final three (3) credit hours shall consist of IDST3424.1(.2); and
 - (iii) the remaining eighteen (18) credit hours must be from the IDS annual List of Approved Courses (available from the Program), or must be selected from courses with a clear focus on international development issues, in which case permission of the Program Coordinator or his/her designate is required. Six (6) credit hours of these eighteen must be at the 4000 level or above, the remaining twelve (12) credit hours being at the 2000 level or above. In completing this requirement, students are encouraged to combine social science courses with other courses when choosing electives.

Students should consult with the undergraduate advisor or the IDS program Coordinator regarding approval for courses not in the sampling of approved courses appearing below.

The Minor Program

The equivalent of twenty-four (24) credit hours selected from courses approved for the program, of which:

- a. six (6) credit hours consisting of IDST 2301.1(.2) and IDST 2302.1(.2);
- b. nine (9) credit hours consisting of: ECON1202.1 (.2); and SOCI3385.1 (.2) or SOCI3386.1 (.2); and POLI2314.1 (.2) or an approved political science course at the 2000 level or above;
- c. the remaining nine (9) credit hours must consist of courses selected from the approved courses appearing below (or others approved by the IDS Coordinator or undergraduate advisor), and must be at the 2000 level or above.

The Concentration Program

A concentration in International Development Studies in partial fulfillment of the B.A. Degree, is the same as the requirements for the IDS Minor Program.

The Honours Program

- a. To obtain an honours degree in International Development Studies, a student must first be admitted to the honours program and must then complete all requirements pertinent to the IDS honours program.

Students are encouraged to consult with the undergraduate student advisor to arrange a course schedule adequate to the demands of completing the required honours thesis. More specifically:

- (i) To be admitted to the program, a student must satisfy pertinent Faculty of Arts requirements for entry into an honours program, and must have a cumulative grade point average of 3.0 or better;
 - (ii) To graduate from the program, a student must satisfy the pertinent Faculty of Arts requirements, and must complete the equivalent of sixty-six (66) credit hours in the IDS honours program as outlined in (b) below; and
 - (iii) To graduate from the program, a student must also receive a minimum grade of B+ (3.30) in IDST4500 (the Honours Seminar). Students should note that the Honours Seminar is a full year course; September entry only.
- b. For the Bachelor of Arts (Honours) degree in International Development Studies, all students must complete no fewer than sixty-six (66) credit hours, of which:
- (i) eighteen (18) credit hours must be IDST2301.1 (.2), 2302.1(.2), 3401.1(.2), 3402.1(.2), and IDST4500.0;
 - (ii) a further twenty-one (21) credit hours must be: ECON1202.1(.2) and any additional three (3) credit hours in Economics, such as ECON3310.1(.2); and POLI2314.1(.2), and any additional three (3) credit hours in Political Science; and SOCI3386.1(.2) or SOCI3385.1(.2), and any additional three (3) credit hours in Sociology. The remaining three (3) credit hours shall consist of IDST3424.1 (.2). With the exception of ECON 1202.1 (.2), all courses other than the above must be at the 2000 level or higher and must be from the list of approved courses appearing below (or other courses upon approval by the IDS Coordinator or undergraduate advisor), and must be at the 2000 level or above.;
 - (iii) the remaining twenty-seven (27) credit hours must be selected from the list of approved courses appearing below (or other courses upon approval by the IDS Coordinator or undergraduate advisor), and must be at the 2000 level or above. Six (6) credit hours of the twenty-seven must be at the 4000 level or above, the remaining twenty-one (21) credit hours being at the 2000 level or above. Students should attempt to select courses that will allow them to concentrate on the development problems of a particular region, such as Latin America, Africa, Asia, Oceania, or the Middle East/North Africa.

Students must consult with the undergraduate advisor or the IDS Program Coordinator regarding approval for courses not in the list of approved courses appearing below;

Approved IDS Courses

Some of these courses have prerequisites which students should note very carefully. The courses below form a partial list of IDST approved courses.

Anthropology

ANTH 2311 Ethnology: Melanesia
 ANTH 2326 Ethnology: East Asia
 ANTH 3304 Egalitarian Societies
 ANTH 3309 Peasant Society and Culture
 ANTH 3334 Approaches to Human Conflict

Asian Studies

ASNT 3300 Multidisciplinary Study of Asia
 ASNT 3305 Contemporary China: Institutions and Culture

Criminology

CRIM 4415 Drugs and Power in Latin America
 CRIM 3313 State, Crime, and Power in Developing Societies

Economics

ECON 3300 Intermediate Microeconomic Theory
 ECON 3301 Intermediate Macroeconomic Theory
 ECON 3310 Development Economics
 ECON 3315 Comparative Economic Systems
 ECON 3365 International Economic Issues

Education

EDUC 4473 Comparative Perspectives on Innovations in Education-Reforms
 EDUC 4474 Comparative Perspectives on Innovations in Education-Alternatives
 EDUC 4476 Education and Development I: Perspectives
 EDIC 4477 Education and Development II: Policy and Practice
 EDUC 4518 Introduction to International Comparative Education: Perspectives
 EDUC 4528 Introduction to International Comparative Education: Policies

English

ENGL 4460 Postcolonial Literature: An Overview

Finance

FINA 4476 International Financial Management

Geography

GEOG 2302 Geography of World Affairs
 GEOG 2339 Cultural Geographies

History

HIST 2375 Modern Latin America

Management

MGMT 4488 International Business Management
 MGMT 4494 Entrepreneurship: Theories and Concepts

Marketing

MKTG 3375 International Marketing

Spanish

SPAN 3304 The Changing Face of Latin America
 SPAN 3310 Latin America Culture

SPAN 4416 Latin American Literature of Social Change

Philosophy

PHIL 2325 Philosophical Issues in Int'l Development
 PHIL 4525 International Justice

Political Science

POLI 2314 Politics of Developing Areas
 POLI 2315 Canadian Foreign Policy
 POLI 3321 International Organization
 POLI 3322 Global Political Economy
 POLI 3418 International Law
 POLI 3451 Gender and International Relations
 POLI 3456 Issues in International Security
 POLI 4402 Model United Nations
 POLI 4493 Global Social Movements
 POLI 4553 International Studies Seminar

Religious Studies

RELS 3348 Religion & Ecological Issues In the Developing World

Sociology

SOCI 3319 Reform and Revolution in Latin America
 SOCI 3333 Social Movements
 SOCI 3385 Problems of Development
 SOCI 3386 Sociology of Developing Societies
 SOCI 4422 Gender & Development: Theory & Method
 SOCI 4423 Gender & Development: Policy & Practice
 SOCI 4482 Gender and International Migration

Course Descriptions

2301.1(.2) Introduction to Development Studies: Perspectives

Prerequisite: one of ANTH 1200.0, ECON 1201.1(.2)/1202.1(.2), POLI 1200.0, SOC 200.0, or SOCI 1210.1(.2) and either SOCI 1211.1(.2) or 1212.1(.2).

This course introduces students to the nature and scope of development studies as an interdisciplinary field. The course explores the definitions of development, development explanations of poverty and prosperity in many regions of the world and examines a wide spectrum of problems that confront the so-called developing world.

2302.1(.2) Introduction to Development Studies: Policies and Practice

Prerequisite: IDST 2301.1(.2).

This is a continuation of IDST 2301, and explores real-world, past and current development policies and how they are formulated and applied to specific development problems through programs, institutional practices, or community initiatives. It examines the role of the state, local community organizations, and other actors who contribute to the policy-making process and critically analyzes policy successes and failures.

2325.1(.2) Philosophical Issues in International Development [PHIL 2325.1(.2)]

3348.1(.2) Religion and Ecological Issues in the Developing World [RELS 3348.1(.2)]

3386.1.(2) Sociology of Developing Societies
[SOCI 3386.1.(2)]

3401.1.(2) Seminar in Development Studies: Conceptual Foundations

Prerequisite: IDST 2301.1.(2) and 2302.1.(2).

This is a core IDS mixed lecture/seminar course which examines key concepts, perspectives and theoretical approaches to dealing with issues affecting developing countries, such as industrial development, rural development, economic prosperity, community development etc. The acquisition by students of an analytical and critical assessment of these approaches will be strongly emphasized through readings, presentations, group study and lectures.

3402.1.(2) Seminar in Development Studies: Contemporary Issues

Prerequisite: IDST 3401.1.(2).

A continuation of the core IDST 3401 lecture/seminar. In this course students will research and analyze selected problems of development in Africa, Asia, Latin America and the Caribbean, Oceania, or Middle East/North Africa. Students will read and discuss a common body of readings, discussing existing programs, policy implications, and contemporary development practices and write one or more major research papers.

3424.1.(2) Research Methodology

Prerequisite: IDST 2301.1.(2) and 2302.1.(2)

Students will leave this course with the basics of research design and will acquire proficiency in the quantitative and qualitative data collection and manipulation techniques that can be applied to a selected range of development problems.

3460.1.(2) Development Practice

This experiential learning course will provide students with an opportunity to link development theory and development practice. This may take many forms, such as acting as a volunteer with an NGO or community-based organizations, pursuing an internship with a multilateral agency, or other forms of University and Program-approved field experience overseas, or, with approval, in Canada.

3461.1.(2) South East Asia: Contemporary Development Issues

Prerequisite: IDST 2301.1.(2)/2302.1.(2) or permission of instructor.

This course explores development issues in the context of South East Asia, focusing on the nation-state and its development strategies, as well as broader, regional issues of economic and social development. Issues include the emergence of high- growth rate, newly-industrializing countries, the impact of the Asian financial crises and globalization. The course will begin from the perspective of common colonial roots and identify the current sub-regional models of development. The course will explore current alternative approaches articulated by Asian scholars and grassroots organizations. (Note: this course is cross-listed with Asian studies at the undergraduate level.)

3462.1.(2) Sub-Saharan Africa: Contemporary Development Issues

Prerequisite: IDST 2301.1.(2)/2302.1.(2) or permission of instructor.

This course explores development issues specific to Sub-Saharan Africa, focusing on the nation-state and its colonial past, development strategies, and a spectrum of broader issues of economic and social development. Such issues include the impact of structural adjustment, efforts toward political democratization and the ongoing presence of traditional forms of social organization. The overall objective is to present the dynamic nature of the current policy debates as they are being articulated and challenged by a variety of actors in the region, including African scholars and grassroots organizations.

3463.1.(2) Latin American: Contemporary Development Issues

Prerequisite: IDST 2301.1.(2)/2302.1.(2) or permission of instructor.

This course explores central development issues in Latin America, focusing on the nation-state and its development strategies, as well as broader issues of economic and social development. Such issues include the impact of globalization and liberalization, efforts towards political democratization including the role of popular organizations and alternative approaches articulated by Latin American scholars and grassroots organizations. Sub-regional differences will be discussed and compared.

3485.1.(2) Problems of Development [SOCI 3385.1.(2)]

4422.1.(2) Gender and Development: Theory and Method [SOCI 4422.1.(2)]

4423.1.(2) Gender and Development: Policy and Practice [SOCI 4423.1.(2)]

4464.1.(2) Popular Approaches to Development

Prerequisite: IDST 2301.1.(2)/2302.1.(2) or permission of instructor.

This course will examine theoretical debates surrounding the current alternative and people-centered approaches to development and social change. Emphasis is on alternatives articulated by a new civil society or the new social movements in the South including NGOs, community and grassroots organizations, labour groups and others. Issues range from new practices in development based on increased participation by subaltern groups to the more fundamental challenges to national and international structures as they struggle for greater democratization as groups work for economic and political decentralization.

4470.1(.2) Environment and Development

Prerequisite: IDST 2301.1(.2) and 2302.1(.2), or permission of instructor.

This seminar will explore the implications for world economic and social development of environmental problems, as well as the question of what mainstream economic development might mean in the context of tackling the growing disruption of the global ecosystem. Along with an in-depth discussion of the possible ecological outcomes of environmental modification, the importance of a sociological and political-economic analysis of the problems of environmental disruption and change will be emphasized.

4473.1(.2) Comparative Perspectives on Innovations in Education – Reforms [EDUC 4473.1(.2)]

Prerequisite: at least thirty (30) credit hours of University courses.

This course will assess, compare and contrast variations and reforms to mainstream educational systems, and will emphasize the conditions out of which such reforms are initiated. Special emphasis will be given to contrasting public systems of education with privatization initiatives, together with public/private partnerships and changes that affect access to education, gender and education, and so on. This course will draw on the considerable body of literature and concrete case studies throughout the world; however, considerable emphasis will be given to examples and case studies from the regions or sub-regions of Asia, Africa, Latin America and the Middle East/North Africa.

4474.1(.2) Comparative Perspectives on Innovations in Education – Alternatives [EDUC 4474.1(.2)]

Prerequisite: at least thirty (30) credit hours of University courses.

This course will seek to understand the material and social conditions, practical initiatives, rationale and outcomes of radical alternatives to mainstream education and mainstream educational reforms. Above and beyond in-depth discussions of perspectives on informal and non-formal educational systems, the works of Illich, Freire, and other educational radicals will be discussed, as will the concepts of intercultural bilingual education, social capital education, and other alternative conceptions of education. The course will provide a forum for the discussion and deeper understanding of the relation between the larger social, political and economic structure and the educational goals and objectives of radical education alternatives. Considerable emphasis will be given to examples and case studies from the regions or sub-regions of Asia, Africa, Latin America, and the Middle East/North Africa.

4476.1(.2) Education and Development I: Perspectives [EDUC 4476.1(.2)]

Introduction to concepts and analysis underlying a comparative understanding of selected educational systems around the world. The course will emphasize comparisons between mainstream educational understandings in the developed world, the agenda of international education organizations, international educational funders, and the

implementation of educational systems, both public and private. Specific reference will be made to access to education, curriculum and culture, gender and education, and similar issues with an emphasis on examples from the so-called *developing world* in Asia, Africa, Latin America and the Middle East/North Africa.

4477.1(.2) Education and Development II: Policies and Practices [EDUC 4477.1(.2)]

A continuation of IDST 4476.1(.2). Examination and comparison of educational policies in selected countries or regions of the world with a view to assessing educational outcomes, education processes and the relation between education, the public sector, the private sector and international organizations, and the effect of such policies worldwide. Emphasis is on Asia, Africa, Latin America and the Middle East/North Africa.

4481.0 Gender, Ethnicity and Migration [SOCI 4481.0]**4500.0 Honours Seminar in Development Studies**

Prerequisite: IDST 3401.1(.2) and 3402.1(.2).

Students registered in the International Development Studies Honours Program will use this seminar as an on-going forum in which to complete the required honours thesis. Using a sequence of assignments, discussions, and seminar presentations the student will be introduced to the requirements of conducting empirical research and advanced undergraduate scholarly research writing.

The student's overall grade for this seminar will be the average of the thesis grade (provided by the thesis advisor) and the seminar instructor's grade for honours seminar participation (minimum of B+).

4518.1(.2) Introduction to International Comparative Education: Perspectives [EDUC 4518.1(.2)]

Prerequisite: at least thirty (30) credit hours of University courses.

Introduction to concepts and analysis underlying a comparative understanding of selected educational systems around the world. The course will emphasize comparisons between mainstream educational understandings in the developed world, the agenda of international education organizations, international educational funders, and the implementation of educational systems, both public and private. Specific reference will be made to access to education, curriculum and culture, gender and education and similar issues with an emphasis on examples from the so-called developing world in Asia, Africa, Latin America and the Middle East/North Africa.

4528.1(.2) Introduction to International Comparative Education: Policies [EDUC 4528.1(.2)]

Prerequisite: at least thirty (30) credit hours of University courses and IDST 4518.1(.2) or permission of Instructor

This course is a continuation of IDST 4518.1(.2). Examination and comparison of educational policies in selected countries or regions of the world with a view to

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assessing educational outcomes, educational processes and the relation between education, the public sector, the private sector and international organizations, and the effect these policies have had, or are having worldwide, with emphasis on the regions or sub-regions of Asia, Africa, Latin America and the Middle East/North Africa.

4591.1(.2) to 4593.1(.2) Directed Study in Education

Prerequisite: Permission of the Program Coordinator and/or Dean

An independent study course organized by a faculty member in consultation with a student. It enables a student to pursue independent research in a specific theme in education.

Papers and/or examinations will be required.

4826.1(.2) – 4849.1 (.2) Special Topics in Development Studies

Prerequisite: IDST 2301.1(.2) and 2302.1(.2).

These courses will investigate in-depth a particular topic or set of topics in Development Studies. The specific topic(s) will vary from year to year, depending on the availability of visiting scholars, invited research fellows, or the research plans of associated faculty.

4876.1(.2) – 4899.1(.2) Directed Study

Prerequisite: IDST 2301.1(.2) and 2302.1(.2), or permission of Coordinator.

These courses provide an opportunity for students to pursue advanced study individually with resident or adjunct faculty concerning topics not normally covered by regular course offerings. Students are expected to demonstrate initiative and independence and will normally produce a substantial written document such as an annotated bibliography summarizing their literature research.

Irish Studies (IRST)

Program Coordinator S. Kennedy, English
D'Arcy McGee Chair of Irish Studies P. Ó Siadhail

The D'Arcy McGee Chair of Irish Studies was established at Saint Mary's University by Dr. Cyril J. Byrne in the spring of 1986 to form a focal point for the study of all aspects of Irish and Irish-Canadian culture, particularly language, literature, history, political science and folklore. Saint Mary's is the only University in Canada where you can complete an undergraduate degree in Irish Studies.

The Major Program

To obtain a major in Irish Studies, forty-two (42) credit hours are required, including:

IRST 1201.1(.2) An Introduction to Modern Irish

IRST 1202.1(.2) Modern Irish Language

IRST 2325.1(.2) Intermediate Irish I

IRST 2326.1(.2) Intermediate Irish II

IRST 3460.1(.2)/HIST 3460.1(.2) Issues in Modern Irish History

IRST 3470.1(.2) Irish Studies Seminar

Plus twenty-four (24) credit hours, twelve (12) credit hours of which must be at the 3000 level and approved by the Coordinator of Irish studies.

The Minor Program

The following program constitutes a minor in Irish Studies according to the "Requirements for the Degree of Bachelor of Arts" as stated above in Section 3:

Six (6) credit hours in IRST at the 1000 level

Plus eighteen (18) credit hours approved by the Coordinator of Irish Studies.

The Concentration Program

To obtain a concentration in Irish Studies in partial fulfillment of the B.A. General degree (i.e., one with

Double Arts Concentrations and a minimum of ninety (90) credit hours), a minimum of twenty-four (24) credit hours in IRST is required; also a minimum cumulative grade point average of 2.00. Further details are available from the coordinator.

Course Descriptions

1201.1(.2) An Introduction to Modern Irish

This course will introduce students to Modern Irish, with emphasis on the spoken and written forms.

1202.1(.2) Modern Irish Language

Prerequisite: IRST 1201.1(.2) or permission of instructor.

This course will develop the student's ability to speak, write and read Modern Irish.

1203.1(.2) Scottish Gaelic - Introductory I

This course gives the student an introduction to the structure and use of Scottish Gaelic in a Nova Scotia context. Topics covered include grammar and conversation basics, traditional and new Gaelic songs, and conversation aimed at specific social occasions and locations.

1204.1(.2) Scottish Gaelic - Introductory II

Prerequisite: IRST 1203.1(.2).

This course gives the student a continuation of the introduction to the structure and use of Scottish Gaelic in a Nova Scotia context. Topics covered include grammar and conversation basics, traditional and new Gaelic songs, and conversation aimed at specific occasions and locations.

1215.1(.2) Ireland: An Introduction [HIST 1215.1(.2)]

The course is designed to provide students with a general introduction to Ireland through a survey of the island's

history. Although it is situated on the fringes of Europe, Ireland was influenced by developments on the continent from the earliest times. In addition, the later experience of overseas migration connected Ireland to developments across the Atlantic and beyond. This course will pay particular attention to how Ireland's history reflects these broader European and transatlantic connections.

1216.1(2) Ireland: Culture and Society

This course, which complements IRST 1215.1(2), seeks to expand students' understanding of the complexity of the Irish experience. Areas covered in this course include: Women in Ireland; the Irish abroad (with special emphasis on the Irish in Canada); Ireland in a European context; the Celtic Tiger; Northern Ireland in the post-Belfast Agreement period; sport in Ireland; and the Irish and film. This survey is aimed at both Irish Studies students and those who have a general interest in Ireland.

2325.1(2) Intermediate Irish I

Prerequisite: IRST 1201.1(2) and 1202.1(2).

A continuation of elementary Irish, with emphasis placed on students attaining a firm grasp of spoken Irish. In addition, students will continue their study of the history and development of the Irish language.

2326.1(2) Intermediate Irish II

Prerequisite: IRST 2325.1(2) or permission of instructor.

Building upon the skills acquired while studying elementary Irish and Intermediate Irish I, students will concentrate on refining their command of the Irish language. A variety of aural sources and written texts will be used.

2327.1(2) Scottish Gaelic - Intermediate I

Prerequisite: IRST 1203.1(2) and 1204.1(2).

This course gives the student an opportunity to advance from the introductory level in a structured environment. Topics covered include a review of grammar and conversation basics. Time will be spent on composition of short stories, translation of written and recorded Gaelic, traditional and new Gaelic songs, and poetry and conversation aimed at specific social occasions and locations.

2328.1(2) Scottish Gaelic - Intermediate II

Prerequisite: IRST 2327.1(2) or equivalent.

This course gives the student an opportunity to advance from the introductory level in a structured environment. Topics covered include a review of grammar and conversation basics. Time will be spent on composition of short stories, translation of written and recorded Gaelic, traditional and new Gaelic songs, and poetry and conversation aimed at specific social occasions and locations.

2340.1(2) The Early Christian Church in Britain and Ireland [ANTH 2341.1(2), RELS 2367.1(2)]

This course proposes to examine the development of Christianity in the British Isles from its inception in Roman

Britain, through the establishment of a 'Celtic' church in Wales, Scotland and Northern England, to the eventual conversion of the people of Ireland. The course will focus on the historical and archaeological remains which made up the early-Christian landscape of the 4th through the 11th centuries.

2346.1(2) A Sociolinguistic History of Ireland [LING 2346.1(2)]

Prerequisite: at least six (6) credit hours in Irish Studies, Linguistics, English, or History.

This course charts the history and development of language in Ireland from earliest times to the present. Students learn about the origins and growth of Irish, the influence on it of Latin, Norse and English, and the emergence of Hiberno-English. A series of texts which demonstrate the changing linguistic landscape of Ireland and the interrelationship of languages are considered.

2350.1(2) The Irish Musical Tradition

A survey of Irish folk music from pre-Christian times to the twentieth century. Areas under investigation shall include folk music as it relates to the wider background of Irish history; folk instruments; song-airs and singers; the structure and ornamentation of Irish folk music; and the role of Irish folk music in its nation's current musical scene. A knowledge of musical notation and terminology is not a prerequisite.

2391.1(2) Geography of Ireland [GEOG 2390.1(2)]

2395.0 Ireland, 1600-1985: From the Plantations to the "Troubles" [HIST 2395.0]

3334.0 The Literature of Modern Ireland [ENGL 3334.0]

A comprehensive study of folklore in Ireland. All aspects of folklore will be examined, with special emphasis on the storytelling, song, and folk drama traditions.

3430.1(2) Irish Folklore

Prerequisite: at least six (6) credit hours in Irish Studies, Linguistics, English, or Anthropology.

A comprehensive study of folklore in Ireland. All aspects of folklore will be examined, with special emphasis on the storytelling, song, and folk drama traditions.

3443.1(2) Irish Poetry [ENGL 3443.1(2)]

3460.1(2) Issues in Modern Irish History [HIST 3460.1(2)]

3470.1(2) Irish Studies Seminar

Prerequisite: Permission of Coordinator

This interdisciplinary course will allow students to consider a selection of topics relating to the Irish experience at home and abroad. Availing of the expertise of internal and external guest speakers, areas of study will include post-colonial Ireland; Ireland in a contemporary European context; language and culture; Northern Ireland; contemporary literature in Irish and English; the Irish contribution to

Canada; and sources for the study of the history of the Irish in Canada.

3826.1(2) – 3849.1(2) Special Topics in Irish Studies
Prerequisite: permission of Coordinator of the Irish Studies Program.

This course will investigate in depth a specific topic or set of topics in Irish Studies. The topic will vary from year to year.

4431.1(2) The Modern Irish Novel [ENGL 4431.1(2)]

4441.1(2) The Irish Short Story [ENGL 4441.1(2)]

4876.1(2) - 4899.1(2) Directed Reading Courses in Irish Studies

Prerequisite: Permission of Coordinator

An independent reading course in selected topics relating to Ireland and the Irish abroad. Topics include: the history and culture of Ireland; languages and literature; the Irish in Canada; and contemporary Ireland.

Japanese (JPNS)

Chairperson, Modern Languages and Classics
Associate Professor G. Nahrebecky

Assistant Professors A. Avdulov, C. Beaupré

Courses and programs in Japanese are offered by the Department of Modern Languages and Classics

Department Policy - Modern Languages and Classics

1. Enrollment in some language courses involves the following formal placement procedures.

All students seeking entry into language courses who have not previously taken a language course at Saint Mary's University must complete and return the Language Profile Form to the Department of Modern Languages and Classics.

Based on the information provided in the Language Profile Form, students may receive notification from the Department to appear for an oral interview and/or a written placement test at a designated time.

The Department of Modern Languages determines the appropriate course placement for each student

- (i) Permission to register or remain in a particular language course can be refused if the Department judges that the student's knowledge exceeds the level for that course.
- (ii) Native speakers are not eligible to receive advanced credit for language courses.
- (iii) Completion of Advanced Standing (transfer) courses does not exempt a student from taking the placement test.

2. In order to ensure the academic integrity in language courses, especially at the lower levels of instruction, the Department of Modern Languages and Classics does not allow native or near-native speakers of a particular target language to enroll in courses at the 2000 level or lower.

Students who misrepresent their knowledge of any given language by providing inaccurate or incomplete information about their linguistic educational history will be subject to disciplinary action as laid out in Academic Regulation 19(d).

3. The Department of Modern Languages and Classics supports a policy of regular class attendance by students. Frequent, unexplained absences from class will result in a lowering of the final grade in a manner to be determined by each faculty member.

Programs in Japanese

The Certificate of Japanese Studies is available as outlined below.

Certificate of Japanese Studies (CER JPST)

This certificate program in Japanese Studies is designed to provide linguistic, cultural and practical knowledge to persons interested in studying about or working in Japan. The program consists of twenty-four (24) credit hours. It is intended for undergraduate students, persons already holding degrees in any discipline, and mature students with relevant work experience.

Admission

The Certificate of Japanese Studies requires a formal application for admission. The official approval of the Asian Studies Coordinator is a prerequisite for admission to the program. Students majoring in Asian Studies at Saint Mary's University are not eligible for this program.

A student of the program must complete at least eighteen (18) credit hours at Saint Mary's University. Relevant academic courses, work experience and linguistic capability may be considered for credit recognition. Applicants should submit a resume of relevant work experience, official university transcripts and any other relevant documentation.

Program Courses

This program consists of twelve (12) required credit hours and a number of optional credit hours. All students are required to take Japanese 1100.0 (Introductory Japanese) and Japanese 2200.0 (Intermediate Japanese). Students must

also select twelve (12) optional credits hours in at least two different disciplines from the following courses:

ANTH 2326.1(.2); ANTH 2327.1(.2); ASNT 3300.1(.2); ASNT 3302.1(.2); ASNT 2303.1(.2); ASNT 4410.1(.2); GEOG 3360.1(.2); HIST 1222.1(.2); HIST 1223.1(.2); HIST 2354.1(.2); HIST 2355.1(.2); HIST 2356.1(.2); HIST 4511.0; RELS 2327.1(.2); RELS 2340.1(.2).

At least twelve (12) credit hours must be at the 3000 level or above. Detailed descriptions are found under Departmental listing. Not all courses will be offered each year.

Requirements for Graduation

Students are encouraged to complete the program within five years. A minimum cumulative grade point average of 2.00 in the Certificate of Japanese Studies is required. Students who have completed all the courses without being officially admitted to the program will not be accredited.

Course Descriptions

1100.0 Introductory Japanese

An introductory language course for those beginning the study of Japanese language and culture. Classroom activities will provide practice in pronunciation and the use of basic patterns of speech. Written Japanese will be introduced and studied.

2200.0 Intermediate Japanese

Prerequisite: JPNS 1100.0 or equivalent.

A continuation of introductory Japanese, intended to develop proficiency in oral, aural and written Japanese within the context of Japanese culture.

3300.1(.2) Advanced Oral and Written Japanese I

Prerequisite: JPNS 2200.0.

This course offers an opportunity to build and refine students' ability to comprehend and to communicate effectively in Japanese.

3301.1(.2) Advanced Oral and Written Japanese II

Prerequisite: JPNS 3300.0.

This course is a continuation of JPNS 3300.1(.2).

Linguistics (LING)

Coordinator and Associate Professor

E. Asp, English

Professor E. Enns

Assistant Professor C. Beaudoin-Lietz

Adjunct Professor R. Cosper

Halifax Interuniversity Program in Linguistics

Three Halifax area universities - Saint Mary's, Dalhousie, and Mount Saint Vincent - offer honours, majors and minors in linguistics in undergraduate degree programs. Students enrolled in a linguistics program can take classes from the three universities to fulfil degree requirements.

An undergraduate degree in linguistics provides opportunities to study the formal, functional and systemic nature of language and languages as both social and cognitive phenomena. Although a discipline in its own right, linguistics has cognate relationships with many disciplines, suggested by the interdisciplinary nature of many of the courses in the program. Faculty members from Anthropology, English, French, Russian, Political Science, Philosophy, Psychology, Sociology, and other disciplines participate.

Certificate in Linguistics

The Certificate in Linguistics provides an opportunity to explore the structure and function of languages and how

their systematic nature makes human communication possible. The Certificate in Linguistics is designed to provide a foundation in linguistics to complement study in related fields, such as language teaching, anthropology, sociology, business, and computer studies.

The program consists of thirty (30) credit hours and is intended primarily for students already holding degrees in any discipline.

1. Admission

Admission to the certificate program requires a formal application for admission. Students taking the certificate while completing a bachelor's degree must obtain official approval of the Coordinator for Linguistics. Students majoring in linguistics at Saint Mary's University are **not** eligible for this program. Fifteen (15) of the thirty (30) credit hours must be completed at Saint Mary's University.

2. Program Courses

All students are required to take LING 1200.0. They must also select six (6) credit hours from the following courses: LING 2310.1(.2); LING 2320.1(.2); LING 2330.1(.2); LING 2340.1(.2). The remaining eighteen (18) credit hours are to be selected from the courses listed below in **subsection d**. One of these courses must be at the 3000 level. With the

permission of the Coordinator for Linguistics, one of these courses can be other than a linguistics course. Typically, this course would be one suitable for the student's objectives, such as an upper level class in a second language, formal logic or computing studies.

3. Requirements

A minimum cumulative quality point average of 2.00 in this Certificate Program is required for graduation.

4. Teacher Certification

In September 2002, the Provincial Department of Education's Minister's Advisory Committee on Teacher Certification approved the Certificate in Linguistics program in general for teacher certification purposes. Any teacher interested in pursuing this certificate program for teacher certification purposes **must** request individual approval of the program from the Registrar - Teacher Certification **prior** to registration in this program.

Honours in Linguistics

An honours degree requires a minimum of sixty (60) credit hours including:

a. The following twenty-four (24) credit hours:

LING 1200.0 Introduction to Linguistics
LING 2310.1(.2) Phonology
LING 2320.1(.2) Morphology
LING 2330.1(.2) Syntax
LING 2340.1(.2) Semantics
LING 3368.1(.2) Linguistic Analysis
LING 4826.1(.2) Linguistic Theory

b. Six (6) credit hours selected with the advice of the program coordinator

c. Six (6) credit hours at or above the 2000 level in a language other than English

d. Twenty-four (24) credit hours selected from those specified in subsection (d) below for the major

Major in Linguistics

A major in linguistics requires a minimum of thirty-six (36) credit hours, including:

a. Six (6) credit hours: Introduction to Linguistics. [either LING 1200.0 at Saint Mary's University or FREN 3020R at Dalhousie University or LING 2251.1(.2)/2252.1(.2) at Mount Saint Vincent University]

b. Twelve (12) credit hours:
LING 2310.1(.2) Phonology
LING 2320.1(.2) Morphology
LING 2330.1(.2) Syntax
LING 2340.1(.2) Semantics

c. Six (6) credit hours selected with the advice of the program coordinator

d. Twelve (12) credit hours from approved courses at Saint Mary's University as well as courses described in the *Academic Calendars* of Dalhousie and Mount Saint Vincent Universities.

Saint Mary's University courses:

ANTH 1290.1(.2) Introduction to Human Communication
ANTH 2391.1(.2) Linguistic Anthropology
ANTH 2392.1(.2) Language, Culture and Society
ANTH 3395.1(.2) Language Use and Issues in Northern Canada
ANTH 3396.1(.2) Language Use and Issues in Southern Canada
ANTH 4491.1(.2) Ethnography of Communication
ANTH 4492.1(.2) Anthropological Analysis of Linguistic Communities
ENGL 2308.1(.2) Development of English Prose Style from 1500
ENGL 2311.1(.2) Modern English Language
ENGL 2326.1(.2) Language and Gender
ENGL 3312.1(.2) Canadian English
ENGL 3402.0 History of the English Language
ENGL 3427.1(.2) Language, Gender, and Power
ENGL 4493.1(.2) Doing Discourse Analysis
ENGL 4494.1(.2) Approaches to Discourse Analysis
FREN 3320.1(.2) French Phonetics
FREN 4440.1(.2) Canadian French: Sociolinguistic Perspectives
IRST 2346.1(.2) A Sociolinguistic History of Ireland
LING 3368.1(.2) Advanced Linguistic Analysis
LING 3826-3849 Special Topics in Linguistics
LING 4826-4849 Special Topics in Linguistics
LING 4876-4899 Directed Reading in Linguistics
PHIL 3402.1(.2) Philosophy of Language: Meaning
PHIL 3403.1(.2) Philosophy of Language: Speech Acts
SOCL 3388.1(.2) Language Change and Social Change
SOCL 3339.1(.2) The Sociology of Language
SOCL 3366.1(.2) Field Methods in Sociolinguistics I
SOCL 3367.1(.2) Field Methods in Sociolinguistics II
SOCL 4417.0 Seminar on Endangered Languages

Minor in Linguistics

A minor in linguistics requires a minimum of twenty-four (24) credit hours in linguistics including:

a. LING 1200.0 Introduction to Linguistics

b. Eighteen (18) credit hours at the 2000 level or above. The appropriate Saint Mary's courses are delineated above in subsections (b) and (d) of the requirements for the major. Dalhousie and Mount Saint Vincent Universities courses are described in the *Academic Calendars* of those institutions. The program coordinators can also be consulted.

Course Descriptions

1200.0 Introduction to Linguistics

Natural languages are systematic and this course will examine how this fact makes human communication possible. An introduction to modern methods of linguistic analysis, the course will enable students to understand the structure of their own language and to compare it with other languages. By familiarizing them with the basic concepts of linguistics, the course will prepare students for more advanced courses in linguistics.

2308.1.(2) Development of English Prose Style [ENGL 2308.1.(2)]

2310.1.(2) Phonology

Prerequisite: LING 1200.0 or approval of the Linguistics Coordinator..

Phonology is the study of the sound patterns of language. The course describes how speech sounds are produced and perceived, how they are used in spoken language, and how we can record them using symbolic notation. The universal principles by which sounds are organized in language through phonological rule systems are examined, as well as the processes which account for language-specific diversity.

2311.1.(2) Modern English Language [ENGL 2311.1.(2)]

2320.1.(2) Morphology

Prerequisite: LING 1200.0 or approval of the Linguistics Coordinator.

Morphology is the study of word formation and structure. The course examines how words are made up of smaller, meaningful elements. Processes of word formation such as derivation and compounding are analyzed: how roots combine with other elements to form larger units. Inflectional morphology is investigated. The course also discusses the manner in which morphology relates to the other components of language: phonology, the lexicon and syntax.

2321.1.(2) French Phonetics [FREN 3320.1.(2)]

2326.1.(2) Language and Gender [ENGL 2326.1.(2)]

2330.1.(2) Syntax

Prerequisite: LING 1200.0 or approval of the Linguistics Coordinator..

Syntax is the study of sentence structure: how words are organized into larger meaningful units. The course examines the nature of speakers' underlying knowledge of the rules for combining words into higher-order structures. The fundamental similarities in sentence patterning among different languages will be addressed.

2338.1.(2) Language Change and Social Change [SOCI 3338.1.(2)]

2339.1.(2) The Sociology of Language [SOCI 3339.1.(2)]

2340.1.(2) Semantics

Prerequisite: LING 1200.0 or approval of the Linguistics Coordinator.

This course analyzes how words and sentences convey meaning in language. Students will learn how lexical items can be represented in terms of their semantic components and how interrelated groups of words form semantic fields. At the sentence level, grammatical, pragmatic and logical aspects of meaning are introduced. The course also explores idiomatic expressions and the ubiquity of metaphor.

2346.1.(2) A Sociolinguistic History of Ireland [IRST 2346.1.(2)]

2391.1.(2) Linguistic Anthropology [ANTH 2391.1.(2)]

2392.1.(2) Language, Culture and Society [ANTH 2392.1.(2)]

3312.1 (.2) Canadian English [ENGL 3312.1 (.2)]

3366.1.(2) Field Methods in Sociolinguistics I [SOCI 3366.1.(2)]

3367.1.(2) Field Methods in Sociolinguistics II [SOCI 3367.1.(2)]

3368.1.(2) Advanced Linguistic Analysis

Prerequisite: LING 1200 and at least six (6) credit hours in linguistics at or above the 2000 level.

This course takes a practical approach to linguistic analysis. Students will explore the application of linguistic principles by analyzing data from a variety of languages or by analyzing one (in most cases) non-Indo-European language in depth. Students will examine and analyze texts considering the core areas of linguistics. The analysis will focus on at least two of the core areas of phonology, morphology, syntax and semantics. Based on the results of the analysis, the discussion will broaden to include a typological perspective.

3395.1.(2) Language Use and Issues in Northern Canada [ANTH 3395.1.(2)]

3396.1.(2) Language Use and Issues in Southern Canada [ANTH 3396.1.(2)]

3402.0 History of the English Language [ENGL 3402.0]

3427.1.(2) Language, Gender and Power [ENGL 4427.1.(2)]

3826.1.(2) - 3849.1.(2) Special Topics in Linguistics

Prerequisite: LING 1200 and at least six (6) credit hours in linguistics at or above the 2000 level

These courses allow students to study a special topic at an advanced level. Such topics will either (a) not be covered by other LING courses or (b) handle the subject matter in alternative models.

Seminar: 3 hrs. a week. 1 semester.

4417.0 Seminar in Endangered Languages [SOCI 4417.0]

LING 4432.1(.2) Linguistic Theory

Prerequisite: LING 1200.0 and six credit hours in Linguistics

This course will examine concepts and trends in the development of linguistic theory from the beginning of the twentieth century to the present. Perspectives will include (a) particular areas of enquiry, such as language diversity, pragmatics, neurolinguistics, etc., and how they have informed linguistic theory; (b) schools of linguistics from Saussure to the present; and (c) fundamental concepts in linguistic theory.

4440.1(.2) Canadian French: Sociolinguistic Perspective [FREN 4440.1(.2)]

4491.1(.2) Ethnography of Communication [ANTH 4491.1(.2)]

4492.1(.2) Anthropological Analysis of Linguistic Communities [ANTH 4492.1(.2)]

4493.1(.2) Doing Discourse Analysis [ENGL 4493.1(.2)]

4494.1(.2) Approaches to Discourse Analysis [ENGL 4494.1(.2)]

4500.0 Honours Thesis

Prerequisite: honours standing in Linguistics.

Supervised preparation of a significant research paper for honours students in linguistics.

LING 4511.1(.2) Honours seminar

Prerequisite: Acceptance in the Honours program in Linguistics (at any of the participating universities)

This is a seminar designed for Honours students. The seminar gives students the opportunity to cover in depth one or two selected topics of advance study in Linguistics. The topics will vary and will complement the program. The seminar requires independent study and initiative.

4826.1(.2) – 4849.1(.2) Special Topics in Linguistics

Prerequisite: at least eighteen (18) credit hours in LING.

These courses allow students to study a special topic at an advanced level. Such topics will either (a) not be covered by other LING courses or (b) handle the subject matter in alternative models.

Seminar: 3 hrs. a week. 1 semester.

4876.1(.2) – 4899.1(12) Directed Readings in Linguistics

These courses provide the opportunity to study a particular subject(s) in detail. They are designed to examine at an advanced level topics not covered in other linguistics courses or in courses cross-listed as linguistics courses, or to allow for a different approach to the study of topics already covered in other courses.

Management (MGMT)

Chairperson,	R. Summers
Associate Professor	J. Chamard, H. Das,
Professors	P. Fitzgerald, K. Kelloway, A. Mills, S. Pendse, T. Wagar
Associate Professors	C. Driscoll, E. Farrell, J. Haiven L. Haiven, J. Helms-Mills, D. Wicks
Assistant Professors	C. Holmvall, J. Weststar, E. Wiebe
Adjunct Professor	A. Robb
Canada Research Chair	C. Loughlin
Professor Emeriti	J. Badawi, H. Schwind

The Department of Management offers four programs for majors:

- * Entrepreneurship
- * Global Business Management
- * Human Resource Management and Industrial Relations
- * Management

Details on the requirements for the Management major are given below. Details on the other majors can be found in the corresponding sections of this Calendar.

Management Major

To assist students, the Year 3 and Year 4 course requirements for a Management Major and the core BComm degree program requirements are listed below. Course descriptions follow later in this section.

Note: In addition to all other requirements for this major, a minimum GPA of 2.2 is required in ACCT 3332, MGMT 2383, MGMT 2384, MGMT 3385, MGMT 3386, MGMT 4481, MGSC 3317, plus the courses satisfying the required ACCT, FINA, and MKTG electives (as indicated below by *).

Year 3

- *ACCT 3332.1(.2) Planning and Control – see Note (i)
- FINA 2360.1(.2) Business Finance I
- FINA 3361.1(.2) Business Finance II
- MGMT 3480.1(.2) Ethical Responsibilities of Organizations
- *MGSC 3317.1(.2) Operations Management
- *Three (3) credit hours in Accounting electives
- *Six (6) credit hours in Marketing electives
- Three (3) credit hours in Commerce electives
- Three (3) credit hours in free electives

Year 4

- *MGMT 3385.1(.2) Human Resource Management
- *MGMT 3386.1(.2) Industrial Relations
- *MGMT 4481.1(.2) Organization Theory: Structure, Process, Analysis and Design
- MGMT 4489.1(.2) Strategic Management
- *Three (3) credit hours in Finance electives
- Twelve (12) credit hours in non-Commerce electives
- Three (3) credit hours in free electives

Note: (i) Students cannot receive credit for both ACCT 3332 and Acct 3333.

Graduate Studies

For information on graduate courses and programs see *the Graduate Academic Calendar*.

Course Descriptions

1281.1(.2) Introduction to Business Management

The purpose of this course is to introduce the student to the various aspects of business in the Canadian environment. Emphasis will be placed on the functional areas of marketing, production, finance, and the individual in the organization. In addition, the process of management will be outlined and evolving changes in management practices discussed. Current issues such as social responsibility, business ethics and the role of business in the community will be examined. Teaching methods will include lectures, group presentations and discussions of cases as well as other exercises.

2383.1(.2) Micro Organizational Behavior

Prerequisite: MGMT 1281.1(.2).

This course focuses on the micro aspects of organizational behavior. Topics covered include human needs and motivation, learning, perception, and attribution, as these relate to individuals and groups in organizations. Teaching methodology includes lectures, discussions and case analysis.

2384.1(.2) Macro Organizational Behavior

Prerequisite: MGMT 1281.1(.2).

This course focuses on macro aspects of organizational behavior. Topics covered include group processes and their relationship to effectiveness, inter-group cooperation and conflict, organizational character, structure, environment and culture, leadership, communication, decision making and organizational change and development.

3380.1(.2) Family Business

Prerequisite: completion of at least sixty (60) credit hours.

This course is designed to examine the dynamics of family-owned businesses which have problems peculiar to the family orientation. It covers issues such as income vs. inheritance, management and promotion, bringing non-family resources to the firm, harvest and sell out strategies, succession, deciding to join the family firm, establishing credibility as a daughter or son, stages of family business growth, and strategic planning.

Classes 1 1/2 hrs. and seminars 1 1/2 hrs. a week. 1 semester.

212 Management

3385.1(.2) Human Resource Management

Prerequisite: MGMT 2383.1(.2) and 2384.1(.2) or PSYC 3327.1(.2) and 4427.1(.2).

A study of the conceptual and practical aspects of the human resource management function in organizations, with a special emphasis on business organizations. The course focuses on the major issues, procedures and problems involved in human resource planning, recruitment and selection, compensation, training and development, and maintenance of human resources.

3386.1(.2) Industrial Relations

Prerequisite: MGMT 2383.1(.2) and 2384.1(.2) or PSYC 3327.1(.2) and 4427.1(.2).

An introduction to the field of industrial relations. It focuses on the impact of collective bargaining in management/labour relations. Topics covered include the historical development, structure, and operation of labour unions, the process and contents of negotiations and the settlement of union/management disputes.

3389.1(.2) Structuring the Start-Up

Prerequisite: ACCT 2242.1(.2) and MKTG 2270.1(.2).

This course uses lectures, problems and cases to develop the students' ability to plan the human, material and economic aspects of the business start-up, whether it is de novo, a franchise, or a buy-out.

Classes and case study 3 hrs. a week. 1 semester.

3392.1(.2) Occupational Health and Safety

Prerequisite: completion of at least sixty (60) credit hours.

This course examines current issues in occupational health and safety including employee/union involvement, government regulation, inspections and compliance auditing.

Classes 1 1/2 hrs. and seminars 1 1/2 hrs. a week. 1 semester.

3480.1(.2) Ethical Responsibilities of Organizations

Prerequisite: completion of at least sixty (60) credit hours.

The purpose of the course is to help students bring ethics into their decision making. Ethics will be defined in a broad, contextual, and practical sense. The course focuses on the individual decision maker, the organization as a context and culture that sets the stage for ethical action, and the broader societal, economic, political, and ecological systems that influence moral decision making.

4481.1(.2) Organization Theory: Structure, Process, Analysis and Design

Prerequisite: COMM 2293.1 (.2) and MGMT 2383.1(.2) and 2384.1(.2) or PSYC 3327.1(.2) and 4427.1(.2).

In a systems context, the first phase of the course will expose the student to different concepts of formal organization. The second phase will involve the application of concepts using various design approaches and configurations.

4482.1(.2) Staffing and Selection

Prerequisite: COMM 2293.1 (.2) and MGMT 3385.1(.2) or PSYC 3327.1(.2) and PSYC 4427.1(.2).

This course examines the issues involved in recruiting applicants for job vacancies and the procedures for assessing the match between candidates and the requirements of the position. The examination of the topic will include consideration of statistical and scientific issues and the practical implications.

Notes: (a) Students cannot receive credit for both Mgmt 4482 and Psyc 4428.

(b) Students who have previously earned credit for MGT 486 may not also earn credit for MGMT 4482.

4483.1(.2) Management Skills I

Prerequisite: COMM 2293.1 (.2) and MGMT 2383.1(.2) and 2384.1(.2) or PSYC 3327.1(.2) and 4427.1(.2).

This course presents the key skills/behaviors considered critical in achieving managerial success. Though there is a theoretical component in the course, much of its development is dependent on each participant's strengths and weaknesses. Individual skill development through activities such as class discussions, role-plays, experimental exercises and feedback on interactions are central to the learning experience within the course.

4485.1(.2) Wage and Salary Administration

Prerequisite: COMM 2293.1 (.2) and MGMT 3385.1(.2) or PSYC 3327.1(.2) and 4427.1(.2).

This course is designed to integrate compensation systems with employment planning, career development, and organizational planning concepts.

4486.1(.2) Training and Development

Prerequisite: COMM 2293.1 (.2) and MGMT 3385.1(.2) or PSYC 3327.1(.2) and 4427.1(.2).

This course examines the organizational procedures for analyzing training needs and the subsequent phases of developing and evaluating training program effectiveness. The course will also address organizational activities associated with preparing and developing employees as part of their careers in an organization.

Notes: (a) Students cannot receive credit for both Mgmt 4486 and Psyc 4426.

(b) Students who have previously earned credit for MGT 486 may not also earn credit for MGMT 4486.

4487.1(.2) New Venture Opportunities

Prerequisite: COMM 2293.1 (.2) and MGMT 3389.1(.2).

Students are led through the development of the major elements of a business plan for a new venture. As a planning and financing tool, the business plan outlines in detail and specifically quantifies market potential, competition, production and operational requirements,

finance, management and the overall feasibility of a possible new venture.

4488.1(.2) International Business Management

Prerequisite: completion of at least sixty (60) credit hours and COMM 2293.1 (.2).

An introduction to the nature of environment of international business management including the study of multinational corporations, intercultural differences and their effects on management style and policy and execution. The focus of discussion and presentation will be on management systems in North and South America, Europe, Middle East, South-East Asia, China, and Japan.

4489.1(.2) Strategic Management

Prerequisite: COMM 2293.2 (.2), FINA 3361.1(.2), MKTG 2270.1(.2), MGMT 2383.1(.2), MGMT 2384.1(.2), and six (6) additional credit hours at the 3000-level from ACCT, ECON, MGMT, FINA, MKTG, or MGSC.

This is a “capstone” course that attempts to utilize all the business disciplines (management, marketing, finance, accounting, etc.) in an effort to identify, diagnose, and recommend appropriate action for real managerial problems. It is hoped that through this course, students will gain a better understanding of the complexity and interrelationship of modern managerial decision making. It is also hoped that this exposure will facilitate the students’ ability to analyze complex problem situations.

4493.1(.2) Business-Government Relations in Canada

4494.1(.2) Entrepreneurship: Theories and Concepts

Prerequisite: COMM 2293.1 (.2) and completion of at least sixty (60) credit hours.

Through lectures and seminars, this course covers the nature of entrepreneurship, theories of entrepreneurship, characteristics and behaviors of entrepreneurs, the entrepreneur as catalyst for economic activity, application of the concepts of entrepreneurship to public and non-profit enterprises both large

4495.1(.2) Small Business Performance Improvement

Prerequisite: COMM 2293.1 (.2) and completion of at least sixty (60) credit hours.

This course requires students to work with a small business owner/manager to identify a small business problem, to develop a workable solution to the problem, and to implement that solution.

4496.1(.2) Collective Bargaining

Prerequisite: COMM 2293.1 (.2) and MGMT 3386.1(.2).

An examination of the process of collective bargaining and its role in management-union relations. The course examines the nature of negotiation, its characteristics, the roles of power, persuasion, communication, social structure, negotiating strategies and tactics, and negotiators’ personalities. Grievance handling as a form of negotiation is also examined.

4497.1(.2) Issues in Industrial Relations

Prerequisite: COMM 2293.1 (.2) and MGMT 3386.1(.2).

An examination of some of the important issues related to industrial relations. Examples include employment statutes, human rights legislation, collective bargaining in the public sector, and the settlement of management-union disputes. Topics may be slightly varied depending on emerging issues and the interests of instructor and students.

4498.1(.2) Small Business Consultancy

Prerequisite: COMM 2293.1 (.2) and permission of instructor.

This course allows students to gain hands-on business experience by working with clients of the Saint Mary’s University Business Development Centre. Student groups receive a project proposal outlining the requirements, information needs and services they will provide the client during the semester. Projects generally take the form of a business plan, market study, or other business-related function and often involve financial projections. Each project provides students an opportunity to use skills learned in business courses and to understand the interrelationship between marketing, accounting, finance, and management in a practical business setting. Under supervision, students prepare a professional report and final presentation that communicate the project’s results for the client.

Work groups often include students from different business disciplines and are assigned based upon the needs of the project. Groups schedule their preferred meeting times but are required to meet a minimum of three hours each week. For more information see <http://www.smu.ca/smubdc>.

Internship. 1 semester.

4499.1(.2) Senior Management Perspectives

4826.1(.2) – 4849.1(.2) Special Topics/Seminars in Management

Prerequisite: COMM 2293.1 (.2) and completion of at least sixty (60) credit hours and permission of instructor.

These courses deal with selected topics in the management area. The topics to be covered will vary depending on the interests of the students and instructors.

Seminar 3 hrs. a week. 1 semester.

4876.1(.2) – 4899.1(.2) Directed Study

Prerequisite: COMM 2293.1 (.2). and permission of Chairperson and instructor.

Intended to supplement or provide an alternative to the regular management courses in order to meet the special needs and interests of students, the course provides an opportunity to study a particular subject in detail and requires from the student some measure of independence and initiative.

Tutorial and independent study. 1 semester. and small, entrepreneurship in developing and developed economies.

Management Science (MGSC)

Chairperson, Professor D. Jutla,
Professors T. Charles, P. Dixon, E. Lee, H. Millar
Associate Professors S. Amirkhalkhali, M. Wang
Assistant Professor M. Zhang

Management Science courses are offered by the Department of Finance, Information Systems, and Management Science.

Course Descriptions

1205.1(.2) Quantitative Methods I

Prerequisite: Nova Scotia Pre-Calculus Mathematics or Mathematics 12 Academic; or equivalent.

This course illustrates applications of basic mathematical techniques in decision-making such as break-even analysis, data manipulation, aggregate planning and financial planning. Topics include linear functions and equations, linear programming and the simplex method, compound interest and annuities.

1206.1(.2) Quantitative Methods II

Prerequisite: Nova Scotia Pre-Calculus Mathematics or Mathematics 12 Academic; or equivalent.

Note: No credit will be given for MGSC 1206.1(.2) if taken subsequently to or concurrently with MATH 1210.1(.2).

The purpose of this course is to provide a basic understanding of the dynamics of non-linear functions as they relate to the economic use of scarce resources. Students will be exposed to the basic methods of calculus and the concepts of probability as they relate to decision making in an uncertain environment.

2207.1(.2) Introductory Statistics

Prerequisite: MGSC 1206.1(.2).

This course is designed to introduce some common decision aids for coping with uncertainty. Topics include: data collection, summarization and presentation, reporting and interpreting the accuracy of results, evaluating the effectiveness of a decision and determining relationships among factors for the purpose of prediction. Examples will be drawn from a variety of fields and disciplines. Since the analysis of data will involve the use of a computer, it is strongly recommended that a course such as CISY 1225.1(.2) be completed beforehand.

Note: Students may receive credit for only one of the following towards the Bachelor of Commerce: MGSC 2207, PSYC 2350, SOCI 2365, GEOG 3326, BIOL 2308, EGNE 2309, MATH 1207, or MATH 1216.

3317.1(.2) Operations Management

Prerequisite: MGMT 1281.1(.2), MGSC 1205.1(.2) and MGSC 2207.1(.2).

This course addresses operations issues that contribute to how firms compete with respect to cost, quality, time and flexibility. Topics include project management, product/service and process design, process flows, quality, and supply chain management (including forecasting, inventory management, JIT, and supplier relations). Examples will be drawn from both service and manufacturing sectors.

4491.1(.2) Small Business Consultancy

Prerequisite: COMM 2293.1 (.2) and permission of Chairperson.

This course allows students to gain hands-on business experience by working with clients of the Saint Mary's University Business Development Centre. Student groups receive a project proposal outlining the requirements, information needs and services they will provide the client during the semester. Projects generally take the form of a business plan, market study, or other business-related function and often involve financial projections. Each project provides students an opportunity to use skills learned in business courses and to understand the interrelationship between marketing, accounting, finance, and management in a practical business setting. Under supervision, students prepare a professional report and final presentation that communicate the project's results for the client.

Work groups often include students from different business disciplines and are assigned based upon the needs of the project. Groups schedule their preferred meeting times but are required to meet a minimum of three hours each week. For more information, see <http://www.smu.ca/smubdc>. Internship. 1 semester.

4826.1(.2) – 4849.1(.2) Special Topics/Seminars in Management Science

Prerequisite: COMM 2293.1 (.2) and permission of Chairperson.

This course deals with selected topics in management science. It is offered when in sufficient demand, and specific topics covered may vary depending on the interests of students and instructor.

4876.1(.2) – 4899.1(.2) Directed Study

Prerequisite: COMM 2293.1 (.2) and permission of Chairperson.

Intended to supplement or provide an alternative to the regular management science courses in order to meet the special needs and interests of students, the course provides an opportunity to study a particular subject in detail and requires from the student some measure of independence and initiative.

Marketing (MKTG)

Chairperson, Associate Professor	H. Ogden
Professors	C. Kim
Associate Professors	G. Fullerton, R. Venkat
Assistant Professors	V. Creelman, K. Grandy, M. Morales, D. Wadden

The Department of Marketing offers a program for marketing majors which, in addition to the general requirements for a Bachelor of Commerce degree as outlined in Section 3 of this *Calendar*, requires students to take MKTG 3376.1(.2) (Consumer Behaviour), MKTG 3378.1(.2) (Marketing Research), MKTG 3379.1(.2) (Marketing Management), MKTG 4479.1(.2) (Marketing Policy) and six (6) credit hours additional electives. For additional information, students should consult the Chairperson and/or faculty advisors. The Department administers the communications courses [COMM 2293.1(.2) and COMM 3394.1(.2)] described earlier in this *Calendar*.

Graduate Studies

For information on graduate courses see the *Graduate Academic Calendar*.

Upon completion of 45 credit hours, Commerce students with a cumulative grade point average of 2.0 may elect to declare a major in Marketing. (In exceptional circumstances, students can also be admitted to the major by permission of the Chairperson.)

To assist students, the Year 3 and Year 4 course requirements for a General Business Studies major and the core BComm degree program requirements are listed below. Course descriptions follow.

To complete a major in Marketing, students must attain a minimum grade point average of 2.2 in MKTG 2270 and the 3rd and 4th year MKTG courses (as indicated below by *).

Year 3

FINA 2360.1(.2) Business Finance I
 FINA 3361.1(.2) Business Finance II
 MGMT 3480.1(.2) Ethical Responsibilities of Organizations
 *MKTG 3376.1(.2) Consumer Behaviour
 *MKTG 3378.1(.2) Marketing Research
 *MKTG 3379.1(.2) Marketing Management
 Nine (9) credit hours in non-Commerce electives
 Three (3) credit hours in free electives

Year 4

MGMT 4489.1(.2) Strategic Management
 *MKTG 4479.1(.2) Marketing Policy
 *Six (6) credit hours in Marketing electives
 Six (6) credit hours in non-Commerce electives
 Twelve (12) credit hours free electives

Course Descriptions

2270.1(.2) Introduction to Marketing

Prerequisite: MGMT 1281.1(.2), and ECON 1201.1(.2) and 1202.1(.2).

Students are introduced to the basic marketing tools - segmentation, positioning, product, price, distribution, and promotion. Marketing research, buyer behaviour, planning, marketing in a global setting, and the relationship between marketing and society are also introduced. Teaching methods include lecture, current readings, videos, class exercises and case analysis.

3375.1(.2) International Marketing

Prerequisite: MKTG 2270.1(.2).

Students explore the economic, cultural, political, and legal aspects of international marketing, together with international product policy, distribution, pricing, and promotion. International consumerism, research, and management issues are also addressed.

3376.1(.2) Consumer Behaviour

Prerequisite: MKTG 2270.1(.2).

Students gain an understanding of the social, cultural, and psychological factors influencing consumer behaviour and of the implications of consumer behaviour to marketing strategies. Topics include consumers' needs, attitudes, learning, decision making, consumption patterns, cultures, and life styles.

3378.1(.2) Marketing Research

Prerequisite: MGSC 2207.1(.2) and MKTG 2270.1(.2).

Students are introduced to applied marketing research. Topics include preparation and evaluation of research proposals, evaluation of secondary data, design of research instruments, sampling, data collection, data analysis using statistical packages, and preparation and evaluation of research reports.

3379.1(.2) Marketing Management

Prerequisite: MKTG 2270.1(.2), ACCT 2242.1(.2), and COMM 2293.1(.2).

The objective of this course is to better equip students with the necessary analytic and communication skills to succeed as marketing managers. The focus is on practical applications. Course activities may include discussions, case analyses, simulation games, secondary research and field research projects. The course focuses on skill development and on integration of all decision areas in marketing.

4462.1(.2) Services Marketing

Prerequisite: MKTG 3379.1(.2) and COMM 2293.1(.2).

Students will be exposed to conceptual and managerial issues in the marketing of services. Topics include marketing

and service organizations, service-quality management, service marketing mix, marketing strategies for profit and non-profit service organizations, international and emerging perspectives on service marketing. Students will develop strategies for specific service areas such as health care or tourism.

4470.1(.2) Ethical Issues in Marketing Management

Prerequisite: MKTG 3379.1(.2) and COMM 2293.1 (.2).

Students explore the moral and social consequences of marketing decisions on the major stakeholder groups: customers and clients, channel members, suppliers, governments, public-interest groups, and society. The obligations and responsibilities of marketing managers to these groups are also discussed.

4471.1(.2) Integrated Marketing Communications

Prerequisite: MKTG 3379.1(.2) and COMM 2293.1 (.2).

Students study models of interpersonal and mass communications and the various promotional crafts: advertising, sales promotion, publicity, public relations, and personal selling, with a focus on integrating these into a coherent communications strategy. Marketing communications implications inherent in product pricing, design, packaging, and distribution are also examined.

4473.1(.2) Management of Marketing Channels

Prerequisite: MKTG 3379.1(.2) and COMM 2293.1 (.2).

Students examine the complex path from manufacturer or producer to end-user: the structure of marketing channels, the responsibilities of each member, the factors affecting channel effectiveness, the methods for developing and managing effective channel relationships.

4474.1(.2) Personal Selling and Sales Management

Prerequisite: MKTG 3379.1(.2) and COMM 2293.1 (.2).

Students study the theories and skills required for effective personal selling; for recruiting, training, compensating, and motivating sales personnel; and for managing the total selling effort.

4478.1(.2) Retail Management

Prerequisite: MKTG 3379.1(.2) and COMM 2293.1 (.2).

Students undertake a comprehensive study of the activities involved in retailing goods and services to consumers. Topics include the evolution of retailing, shopping behaviour, retail marketing strategies, and emerging trends.

4479.1(.2) Marketing Policy

Prerequisite: COMM 2293.1 (.2), MKTG 3376.1(.2), 3378.1(.2), and 3379.1(.2).

Students integrate the material learned in the prerequisite, upper-division marketing courses to analyze marketing opportunities, develop and evaluate marketing strategies, and develop and evaluate marketing plans.

Teaching methods include case analyses, field projects, and/or computer simulation games.

4495.1(.2) Business Consultancy

Prerequisite: COMM 2293.1 (.2) and MKTG 3379.1(.2) (which may be taken concurrently) and permission of instructor.

This course allows students to gain business experience by working for clients of the Saint Mary's University Business Development Centre.

Student groups receive a project proposal outlining the requirements, information needs, and services they will provide the client during the semester. Projects generally take the form of a business plan, market study, or other business-related function and often involve financial projections. Each project provides students an opportunity to use skills learned in business courses and to understand the interrelationship between marketing, accounting, finance, and management in a practical business setting. Under supervision, students prepare a professional report and final presentation that communicate the project's results for the client.

Work groups often include students from different business disciplines and are assigned based upon the needs of the project. Groups schedule their preferred meeting times but are required to meet a minimum of three hours each week. For more information see <http://www.stmarys.ca/smubdc>.

Internship. 1 semester.

4826.1(.2) – 4849.1(.2) Special Topics/Seminars in Marketing

Prerequisite: MKTG 3379.1(.2) and COMM 2293.1 (.2).

Students have the opportunity for in-depth study of selected topics in marketing. Topics selected for discussion are at the discretion of the instructor, with approval of the Department. Issues to be discussed may include such topics as marketing productivity, marketing auditing, marketing models, social issues in marketing. Topics will vary from year to year. The course may be repeated for credit hours when topics vary.

Tutorial and independent study. 1 semester.

4876.1(.2) – 4899.1(.2) Directed Study

Prerequisite: COMM 2293.1 (.2) and permission of Chairperson and instructor.

Intended to supplement or provide an alternative to the regular marketing courses in order to meet the special needs and interests of students, the course provides an opportunity to study a particular subject in detail and requires from the students some measure of independence and initiative.

Tutorial and independent study. 1 semester.

Mathematics (MATH)

Chairperson, Associate Professor	S. Konstantinidis,
Professors	R. Dawson, A. Finbow, B. Hartnell, P. Lingras, P. Muir
Associate Professors	W. Finden, B. Khan, S. Oore, P. Scobey
Assistant Professors	W. Finbow-Singh, J. Irving, N. Linney
Adjunct Professors	R. Haynes, P. Keast, J. MacInnes, L. Oliver
Computing Science Advisor:	N. Linney
Co-op Advisor:	B. Khan

The Department of Mathematics and Computing Science offers a broad range of courses, including introductory courses intended for students with little mathematical or computing science background; preparatory courses for students intending to enter fields requiring mathematics or computing science; and specialized courses for more advanced mathematics and computing science students.

Notes:

- Students must obtain formal Departmental approval of their program at the time of their declaration to enter the major or honours program, as well as for any subsequent changes.
- Students taking a major or honours in mathematics are permitted credit for at most one of BIOL 2308.1(.2), ECON 2207.1(.2), MATH 1207.1(.2), MGSC 1207.1(.2), or PSYC 2350.1(.2); and shall not be permitted credit for any of these courses simultaneously with or subsequent to MATH 1216.1(.2) or 2316.1(.2).
- Major and honours students in mathematics can use CSCI courses to satisfy Faculty of Science regulation 6e or 12b.

Requirements for a Major in Mathematics

A major in mathematics can be completed in either a Bachelor of Arts and Bachelor of Science .

- MATH 1210.1(.2)/1211.1(.2)
- Either CSCI 1226.1(.2) and 1227.1(.2); or b) CSCI 1228.1(.2) and one of MATH 1216.1(.2) or any 3 credit hour CSCI course.
- MATH 2310.1(.2)/2311.1(.2)
- MATH 2320.1(.2)/2321.1(.2)
- MATH 4420.1 (.2) and MATH 4441.1 (.2)
- Six(6) credit hours in mathematics at the 3000 level or above
- Twelve (12) additional credit hours in mathematics courses numbered 1216 or 2305 or above, chosen by the student in consultation with the Department.

A suggested program sequence for a B.Sc. with major in Mathematics is as follows:

Year 1

MATH 1210.1(.2) Introductory Calculus I
 MATH 1211.1(.2) Introductory Calculus II
 CSCI 1226.1(.2) Intro to Computing Science

CSCI 1227.1(.2) Intermediate Programming
 ENGL 1205.1(.2) Introduction to Literature
 Three (3) credits hours Humanities electives
 Six (6) credits hours Arts electives
 Six (6) credit hours non-Mathematics Science electives

Year 2

MATH 2310.1(.2) Intermediate Calculus I
 MATH 2311.1(.2) Intermediate Calculus II
 MATH 2320.1(.2) Linear Algebra I
 MATH 2321.1(.2) Linear Algebra II
 Six (6) hours Mathematics electives (1216 or 2305 and above)
 Six(6) credits hours Arts electives
 Six (6) credit hours non-Mathematics Science electives

Year 3

Six(6) hours Mathematics electives (1216 or 2305 and above)
 Twenty-four (24) credit hours electives

Year 4

MATH 4420.1(.2) Abstract Algebra I
 MATH 4441.1(.2) Real Analysis I
 Six (6) hours Mathematics electives at 3000 level or above
 Eighteen (18) credit hours electives

Requirements for a Double Major in Mathematics and a subject other than Computing Science or Physics

The Departmental requirements for a double major in mathematics and a subject other than computing science or physics are the same as the requirements for a major in mathematics except that students need not complete MATH 4421.1(.2) and MATH 4441.1(.2).

Requirements for Honours in Mathematics

The honours program is designed for mathematics majors of above average ability. Mathematics majors in Year 2 with an overall quality point average of at least 2.50, and with a quality point average of at least 3.00 in their mathematics courses, should consider enrolling in the honours program, and are advised to consult with the Department before making a final decision. Students are required to achieve a degree GPA of at least 3.00 to graduate with Honours.

The Departmental requirements for honours in mathematics are:

- MATH 1210.1(.2)/1211.1(.2)
- Either a) CSCI 1226.1(.2) and 1227.1(.2) or b) CSCI 1228.1(.2) and one of MATH 1216.1(.2) or any 3 credit hour CSCI course.
- MATH 2310.1(.2)/2311.1(.2)
- MATH 2320.1(.2)/2321.1(.2)
- MATH 4420.1(.2), 4421.1(.2), 4441.1(.2) and 4442.1(.2).
- A minimum of thirty (30) additional credit hours in mathematics courses numbered 1216 or 2305 or above, chosen by the student in consultation with the

Department. At least twelve (12) credit hours must be at the 3000 level or above.

A suggested program sequence for a B.Sc. with honours in Mathematics is as follows:

Year 1 and 2 same as for Major above

Year 3

Six (6) hours Mathematics electives at 3000 level or above
Twelve(12) hours Mathematics electives (1216 or 2305 and above)

Twelve (12) credit hours electives

Year 4

MATH 4420.1(.2) Abstract Algebra I

MATH 4421.1(.2) Abstract Algebra II

MATH 4441.1(.2) Real Analysis I

MATH 4442.1(.2) Real Analysis II

Six (6) hours Mathematics electives at 3000 level or above

Twelve (12) credit hours electives

Requirements for a Double Honours in Mathematics and a subject other than Computing Science or Physics

The Departmental requirements for a double honours in mathematics and a subject other than computing science or physics are the same as the requirements for a major in mathematics plus six (6) additional credit hours in mathematics courses numbered 3000 level or above.

Concentration in Mathematics (B.A.-3 year)

To obtain a concentration in Mathematics in partial fulfillment of the B.A. General degree (i.e., one with Double Arts Concentrations and a minimum of ninety (90) credit hours), a minimum of twenty-four (24) credit hours in MATH is required; also a minimum cumulative quality point average of 2.00 is required. Further details are available from the chairperson.

Concentration in Mathematics (B.Sc. – 3 year)

To obtain a B.Sc. General with a concentration in Mathematics, a student must complete the equivalent of thirty (30) credit hours in mathematics in addition to satisfying Faculty of Science regulations for the B.Sc. These courses must include:

- a. MATH 1210.1(.2), 1211.1(.2), 2310.1(.2), 2311.1(.2), 2320.1(.2), and 2321.1(.2) (18 credit hours)
- b. An additional twelve (12) credit hours in mathematics numbered 1200 or above.

Requirements for a Minor in Mathematics

It is possible to minor in mathematics by completing the equivalent of thirty (30) credit hours in mathematics in addition to satisfying Faculty of Science regulations for a minor. These courses must include:

- a. MATH 1210.1(.2), 1211.1(.2), 2310.1(.2), 2311.1(.2), 2320.1(.2), and 2321.1(.2) (18 credit hours)
- b. An additional twelve (12) credit hours in mathematics numbered 1200 or above.

Requirements for a Double Major or Double Honours in Mathematics and Physics

Detailed requirements for these programs are found above in the Department of Astronomy and Physics.

Certificate in the Mathematical Sciences for Education**1. Introduction**

The Certificate in the Mathematical Sciences for Education is intended to provide holders of a Bachelor of Education (B.Ed.) degree with a broad background in mathematics, statistics, and computing science, enabling them to teach high school mathematics courses effectively. Teachers who complete this program will have a deep understanding of the mathematics that they teach, and a familiarity with the various contexts in which their own university-bound students will use that mathematics. A teaching methods course is an integral part of this program.

2. Admission

To gain entry to this program, students must have a B.Ed. (or equivalent). They must also have at least Grade 12 precalculus mathematics (or equivalent) before starting MATH 1210. (Among possible equivalents are MATH 1190 and some non-credit courses offered at Saint Mary's. **Note:** these do not form part of the Certificate Program.) Precalculus mathematics is not a prerequisite for MATH 1202.

Students must register in the actual program before starting courses.

3. Courses

Students must take at least thirty (30) credit hours as delineated below. Where the student has already obtained credit for one or more of these courses (or equivalents) as part of a program leading to an earlier certification by the Nova Scotia Department of Education, MATH or CSCI courses numbered 1200 or above and acceptable to the Department of Mathematics and Computing Science may be substituted. (Students should note that each individual's program must be approved ahead of time by the Registrar for Teacher Certification in order to be recognized for teacher certification in Nova Scotia.)

MATH 1190.1(.2) Pre-Calculus Review

MATH 1202.1(.2) Concepts and Topics in Mathematics

MATH 1203.1(.2) Concepts in High School Mathematics

MATH 1204.1(.2) Introduction to Geometry

MATH 1210.1(.2) Intro Calculus I

MATH 1211.1(.2) Intro Calculus II

MATH 1216.1(.2) Intro Mathematical Statistics

CSCI 1226.1(.2) Introduction to Computing Science and Programming

MATH 2320.1(.2) Linear Algebra I

EDUC 2523.1(.2) Mathematics

4. To obtain the Certificate, a student in this program must achieve a minimum grade of C in all courses forming part of the certificate and hence have a minimum cumulative quality point average of 2.00.

5. The Department of Mathematics and Computing Science restriction on receiving credit for an advanced course, and then receiving credit for a course prerequisite to the advanced course, and the restriction on taking MATH 1207.1(.2) and MATH 1216.1(.2), do not apply to this Certificate program.

6. All courses must normally be taken at Saint Mary's University. In very exceptional circumstances, the Department of Mathematics and Computing Science may recommend to the Acting Dean of Education for one or more courses to be taken at another university on a Letter of Permission. Courses taken at or transferred from other universities must meet the program's requirement of a minimum grade of C.

7. A student who intends to use this program to obtain a license upgrade or other professional certification **MUST** obtain **prior** written approval from the appropriate authorities (in Nova Scotia, the Registrar for Teacher Certification). **The student is responsible for obtaining such approval**; Saint Mary's University takes no responsibility for the approval of individual programs of study.

Course Descriptions

0010.1(.2) Precalculus I

Elementary set theory and the real number system. Factorization. Inequalities, absolute values, and interval notation. Techniques of solving a variety of equations and inequalities in a single variable. The Cartesian plane and representation of ordered pairs of real numbers. Elements of analytic geometry. Relations, functions, and graphs, with emphasis on the polynomial, exponential, logarithmic functions, and polynomial and rational equations.

Classes 3 hrs. plus recitation 1 1/2 hrs. a week. 1 semester.

Note: This is a preparatory course. It does not carry a credit value; therefore it cannot be counted in the number of credits required for a degree, diploma or certificate.

0011.1(.2) Precalculus II

Prerequisite: MATH 0010.1(.2).

Trigonometry, inverse trigonometric functions. Complex numbers. Matrices, determinants, and system of equations. System of inequalities. Sequences and series. Permutations, combinations, and the binomial theorem. Mathematical induction.

Classes 3 hrs. plus recitation 1 1/2 hrs. a week. 1 semester.

Note: This is a preparatory course. It does not carry a credit value; therefore it cannot be counted in the number of credits required for a degree, diploma or certificate.

1190.1(.2) Pre-Calculus Review

Prerequisite: the equivalent of Nova Scotia pre-calculus Grade 12 which is the prerequisite for MATH 1210.1(.2).

The following topics will be covered, in greater depth than in Grade 12 Mathematics courses: Manipulation of algebraic expressions. Solving equations and inequalities. Functions and relations including discussion of polynomials, rational functions, trigonometric functions, inverse trigonometric functions, logarithms, and exponentials. Analytic Geometry. Derivatives and integrals of simple functions.

Classes 3 hrs. plus recitation 1 1/2 hrs. a week. 1 semester.

Notes: (i) Students who have passed MATH 1190.1(.2) are exempted from writing the pre-test for MATH 1210.1(.2).

(ii) MATH 1190.1(.2) is given in the fall and summer of each year; MATH 1210.1(.2) is given in the winter of each year; and MATH 1211.1(.2) is given in the summer of each year. Thus, if you do not meet or exceed the standards set by the department as indicated on the pre-test, it is possible to take MATH 1190.1(.2) and still complete the Calculus in one calendar year.

(iii) Students receiving a grade of less than C are advised not to proceed with MATH 1210.1(.2).

(iv) This course does not count as one of the mathematics credits required for the degree of Bachelor of Science, or towards the requirements for a major or honours in mathematics and computing science. Students should be aware, therefore, that they may not be able to qualify for graduation by completing the minimum number of courses originally stipulated for their program.

(v) This is a credit course but can only be counted as an elective.

1202.1(.2) Concepts and Topics in Mathematics

Prerequisite: Nova Scotia Academic Grade 12 Mathematics (or equivalent)

This course will deal with fundamental concepts and topics in Mathematics, including the axioms of arithmetic and algebra, the integer, rational, and real systems, sets and logic.

Note: This course is intended to provide the necessary MATH background for elementary teachers. Please note that this course may not be used by B. Sc. Students to satisfy the requirement of a science elective under regulations 3.e., 6.e., 10.c., and 12.b. for B.Sc. degrees.

Classes 3 hrs. and recitation 1.5 hrs. a week. 1 semester.

1203.1(.2) Concepts in High School Mathematics

Prerequisites MATH 1202.1(.2) and Nova Scotia Grade 12 Pre-Calculus MATH or equivalent.

This course will deal with the mathematical background of topics such as algebra, geometry, probability, and statistics that are in the Nova Scotian junior high and high school curriculum. This course, in conjunction with MATH 1202 and other courses, is intended to provide the necessary MATH background for junior high school teachers. The

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material will be covered in significantly greater depth than would actually be taught in the school classroom.

Classes 3 hrs. a week plus recitations 1.5 hrs. a week. 1 semester.

Note: Please note that this course may not be used by B. Sc. Students to satisfy the requirement of a science elective under regulations 3.e., 6.e., 10.c., and 12.b. for B.Sc. degrees.

1204 .1.(2) Introduction to Geometry

Prerequisite(s): MATH 1203.1(2) or Math 1210.1(2)

This course is an introduction to Euclidean geometry. It will cover coordinate, axiomatic, constructive, and transformational geometry with some emphasis on the concept of mathematical proof.

Note: This course is intended for secondary school teachers. It cannot be used as a science course as part of the Faculty of Science requirements.

1207.1(2) Survey of Statistics

Prerequisite: The equivalent of Nova Scotia Precalculus Mathematics 12 or Mathematics 12 Academic.

This course provides an introduction to statistics appropriate for high school teachers. The emphasis will be on developing a practical approach to data analysis rather than on mathematical theory. Topics will include exploratory data analysis, elementary probability theory, confidence intervals, hypothesis testing, ANOVA, and regression. As well, students will be introduced to the use of computers in data analysis.

Classes 3 hrs. plus recitation 1.5 hrs. a week. 1 semester.

Note: No credit will be given for this course simultaneously with or subsequent to credit given for BIOL 2308.1(2), ECON 2207.1(2), ECON 3303.1(2), MATH 1216.1(2), MGSC 2207.1(2), MGSC 3303.1(2), or PSYC 2350.1 (2). Please also note that this course may not be used by B. Sc. Students to satisfy the requirement of a science elective under regulations 3.e., 6.e., 10.c., and 12.b. for B.Sc. degrees.

1210.1(2) Introductory Calculus I

Prerequisite: The equivalent of Nova Scotia Grade Pre-calculus Mathematics 12.

This is a first course in calculus, intended for science and engineering students. Core topics include: functions, limits, continuity, differentiability; derivatives of algebraic and transcendental functions, L'Hôpital's Rule; curve sketching; optimization problems; antiderivatives; area under curves; the fundamental theorem of calculus.

Classes 3 hrs. plus recitation 1 1/2 hrs. a week. 1 semester.

Note: Students who do not meet or exceed the standards set by the department as indicated on at least one of the two pre-tests in this course will be required to withdraw from this

course and will be eligible to re-register only after successful completion of MATH 1190.1(2).

1211.1(2) Introductory Calculus II

Prerequisite: MATH 1210.1(2).

This is a continuation of MATH 1210.1(2), and is intended for science and engineering students. Core topics include: techniques of integration, applications of the definite integral (e.g. area, volume, arc length); improper integrals, separable differential equations; parametric equations, polar coordinates, sequences and series; power series; Taylor and Maclaurin series.

Classes 3 hrs. plus recitation 1 1/2 hrs. a week. 1 semester.

1212.1(2) Calculus II for Engineers

Prerequisite: MATH 1210.1(2).

Applications of integration: area between curves, volumes of revolution, work, average value of function. Techniques of integration: integration by parts, trigonometric integral, trigonometric substitutions, partial fractions, substitutions. More applications of integration: separable differential equations arc length, area of surface of revolution, applications to engineering such as moments, center of mass, hydrostatic pressure and force, applications to Economics and Biology. Parametrically defined curves, tangents, arc length, polar coordinates, areas and length in polar coordinates. Sequences and series, the integral test, and the comparison test, alternating series, absolute convergence. Power series, Taylor and MacLaurin series. The binomial series, approximation by Taylor polynomials.

Classes 3 hours plus recitations 1 1/2 hours a week. 1 semester.

Note: Since this course replaces MATH 1211.1(2) for engineering students only, these students cannot receive a credit for both MATH 1211.1(2) and MATH 1212.1(2).

1216.1(2) Introduction to Mathematical Statistics

Prerequisite: MATH 1210.1(2).

This course provides a mathematically rigorous introduction to statistics, based on calculus. Introductory probability theory is covered, including probability distributions and densities, random variables, the central limit theorem, and counting methods. Statistical inference is then covered, including estimation and confidence intervals, hypothesis tests—Specific methodologies such as regression and analysis of variance are discussed.

Classes 3 hrs. plus recitation 1 1/2 hrs. a week. 1 semester.

2301.1(2) Linear Algebra for Engineers

Prerequisite: MATH 1211.1(2)/1212.1(2).

Geometric vectors in three dimensions, dot product, norm cosine formulas, Schwartz inequality, and cross product. Equations of lines and planes, normal vectors. Complex numbers, the complex plane, real and imaginary parts, complex conjugate, magnitude and phase, Euler's formula, roots of unity, the elementary complex functions: sine, cosine, exponential and logarithm. Systems of equations, Gaussian elimination using matrices, row echelon form,

applications. Matrix algebra, matrix multiplication, matrix inverse, application to networks and graphs. Determinants and Cramers rule. Linear independence, bases, dimensions and rank. Linear transformations: definition and examples, null space and range. Eigenvalues and eigenvectors, applications, diagonalization of symmetric matrices. Inner product spaces, least squares problems, orthonormal sets, and Gram-Schmidt orthogonalization process.

Classes 3 hours plus recitation 1 1/2 hours a week. 1 semester.

Note: Students cannot receive credit for both MATH 2301.1(.2) and MATH 2320.1(.2).

2303.1(.2) Differential Equations for Engineers

Prerequisite: MATH 1212.1(.2) and 2301.1(.2). Students must co-register in MATH 2311.1(.2).

First order differential equations: separable equations; exact equations; integral equations; integrating factors; linear differential equations; modelling electric circuits. Second order differential equations: homogeneous linear equations; constant coefficient equations; Euler-Cauchy equations; Wronskian; non-homogeneous equations; undetermined coefficients; variation of parameters; modelling forced oscillations and resonance modelling electric circuits phasor methods for particular solutions. Power series solutions. Legendre's equation. Laplace transform, inverse transform. Linearity; transforms of derivatives and integral; s-shifting; t-shifting; unit step. Differentiation and integration of Laplace Transforms. Partial fractions method for inverse Laplace Transform. Applications to systems of differential equations, convolutions, the delta function, impulse response, transfer function. Periodic driving functions and Laplace Transforms. Fourier series; even and odd functions; half range expressions; Complex Fourier series; applications to systems driven by various periodic functions (e.g., square wave, saw tooth, etc.) The line spectrum.

Classes 3 hours plus recitation 1 1/2 hours a week. 1 semester.

2305.1(.2) Survey of Discrete Mathematics

Prerequisite: MATH 1210.1(.2)/1211.1(.2).

This course provides an overview of a number of topics in discrete mathematics including sets, set operations, logic, proof techniques such as mathematical induction and proof by contradiction, elementary counting techniques, networks, and applications.

Classes 3 hrs. plus recitation 1 1/2 hrs. a week. 1 semester.

Note: No credit will be given for this course simultaneously with or subsequent to MATH 1205.1(.2).

2308.1(.2) Introduction to Numerical Analysis

Prerequisite: MATH 1210.1(.2)/1211.1(.2), CSCI 1226.1(.2) or equivalent programming experience.

Discussion of errors in numerical analysis. Theoretical and practical considerations of numerical procedures in non-linear equations in one variable, systems of linear equations,

and systems of non-linear equations, interpolation, polynomial approximation and integration.

Classes 3 hrs. plus recitation 1.5 hrs. a week. 1 semester.

2310.1(.2) Introductory Analysis

Prerequisite: MATH 1210.1(.2)/1211.1(.2).

This course consists of the study of the "epsilon-delta" definition of limits and continuity; the least upper bound axiom; completeness of the real line; the intermediate value theorem; and the monotone convergence theorem. This course also provides an introduction to compactness in various forms. Infinite sequences and series are discussed from a more rigorous perspective than MAT 1211. These ideas are extended to two-dimensions and to the complex numbers. Additional topics may include: elementary asymptotics; the big-Oh notation; power series as generating functions; uniform convergence and uniform continuity; and Riemann sums and integration.

Classes 3 hrs. plus recitation 1 1/2 hrs. a week. 1 semester.

2311.1(.2) Intermediate Calculus

Prerequisite: MATH 1211.1(.2)

Limits and continuity of functions of several variables, partial derivatives, and the chain rule, directional derivatives and gradient vector, the total differential, tangent planes and normals to a surface, higher order partial derivatives, extrema of functions of two variables. The double integrals, iterated integrals, double integrals in polar coordinates, applications of double integrals, the triple integral, triple integrals in cylindrical and spherical coordinates, applications of triple integrals vector fields, divergence and curl of vector fields, line integrals, path-independent line integrals. Green's theorem, Stokes theorem, and the divergence theorem.

Classes 3 hrs. plus recitation 1 1/2 hrs. a week. 1 semester.

2315.1(.2) Introduction to Probability Theory

Prerequisite: MATH 1210.1(.2).

This course covers the probability theory which underlies fundamental statistical concepts. It assumes a good knowledge of first-year calculus, and may cover the following topics: probability, conditional probability, Bayes' Theorem, random variables, order statistics, discrete distributions, continuous distributions, expected values, moments, and special distributions including the Poisson, normal, binomial, exponential, and gamma distributions.

Classes 3 hrs. plus recitation 1 1/2 hrs. a week. 1 semester.

2320.1(.2) Linear Algebra I

Prerequisite: MATH 1210.1(.2)/1211.1(.2).

This course presents the basic concepts and techniques of linear algebra, including Gaussian elimination, matrix algebra, vector spaces, determinants, eigenvalues, eigenvectors, diagonalization and linear transformations, together with various applications and computational methods.

Classes 3 hrs. plus recitation 1.5 hrs. a week. 1 semester.

Note: Students cannot receive credit for both MATH 2320.1(.2) and MATH 2301.1(.2).

2321.1(.2) Linear Algebra II

Prerequisite: MATH 2320.1(.2).

This course continues MATH 2320.1(.2) with further concepts and theory of linear algebra. Topics include inner product spaces, orthogonality, Gram-Schmidt Process, linear transformations and their matrix representation, change of basis and similarity, further study of eigenvalues and eigenvectors, canonical forms, with applications to linear differential equations and quadratic forms.

Classes 3 hrs. plus recitation 1.5 hrs. a week. 1 semester.

2826.1(.2) – 2849.1(.2) Selected Topics in Numerical Analysis

Prerequisite: MATH 2308.1(.2) or permission of instructor.

Select topics for MATH 2308 may be further explored. Other topics may include linear least squares, eigenvalues and eigenvectors and optimization.

Classes 3 hrs. plus recitation 1.5 hrs. a week. 1 semester.

3401.1(.2) Sequences, Series and Improper Integrals

Prerequisite: MATH 2311.1(.2).

Infinite sequences and series, convergence tests, grouping and rearrangements, sequences and series of functions, pointwise and uniform convergence, power series, double sequences and series, differentiation under the integral sign, improper single and double integrals, functions defined by improper integrals, Fourier series and transforms.

3402.1(.2) Vector Calculus

Prerequisite: MATH 2311.1(.2) and 2320.1(.2).

Topology of R^n , open sets, closed sets, cluster points, compactness, connectedness, completeness. Transformations, linear transformations, continuity, Extreme and Intermediate Value Theorems, uniform continuity of transformations, differentiability of transformations. The chain rule, Taylor's Theorem, Implicit and Inverse function theorems, maxima and minima, the method of Lagrange multipliers. Multiple Integrals: existence, properties, change of variables theorem and evaluation of multiple integrals. A review of vector field theory, line and surface integrals, the integral theorems of Green and Stokes, the divergence theorem.

3405.1(.2) Differential Equations I

Prerequisite: MATH 1211.1(.2) or permission of instructor.

First-order equations and applications, first order linear differential equations and applications; solutions of homogeneous and non homogeneous equations including undetermined coefficients and variation of parameters; Euler-Cauchy equations; Laplace transforms and inverse Laplace transforms including s-shifting and t-shifting,

Heaviside function, system of differential equations, the Dirac δ -function, convolution; Fourier series and complex Fourier series

Classes: 3 hours plus recitations 1 ½ hour a week. 1 semester..

Note: Students cannot receive credit for both MATH 2303.1(.2) and MATH 3405.1(.2).

3406.1(.2) Differential Equations II

Prerequisite: MATH 2311.1(.2); MATH 2303.1(.2) or MATH 3405.1(.2); MATH 2301.1(.2) or MATH 2320.1(.2). Students who do not meet these exact prerequisites may be permitted to take this course with permission of instructor.

Theory of systems of linear differential equations, linear systems with constant coefficients, solution by matrix methods, applications. Nonlinear differential equations: existence and uniqueness of solutions, stability and the phase plane, Liapunov Method, various equations occurring in applications are qualitatively analyzed, chaos, and bifurcation.

3415.1(.2) Mathematical Statistics

Prerequisite: MATH 2311.1(.2) and a course in computer programming language.

This course studies mathematical foundations of statistics, including both parametric and non-parametric inferences. Emphasis is placed on the properties of random variables and their distributions. The estimation of parameters by using sample statistics and tests of related hypotheses are included. Applications to computer science are studied.

3416.1(.2) Mathematical Probability

Prerequisite: MATH 2311.1(.2) or permission of instructor.

The aim of the course is to introduce students to mathematical (non-measure-theoretic) foundations of probability and elements of stochastic processes. The topics include conditional probabilities, conditional distributions, characteristic functions, limit theorems, Markov chains and Markov processes, birth and death processes and elementary queuing theory.

3456.1(.2) Introduction to Applied Mathematics I

Prerequisite: MATH 2303.1(.2) or 3405.1(.2).

Pointwise and uniform convergence of sequences and series of functions. Tests for uniform convergence, continuity, integral, and differentiability of functions defined by sequences and series. Pointwise and uniform convergence of improper integrals depending on a parameter. Tests for uniform convergences of improper integrals, consequences of uniform convergence of improper integrals, Gamma and Beta functions. Series solutions of Bessel, Legendre, and hypergeometric equations and their elementary properties. Two point boundary value problems, Green's functions, Sturm-Liouville problems, eigenfunction expansions. Fourier series and Fourier integrals.

3457.1(.2) Introduction to Applied Mathematics II

Prerequisite: MATH 3456.1(.2).

Classification of partial differential equations, linear and quasilinear first order equations, method of Lagrange. Classification and solutions of second order linear partial differential equations, the canonical forms. Modeling of wave, heat, and Laplace equations. Separation of variables, Green's functions, and Integral Transform methods. Existence and uniqueness theorems, numerical methods.

4408.1(.2) Numerical Solution of Initial Value Problems

Prerequisite: MATH 2308.1(.2) or permission of instructor.

This course considers the numerical solution of initial value ordinary differential equations. Topics may include multi-step methods, Runge-Kutta methods, stability, stiffness, step-size selection, local error, etc.

4409.1(.2) Numerical Solution of Boundary Value Ordinary Differential Equations

Prerequisite: MATH 2308.1(.2) or permission of instructor.

This course is concerned with the numerical solution of boundary value ordinary differential equations. Topics may include finite difference methods, shooting methods, collocation methods, conditioning, mesh selection, error estimation, etc.

4420.1(.2) Abstract Algebra I

Prerequisite: MATH 2321.1(.2) or permission of instructor.

The study of algebraic structures, such as groups, rings, fields, posets, graphs, or universal algebras. The major emphasis will be on derivation of theory, with inclusion of applications and examples.

4421.1(.2) Abstract Algebra II

Prerequisite: MATH 4420.1(.2) or permission of instructor.

The further study of algebraic structures and their applications.

4426.1(.2) Introduction to Combinatorics

Prerequisite: MATH 2311.1(.2) or 2320.1(.2) or permission of instructor.

This course will introduce the student to various enumeration techniques and will include such topics as permutations and combinations, recurrence relations and generating functions. Various finite structures and their applications will also be studied.

4427.1(.2) Computational Methods in Graph Theory

Prerequisite: MATH 2311.1(.2) or 2320.1(.2) or permission of instructor.

This course discusses various graph theoretic algorithms and their application to different problems. Topics to be discussed will be chosen from the following: the connector problem, the shortest path problem, the Chinese Postman problem and Euler trails, matchings and their applications to the personnel and optimal assignment problems, colouring

problems (with reference to timetabling) and flows in networks.

4430.1(.2) Set Theory

Prerequisite: MATH 2311.1(.2) or 2320.1(.2).

Basic set theory will be developed using one of the widely accepted axiom systems. Alternate systems will be discussed. The topics will include: set operations, cardinality, ordered sets, well ordering, cardinal and ordinal numbers, and the axiom of choice.

4432.1(.2) Elementary Topology

Prerequisite: MATH 2311.1(.2) and 2321.1(.2); MATH 4430.1(.2) is recommended.

This course will begin with a study of the topology of metric spaces. Topics will include bounded and totally bounded sets, completeness and fixed point theorems. Following this, abstract topological spaces will be studied.

4434.1(.2) Geometry

Prerequisite: MATH 2320.1(.2) or 4420.1(.2) or permission of instructor.

Many important ideas of modern mathematics, such as the axiomatic method, emerged from the study of geometry. This course examines topics in geometry from Euclid to the present day, which may include axiomatic geometry, constructive geometry, inversive geometry, projective geometry, non-Euclidean geometry, and combinatorial geometry.

Note: No credit will be given for this course subsequent to a directed study course on geometry [MATH 4490.1(.2)].

4436.1(.2) Theory of Functions of a Complex Variable I

Prerequisite: MATH 2310.1(.2) and 2311.1(.2).

The complex plane. Elementary transformations and mappings, analytic functions, infinite series and uniform convergence. Differentiation and integration in the complex plane, residue. Harmonic functions, entire and meromorphic functions. Some principles of conformal mapping theory.

4437.1(.2) Theory of Functions of a Complex Variable II

Prerequisite: MATH 4436.1(.2).

A continuation of MATH 4436.1(.2). Further study of analytic functions and conformal mapping theory.

4441.1(.2) Real Analysis I

Prerequisite: MATH 2310.1(.2) and 2311.1(.2).

Sets, functions and relations, the real number field, the least upper bound axiom, countability, sequences and subsequences, accumulation points, metric spaces, continuous functions, uniform continuity, monotone and inverse functions, compactness and connectedness, series of functions, uniform convergence, integration and differentiation of series of functions.

4442.1(.2) Real Analysis II

Prerequisite: MATH 4441.1(.2).

Further topics on metric spaces. Baire category theorem, the space of continuous functions, fixed points and integral equations, Arzela-Accoli theorem, the Stone-Weierstrass theorem, Picard existence theorem for differential equations, Riemann Integrability, sets of measure zero, Lebesgue Theorem.

4500.0 Thesis

Prerequisite: permission of Department.

Research project in the mathematical sciences carried out by the student under the supervision of any member of the Department. The student will submit a thesis and present it orally. This course is open to 4th year honours students.

Directed study 6 hrs. a week. 2 semesters.

4876.1(.2) to 4899.1(.2) Directed Study in Mathematics

Prerequisite: permission of instructor.

This course is intended to supplement or provide an alternative to the regular mathematics courses in order to meet the special needs and interests of students. The course provides an opportunity to study a particular subject in detail and requires from the student some measure of independence and initiative.

Philosophy (PHIL)

Chairperson, Associate Professor J. MacKinnon
Undergraduate Advisor, Associate Professor M. Mercer
Graduate Program Coordinator, Associate Professor

	C. MacDonald
Professor	S. Wein
Associate Professors	S. Crooks, L. Gannett
Assistant Professor	R. Ansell
Professors Emeriti	W. Grennan, W.A. Stewart

Website: www.smu.ca/academic/arts/philosophy**General Information**

Throughout our lives, we are frequently assailed by philosophical perplexity. Are knowledge and morals a matter of preference and perspective, or are there such things as objective truths and values? What indeed is worth valuing? Is there a God? Is the mind separable from the body? What is the nature of meaning? How ought we to organize ourselves in society? How can we balance considerations of liberty with those of equality?

The ultimate aim of a philosophy course is not merely to assist students in understanding the writings of those thinkers who have addressed these important issues, but also to equip students with the means by which they themselves can profitably grapple with the same questions. A student's development within the discipline, therefore, depends not just on a critical and imaginative engagement with the material, but on dialogue with others, both inside and outside of the classroom.

Philosophy furnishes a good grounding for adulthood and citizenship, since it contributes so significantly to the development of inquisitive and independent minds. Given the emphasis in philosophy on argument and analysis, there is perhaps no better preparation for a career in law. And since philosophy places a premium on precision of thought and expression, it provides an excellent background for a

career in journalism and publishing, policy-making, education, and counseling. Philosophy graduates also attest to the indispensable value of their education to careers in research and planning, technical services, management, and medicine.

The Department of Philosophy offers a full range of undergraduate courses. Students may obtain an honours degree in philosophy, be a philosophy major, do a minor in philosophy or earn a concentration in Philosophy. Students should consult with the undergraduate advisor to arrange a selection of courses that fits their individual interests and meets Department requirements. In addition, the Department offers a pre-law option and a master's degree.

PHI 1200.0 is the **ONLY** philosophy course that satisfies regulation 3b of the Faculty of Arts degree requirements.

1. Major in Philosophy

Students majoring in philosophy must complete at least thirty-six (36) credit hours in philosophy. At least twenty-four (24) of these credit hours must be above the 1000 level, and of these twenty four credit hours, at least twelve (12) credit hours must be at the 3000 level or above.

2. Major in Philosophy: Pre-Law

Students majoring in philosophy and taking the pre-law option must complete all the requirements for a major in philosophy. It is recommended that they take the following courses:

PHI 1200.0	Critical Thinking
PHI 2302.0	Ethics
PHI 2332.1(.2)	Ethics and the Law
PHI 2333.1(.2)	Philosophy of Law

3. Double Major

A student may major in philosophy and another subject. The student normally completes thirty-six (36) credit hours in philosophy and should consult the undergraduate advisor.

4. Honours Program

To qualify for the degree of Bachelor of Arts (Honours) in philosophy, a student must: (a) meet the general requirements of the Faculty of Arts set out in regulations 8-14, Section 3 of this *Calendar*; and (b) complete sixty (60) credit hours in philosophy, no more than twelve (12) credit hours at the 1000 level and a minimum of twenty-four (24) credit hours at or above the 3000 level. Typically, an honours graduate will have completed twelve (12) credit hours in 1000-level credits, twenty-four (24) credit hours in 2000-level credits, and twenty-four (24) credit hours in 3000-level credits. Eligible students have the option of completing an Honours Thesis (PHI 4599.0). The Chairperson or the Undergraduate Advisor will assist the student in selecting these courses.

5. Double Honours

Double Honours in Philosophy and Physics:
Students pursuing a Bachelor of Arts (Honours) in philosophy and physics or a Bachelor of Science (Honours) in physics and philosophy must complete a minimum of forty-two (42) credit hours of courses in each discipline. Philosophy course recommendations include nine (9) credit hours in core courses (PHIL 1255.1(.2)/PHYS 1255.1(.2), PHIL 2318.1(.2), PHIL 3448.1(.2), or PHIL 4515.1(.2)/PHYS 4515.1(.2) [counting as nine (9) hours from PHIL and three (3) hours from PHYS], twelve (12) credit hours in history of philosophy, twelve (12) credit hours in contemporary philosophy, and nine (9) additional credit hours. It is recommended that Bachelor of Arts (Honours) students also complete the honours thesis, PHIL 4599.0, while Bachelor of Science (honours) students are required to complete PHYS 4500.0. Please consult the Astronomy and Physics Calendar entry for detailed four-year plans for each of these combined degree options. Students are also encouraged to consult each department's undergraduate advisor for further details.

6. Minor in Philosophy

A minor in philosophy requires a minimum of twenty-four (24) credit hours, at least twelve (12) credit hours of which must be above the 1000 level.

7. Concentration in Philosophy

To obtain a concentration in Philosophy in partial fulfillment of the B.A. General degree [i.e., one with Double Arts Concentrations and a minimum of ninety (90) credit hours], a minimum of twenty-four (24) credit hours in PHIL is required; also a minimum cumulative grade point average of 2.00. Further details are available from the Undergraduate Advisor.

8. Master's Program

The general requirements for a Master of Arts in Philosophy are set out in the *Graduate Academic Calendar*.

9. Prerequisites

Except where otherwise stated, the prerequisite for 2000 level courses is at least twenty-four (24) credit hours in the

University; the prerequisite for 3000 level courses is six (6) credit hours in philosophy; and the prerequisite for 4000 level courses is twelve (12) credit hours in philosophy, at least six (6) credit hours above the 1000 level.

Course Descriptions

1200.0 Critical Thinking

An introduction to essential principles of reasoning and critical thinking, designed to introduce students to the analysis of concepts, to enhance their ability to evaluate various forms of reasoning and to examine critically beliefs, conventions and theories, and to develop sound arguments. Emphasis will be given to decision-making and arguments in ordinary language, particularly those addressed to issues of public concern and moral debate.

1201.0 Introduction to Philosophy

Philosophy is devoted to the critical and creative examination of such fundamental questions as: What can be known? Does existence have meaning? What is a worthwhile life? What moral obligations do people have to one another? What makes a society just? Philosophy provides systematic training in the framing of these questions and in the rigorous analysis of the issues they involve.

1222.0 Ethics for Modern Life

The course examines competing moral perspectives on topics such as capital punishment, suicide, euthanasia, abortion, genetic engineering, friendship, marriage, parenthood, discrimination, inequality, poverty, foreign aid, and the environment. The aim is to help the student to develop a coherent set of principles to deal with these and other topics.

1244.1(.2) Human Freedom

The traditional problems of free will and political freedom and different concepts and conceptions of freedom and liberation are considered. In addition, there will be an examination of some contemporary thought on freedom and liberation.

1245.1(.2) Philosophies of Life

An examination of the major philosophies of life and an assessment of the reasons for and against their adoption. Consideration will be given to various forms of collectivism and individualism and to various views of what is ultimately worth striving for.

1255.1 (.2) Scientific Method

This course provides a historical and logical analysis of methods commonly used in science. Possible topics include science vs. pseudo-science, natural vs. social sciences, modes of reasoning, observation and experimentation, construction and empirical testing of theories and models, and thought experiments.

2301.1(.2) Introduction to Symbolic Logic

This course introduces the fundamentals of symbolic logic. Both the propositional and predicate calculus are covered as well as various standard proof techniques.

2302.0 Ethics

An introduction to moral philosophy designed to lead the student to examine the foundations of their moral positions. To this end historical and contemporary answers by philosophers to questions such as the following will be examined: What ought I to do morally and ultimately why I ought to do it? Are ethical positions simply relative: (a) to a person? (b) to a society? What is the relation between science and morality? Why be moral?

2305.1.(2) Environmental Ethics

The nature of the ecological crisis will be examined. Philosophical responses to it will be presented which will involve analysis of the concepts of animal rights, of the intrinsic value of nature, and of obligations to future generations. A portion of the course will be spent on the application of the theoretical concepts to specific ecological issues including population and world hunger, pollution, and the sustainable society. Part of the objective of the applied section will be to raise issues of public policy within a philosophical framework.

2311.1.(2) Political Philosophy: The Classic Texts

A critical examination of some of the core works in the history of political philosophy, such as those of Plato, Aristotle, Augustine, Hobbes, Locke, Mill, Rousseau, Hegel, Marx, and Nietzsche.

2312.1.(2) Contemporary Political Philosophy

This course introduces students to the major schools of contemporary political thought, such as utilitarianism, liberal egalitarianism, libertarianism, Marxism, communitarianism, and feminism. Among the issues addressed are the justification for state power, the role of human nature in determining political arrangements, democracy and the rights of minorities, the tension between liberty and equality, and the just distribution of resources.

2318.1 (2) Science and Society

This course studies science in its social context. Contemporary and historical case studies provide a basis for examining effects of scientific and technological innovation on society, whether social values are implicated in scientific discovery and justification, and way in which social and economic institutions shape scientific practice.

2325.1.(2) Philosophical Issues in International Development [IDST 2325.1.(2)]

Philosophical Issues in International Development: This course will examine various philosophical issues concerning international development. Among the issues addressed will be the nature of development, how to measure development, the extent to which those who are well off have a duty to aid those in need, the limits to which it is morally acceptable to place conditions on receipt of aid, the extent to which it is appropriate for developing countries to protect their cultures from the forces of globalization.

2327.1.(2) Philosophy of Mind: The Classic Texts

A close study of the philosophies of mind in the work of philosophers such as Plato and Descartes. Students read the original works and then move to modern critiques of these problems.

2328.1.(2) Philosophy of Mind: Contemporary Issues

This course is a study of contemporary theories in the philosophy of mind. Topics include Behaviorism, Mind/Brain Identity theories, Functionalism, Cognitivism, and various theories of consciousness.

2330.1.(2) Philosophy of Religion

A philosophical examination of the nature and rationality of religious belief.

2331.1.(2) Business Ethics

An examination of the extent to which business objectives can, must, or do conflict with moral objectives, and of the extent to which business organizations can be brought into harmony with moral objectives. This will involve treatment of the relevant aspects of ethical theory.

2332.1.(2) Ethics and the Law

This course will be concerned with topics such as punishment, the legislation of morality, the notion of mitigating circumstances, and the role of the victim in legal proceedings.

2333.1.(2) Philosophy of Law

Natural Law Theory, legal positivism, separability thesis, relation between law and morality, legal interpretation, the economic analysis of the law, and legal skepticism.

2345.1.(2) Greek Philosophy: The Presocratics and Plato

A brief examination of Greek philosophy before the time of Socrates followed by careful readings of selected dialogues by Plato.

2346.1.(2) Greek Philosophy: Aristotle and The Hellenists

A study of Aristotle's views (focusing on topics in metaphysics, psychology, knowledge and ethics), together with a brief examination of several Hellenistic philosophers.

2348.1.(2) Aesthetics: The Classical Tradition

This course addresses issues central to the history of philosophical aesthetics, including those of representation, expression, and the cognitive aspects of art and aesthetic experience. The course will involve a survey of some of the great works of the tradition, including those of Plato, Aristotle, Kant, Collingwood, Dewey, and others.

2349.1.(2) Aesthetics: Contemporary Debates

This course addresses issues that dominate contemporary philosophical reflection on the arts, including those of form and content, the logic of taste, aesthetic value, art and knowledge, art and emotion, and so on.

2358.1.(2) Philosophy of Human Nature

Is there such a thing as a fixed and essential human nature? If so, what is it? What are we like as beings in the universe, on earth, in history? This course will consider a range of classical and contemporary responses to these questions. Included among the views that will be addressed are those of Aristotle, Hobbes, Rousseau, Darwin, Marx, and Freud, as well as existentialist, behaviorist, and feminist accounts.

2362.1.(2) Philosophy and Literature

Works that have been discussed in recent years include: Shakespeare's *King Lear*, Marlowe's *Dr. Faustus*, Melville's *Billy Budd*, Conrad's *Lord Jim*, Walker Percy's *The Moviegoer*, Tom Stoppard's *Jumpers* and Richard Ford's *The Sportswriter*. The course may also address philosophical questions about literature. For instance, what cognitive and moral values are associated with our reading of literature? How do we explain our emotional reactions to fictional works? Why do we enjoy the experiences elicited by literary tragedy and horror?

2365.1.(2) Philosophy of Education: Classic Texts [EDUC 2365.1.(2)]

Prerequisite: at least thirty (30) credit hours of University courses.

A critical examination of influential works in the history of educational thought.

2368.1.(2) Bioethics

Advancing medical technology has created moral issues that cannot be settled simply on the basis of medical facts. Both the medical profession and society as a whole must make value decisions before life and death issues such as abortion, euthanasia, and treatment of the insane can be settled. This course is intended to help the student reach reasoned conclusions on these issues through clarification and appraisal of arguments.

2385.1.(2) Philosophical Issues in Feminism

This course examines philosophical issues in feminism, such as sexism, oppression, social construction, essentialism, gender, race, and class. Attention is paid to ties between theory and practice.

3000.0 Metaphysics

Metaphysics seeks to determine whether we can know any general truths about the world. What is it to exist? What is it to be an individual? What are the fundamental kinds of things and relations? Consideration is given to the principal metaphysical theories that form part of the Western philosophical tradition, e.g., materialism, idealism, dualism and monism. The course will also consider the major problems and concepts of metaphysics, e.g., time, space, substance, essence, free will, determinism, and causality.

3317.1.(2) Philosophy of Economics

This course examines the basic assumptions on which economic theory rests, asks whether economics is a science, and explores the extent to which economic analysis can be used in other areas (for example, in medicine and law). No knowledge of economics is presupposed or required.

3365.1.(2) Philosophical Foundations of Education [EDUC 3365.1.(2)]

Prerequisite: at least thirty (30) credit hours of University courses.

This course is an enquiry into the nature and aims of education. Topics considered will include analyses of the concept of education, evaluation of contrasting views about what constitutes an ideal education, and implications of various theories of knowledge for methods of teaching and

learning. Selections from historical and contemporary thinkers will be studied.

3375.1.(2) Philosophy and Film

This course will deal with philosophical questions concerning, or arising in, film. These include general issues of perspective, evidence, knowledge and objectivity, as well as more specific questions, such as: What is the nature of representation in film? Can film be construed as a language? What constitutes uniqueness in film? What constitutes excellence? What is the logic of film criticism? These and other questions will be addressed in an effort to clarify the nature of the relation between philosophy and film.

3402.1.(2) Philosophy of Language

How is it that words and sentences mean what they do? One answer to this question is that linguistic meaning is determined by the speaker's intentions; another is that it is determined by social practices. Each answer raises issues regarding the relation of language to both thought and reality that this course will aim to address.

3404.1.(2) Theory of Knowledge: Foundations

This course examines the various concepts of human knowledge and attempts to find the limits of that knowledge. Traditional approaches to problems in the theory of knowledge will be considered as well as current work.

3405.1.(2) Theory of Knowledge: Ethics of Belief

We commonly evaluate beliefs as rational or irrational; justified or unjustified; responsible or irresponsible. But what do these terms mean and when are they correctly applied? Can beliefs be ethical? These and related questions are debated by contemporary epistemologists. This course seeks to interpret and assess the main competing views.

3413.1.(2) Intermediate Logic

Prerequisite: PHI 2301.1.(2) Introduction to Symbolic Logic
This course continues and develops the work of PHI 200.0. It offers students of all faculties opportunities for further growth in reasoning skills, in part through supervised practice in the logical appraisal of extracts from a variety of important writings. Some branches of logic are developed beyond the level of PHI 200.0. The complete predicate calculus (with identity) is applied to arguments of ordinary English. Inductive logic, and practically significant areas of logical theory, are developed considerably. Scientific method and the general methods of some other disciplines are analyzed in some depth.

3415.1.(2) Argumentation Theory

Prerequisite: PHI 1200.0 Critical Thinking
Contemporary argumentation theory draws upon several disciplines: philosophy of language, cognitive psychology, feminist philosophy and communications theory. This course will examine the concept of argument through the lens provided by argumentation theorists. Alternative conceptions of argument will be critically examined and an overview of the development of argumentation theory will be provided.

3442.1(.2) Early Modern Philosophy: The Rationalists

A critical examination of the works from this movement, focusing on the areas of metaphysics and epistemology. Descartes, Malebranche, Spinoza and Leibniz are among the philosophers typically studied.

3443.1(.2) Early Modern Philosophy: The Empiricists

A critical examination of the works from this movement, focusing on the areas of metaphysics and epistemology. Hobbes, Locke, Berkeley and Hume are among the philosophers typically studied.

3444.1(.2) Later Modern Philosophy: Kant

A lecture and seminar course on Kant's theory of knowledge.

3448.1(.2) Philosophy of Science

An introduction to the main problems of the philosophy of science designed to familiarize students with some of the contemporary analyses of scientific concepts and methods.

3454.1(.2) Philosophy of History

A critical study of the philosophical views on the course of human history (its pattern, purpose and value) and an examination of the aim, nature and validity of historical knowledge.

3455.1(.2) Existentialism: The 19th Century

A lecture and seminar course examining the 19th century origins of the existentialist movement in contemporary philosophy, with specific investigation of the writings of Kierkegaard and Nietzsche.

3456.1(.2) Existentialism: The 20th Century

A lecture and seminar course examining the 20th century expression of the existentialist movement in contemporary philosophy, through close study of the writings of Heidegger, Sartre, Camus, and others.

3471.1(.2) Meta-Ethics

The course investigates the moral concepts that are used in the formulation and evaluation of ethical theories, including: 'morality', 'moral value', 'virtue', 'vice', 'moral right', 'moral obligation', 'justice', and 'good'.

3472.1(.2) Foundation of Ethics

The course will involve the study of the nature of moral judgments and the logic of moral reasoning.

3850.0-3875.0; 3876.1(.2)-3899.1(.2) Directed Study - Reading Courses in Philosophy

Prerequisite: One (1.0) credit in philosophy, consent of instructor, and permission of Chairperson.

The subject matter of this course will be determined by the student in consultation with the instructor.

4501.1(.2)-4502.1(.2) Honours Seminar

Prerequisite: Twelve (12) credit hours in philosophy, at least six (6) credit hours of which are above the 1000 level, and Majors or Honours standing in philosophy.

Participants will write and discuss research materials which are connected by a common theme. The aim will be to deepen students' knowledge of the topics studied, while developing effective research methods.

4510.1(.2) Advanced Topics in Applied Ethics

Prerequisites: Any of the following ethics course: PHIL 1222.0, 2302.0, 2305.1 (.2), 23254.1 (.2), 2331.1 (.2), 2332.1 (.2), 2368.1 (.2), 3471.1 (.2), 3472.1 (.2), or permission of the instructor.

This course will deal with advanced issues in applied or practical ethics. The course will focus on ethical issues in a particular domain (e.g., business, health care, the environment, international development) or on a particular ethical problem that might be faced in any of those domains (e.g., conflict of interest, racism, justice). Interested students should contact the Instructor to find out what this year's topic will be.

4514.1 (.2) Philosophy of Biology

The course explores methodological, conceptual, metaphysical, and epistemological questions that arise in modern biology. Possible topics include scientific revolutions, experimentation, biological laws, theoretical modeling, objectivity, reductionism, species concepts, evolution vs. creationism, human nature, and biological theories of gender, race, and sexuality.

4525.1(.2) International Justice

This course will consider how major theories of justice such as Kantian constructivism, economic contractarianism, and utilitarianism deal with important issues in international justice such as the law of peoples, distributive justice, human rights, and democratization.

4565.0 Analytic Philosophy

A lecture and seminar course that examines the origins, expressions, and significance of the contemporary analytic movement in philosophy.

4585.1(.2) Feminist Philosophy [WGST 4585.1(.2)]

This course examines the contributions of feminist philosophers to historical and contemporary philosophical thought in diverse areas of inquiry, such as ethics, political theory, metaphysics, epistemology, philosophy of science, and philosophy of mind.

4599.0 Honours Thesis

Prerequisite: Honours standing in philosophy.

Honours students have the option of completing a thesis on an approved topic. The permission of the Chairperson of the Department and the availability of a thesis supervisor are required.

Physics (PHYS)

Physics courses are offered by the Department of Astronomy and Physics (<http://www.ap.smu.ca>).

Chairperson	I. Short
Observatory Director	D. Turner
ICA Director	R. Deupree
Undergraduate Co-ordinator	A. Sarty
Graduate Co-ordinator	D. Guenther
Professors	D. Clarke, R. Deupree, D. Guenther, A. Sarty, D. Turner
Associate Professors	I. Short, R. Thacker
Assistant Professors	R. Austin, L. Gallo, R. Kanungo, M. Sawicki
Adjunct Professors	K. Balaji, P. Bennett, P. Noerdlinger
Professors Emeriti	W. Lonc, G. Mitchell, G. Welch

Note: This segment lists undergraduate courses and programs in physics only. Course and program descriptions for astronomy and astrophysics may be found in the Astronomy (ASTR) segment of Section 5 in this *Calendar* while graduate course descriptions and programs in astronomy may be found in the *Graduate Academic Calendar*.

History

Physics, the most fundamental of the natural sciences, forms the foundation for all other sciences. Physics deals with motion, the structure of matter, and the underlying forces responsible for that motion and structure. It deals with phenomena at all length and time scales, from the subatomic to the cosmological, from the Planck time to the age of the Universe. With their ability to understand complex phenomena at the most fundamental level, physicists are uniquely qualified to pursue careers and postgraduate studies in a wide variety of fields, including engineering, computer science and modelling, visualisation, aerospace and aeronautics, financial forecasting, communications, meteorology, the energy and health sectors, astronomy, mathematics, and the list goes on. In short, physicists are trained and hired to think.

Physics has been taught at Saint Mary's at least as far back as 1907, and was first offered as a three-year undergraduate major in 1963 under the watch of the Jesuits, who controlled the University between 1940 and 1970. It was also during the Jesuit period when the Faculty of Science was formally organized (1951, with Father M. J. Burke-Gaffney S.J. as its first designated Dean), and when the Department of Physics was first established as a separate academic unit (1963, under its first and only chair for thirty years, Dangety Murty). The four-year honours program in physics was introduced in 1970. In 1993 the Department of Physics was joined with the Department of Astronomy, and the combined department of eight faculty members expanded its physics offerings to include joint programs with Mathematics and Chemistry. In 1995, Father William Lonc S.J., one of only

two Jesuit priests still on the University faculty at the time, retired from the Department of Astronomy and Physics heralding an end of an era. He remains with the Department as Professor Emeritus.

Degree Programs in Physics

The Department offers three different levels of undergraduate study in physics. These include a physics concentration suitable for general science students who want a basic understanding of the fundamentals of physics, a physics major suitable for students who want a solid physics education but who do not necessarily intend to practice physics professionally or go on to graduate school, and a physics honours program for those who require a rigorous training in classical and quantum physics who intend to pursue physics professionally or in postgraduate studies. The major and honours programs are virtually identical through the third year, and students don't need to commit to the honours program until the fourth year if they so choose. Among other differences in the final year, the honours program requires the student to complete an honours thesis (PHYS 4790) under the supervision of a faculty advisor.

In addition to the physics concentration, major, and honours programs, there are double major physics programs with mathematics, chemistry, and philosophy at both the major and honours levels consistent with the regulations governing double major and double honours programs in science and in arts and sciences as outlined in Section 3. These suggested programs of study are suitable for students who want a broader academic background than the pure physics degrees provide while minimising the compromise to the physics content or the content of the other subjects of concentration

a. Physics Concentration (three-year program)

Year 1

1. PHYS 1100 and 1101
2. three (3) credit hours in Arts/ECON electives; and PHYS 1500
3. MATH 1210 and 1211
4. six (6) credit hours in science [CHEM 1210 and 1211 recommended]
5. ENGL 1205 and three (3) credit hours in humanities

Years 2 and 3

Seven to eleven three (3) credit hour courses [21-33 credit hours] in physics (in accordance with science degree requirements and subject to prerequisites) chosen from:

PHYS 2200	PHYS 2300	PHYS 2301
PHYS 2400	PHYS 3200	PHYS 3201
PHYS 3210	PHYS 3300	PHYS 3350
PHYS 3400	PHYS 3500	PHYS 3600
PHYS 4380	PHYS 4390	PHYS 4500
PHYS 4501	PHYS 4510	PHYS 4600

Eighteen (18) additional credit hours in science electives
 Nine (9) additional credit hours in Arts/ECON electives
 Enough additional electives to total ninety (90) credit hours

b. Physics Major/Honours**Year 1**

1. PHYS 1100 and 1101
2. ENGL 1205 and PHYS 1500
3. MATH 1210 and 1211
4. six (6) credit hours in science electives [CHEM 1210/1211 recommended]
5. six (6) credit hours in Arts/ECON electives

Year 2

1. PHYS 2500
2. PHYS 2300 and 2301
3. MATH 2301, 2303 and 2311 [nine (9) credit hours in science electives]
4. three (3) credit hours in science electives [CSCI 1226 recommended]; and three (3) credit hours in humanities
5. six (6) credit hours in electives

Year 3

1. PHYS 3200 and 3201
2. PHYS 3300 and 3210
3. PHYS 3500; and either PHYS 3350 or 3400
4. PHYS 3600; and three (3) credit hours in electives
5. six (6) credit hours in Arts/ECON electives

Year 4 (Major)

1. PHYS 4500; and either PHYS 3350 or 3400
2. six (6) credit hours in electives
3. six (6) credit hours in electives
4. six (6) credit hours in electives
5. six (6) credit hours in electives

Year 4 (Honours)

1. PHYS 4500; and either PHYS 3350 or 3400
2. PHYS 4600 and three (3) credit hours in electives
3. six (6) credit hours from PHYS 4380, 4390, 4501, and 4510
4. PHYS 4790.0
5. six (6) credit hours in electives

c. Double Major/Honours in Physics and Mathematics**Year 1**

1. PHYS 1100 and 1101
2. ENGL 1205 and PHYS 1500
3. CSCI 1226 and 1227
4. MATH 1210 and 1211
5. six (6) credit hours in science electives [CHEM 1210/1211 recommended]

Year 2

1. PHYS 2300 and 2301
2. three (3) credit hours in humanities and PHYS 2400
3. MATH 2311 and 3405
4. MATH 2320 and 2321
5. six (6) credit hours in Arts/ECON electives

Year 3 (Major)

1. PHYS 3300 and 3210
2. PHYS 3500; and either PHYS 3350 or 3400
3. MATH 3406; and either MATH 4436 or 3456
4. six (6) credit hours in science electives
5. six (6) credit hours in Arts/ECON electives

Year 3 (Honours)

1. PHYS 3300 and 3210
2. PHYS 3500; and either PHYS 3350 or 3400
3. MATH 3406
4. either MATH 4436 and 4437; or MATH 3456 and 3457
5. three (3) credit hours from MATH courses numbered 4404 or above
6. six (6) credit hours in Arts/ECON electives

Year 4 (Major)

1. PHYS 4500; and either PHYS 3350 or 3400
2. six (6) credit hours from MATH courses numbered 4404 or above
3. six (6) credit hours from MATH courses numbered 4404 or above
4. six (6) credit hours in electives
5. six (6) credit hours in electives

Year 4 (Honours)

1. PHYS 4500; and either PHYS 3350 or 3400
2. six (6) credit hours from PHYS 4380, 4390, 4501, and 4510
3. Two of MATH 4420, 4421, 4441.1 or 4442.1
4. six (6) credit hours from MATH courses numbered 4404 or above
5. PHYS 4790.0 or MATH 4500.0

d. Double Major/Honours in Physics and Chemistry

Students should be aware of the specific requirements for double majors in chemistry noted in the Chemistry segment in Section 5 of the *Calendar*.

Year 1

1. PHYS 1100 and 1101
2. three (3) credit hours in Arts/ECON electives and PHYS 1500
3. CHEM 1210 and 1211 or 1212 or 1213
4. MATH 1210 and 1211
5. ENGL 1205 and three (3) credit hours in humanities

Year 2

1. PHYS 2400
2. PHYS 2300 and 2301
3. MATH 2301, 2303 and 2311 [nine (9) credit hours in science electives]
4. CHEM 3322 and 3324; or CHEM 2332 and 2333; or CHEM 2344 and 2345;
5. CHEM 2312 and three (3) credit hours in Arts/ECON electives

Year 3 (Major)

1. PHYS 3200 and 3201
2. PHYS 3300 and three (3) credit hours in science electives [CSCI 1226 recommended]
3. PHYS 3500 and 3400
4. CHEM 2313; and three (3) credit hours in electives
5. CHEM 3322 and 3324; or CHEM 2332 and 2333; or CHEM 2344 and 2345

Year 3 (Honours)

1. PHYS 3200 and 3201
2. PHYS 3300; and three (3) credit hours in Arts/ECON electives
3. PHYS 3500 and either PHYS 3210 or 3400
4. CHEM 2313; and three (3) credit hours in Arts/ECON electives
5. CHEM 3322 and 3324; or CHEM 2332 and 2333; or CHEM 2344 and 2345

Year 4 (Major)

1. PHYS 4500; and three (3) credit hours in electives
2. six (6) credit hours from CHEM numbered 4400 or above
3. six (6) credit hours from CHEM numbered 4400 or above
4. six (6) credit hours in Arts/ECON electives
5. six (6) credit hours in electives

Year 4 (Honours)

1. PHYS 4500; and three (3) credit hours from PHYS numbered above 4000
2. CHEM 4498.0
3. six (6) credit hours from CHEM numbered 4400 or above
4. six (6) credit hours from CHEM numbered 4400 or above
5. PHYS 4790.0 or CHEM 4500.0

e. Double Major/Honours in Physics and Philosophy (B.Sc)**Year 1**

1. PHYS 1100 and 1101
2. PHYS 1370/PHIL 1255 and PHYS 1500
3. PHIL 1200.0 or 1201.0
4. MATH 1210 and 1211
5. ENGL 1205; and three (3) credit hours in humanities other than PHIL

Year 2

1. PHYS 2400
2. PHYS 2300 and 2301
3. PHIL 2318 and three (3) credit hours in Arts/ECON electives
4. three (3) credit hours drawn from courses in the history of philosophy* and three (3) credit hours drawn from courses in contemporary philosophy**
5. MATH 2301, 2303 and 2311 [nine (9) credit hours in science electives]

Year 3

1. PHYS 3200 and 3201
2. PHYS 3300 and three (3) credit hours in Arts/ECON electives
3. PHYS 3500 and PHIL 3448
4. six (6) credit hours drawn from courses in the history of philosophy*.
5. six (6) credit hours drawn from courses in contemporary philosophy**

Year 4 (Major)

1. three (3) credit hours drawn from PHYS numbered 4000 or greater and six (6) credit hours in electives
2. PHIL 4515/PHYS 4370 and three (3) credit hours drawn from PHIL.
3. three (3) credit hours in science electives
4. six (6) credit hours in Arts/ECON electives
5. six (6) credit hours electives.

Year 4 (Honours)

1. PHYS 4500; and three (3) credit hours drawn from PHYS numbered 3000 or greater
2. PHIL 4515/PHYS 4370 and three (3) credit hours drawn from PHIL.
3. three (3) credit hours drawn from courses in the history of philosophy* and three (3) credit hours drawn from courses in contemporary philosophy**
4. six (6) credit hours in Arts/ECON electives
5. PHYS 4790.0

*Courses in the history of philosophy include PHIL 2345, 2346, 3442, 3443, 3444, 4565.0

**Courses in contemporary philosophy include PHIL 2301, 3000.0, 3404, 3413, 4565.0

f. Double Major/Honours in Philosophy and Physics (B.A.)

A B.A. (major or honours) in Philosophy and Physics is identical to the corresponding B.Sc. degree in Physics and Philosophy with the following modifications:

1. All Arts/ECON electives become social science electives.
2. Science electives become free electives, although MATH 2301/2303/2311 should still be taken in the second year.
3. PHYS 4790.0 (Honours Thesis) becomes PHIL 4599.0 (Honours Thesis) and, with the permission of the Undergraduate Advisor of the Department of Philosophy, may be replaced with six (6) credit hours of PHIL courses not already taken and numbered 4000 or above,

In addition to physics courses offered to support the degree programs, the Department offers two courses (PHYS 1000 and 1001) for non-majors, suitable for students wishing a non-calculus based introduction to physics for a science elective.

IMPORTANT NOTE ON COURSE NUMBERING

In the 2004-05 academic year, courses were renumbered from three digits to four. A new digit was added to the front of the sequence to indicate the year of study in which a student would normally enrol in a course. The last three digits represent the "old" course number – for example, PHYS 1210 was formerly PHY 210.

In the 2008-09 academic year, a “rationalised” four-digit course numbering scheme was introduced to replace the *ad hoc* four digit scheme created in 2004. The first digit still represents the year, the second digit indicates the subject area (0=general interest, 1=foundation, 2=techniques, 3=classical/thermal, 4=electrodynamics, 5=quantum, 6=experimental, 7=other/research), and the third and fourth digits number the course within a given subject area.

Students are urged to be extremely careful not to register again for a course for which they have already earned credit. Academic Regulation 17(b) is very clear on this matter:

“In the cases where courses have been renumbered, changed in level, or where a six (6) credit hour course (formerly referred to as a “full course”) has been split into two three (3) credit hour courses (formerly referred to as “half courses”) or *vice versa*, a student who received credit from the original course is not entitled to repeat the course in its new format or on its new level for additional credit recognition.”

Course # -2003	Course # 2004-07	Course # 2008-
PHY 210	PHYS 1210	PHYS 1100
PHY 211	PHYS 1211	PHYS 1101
PHY 235	PHYS 1235	PHYS 1000
PHY 236	PHYS 1236	PHYS 1001
	PHYS 1255	PHYS 1370
PHY 305	PHYS 2305	PHYS 2301
PHY 306	PHYS 2306	PHYS 2300
PHY 326	PHYS 2326	PHYS 1500
PHY 335	PHYS 2335	PHYS 2200
PHY 355	PHYS 2355	PHYS 2400
PHY 405	PHYS 3405	PHYS 3300
PHY 417	PHYS 3417	PHYS 3350
PHY 435	PHYS 3435	PHYS 3200
PHY 436	PHYS 3436	PHYS 3201
PHY 437	PHYS 3437	PHYS 3210
PHY 445	PHYS 3445	PHYS 3600
PHY 446	PHYS 4446	PHYS 4600
PHY 457	PHYS 3457	PHYS 3400
PHY 465	PHYS 3465	PHYS 3500
PHY 466	PHYS 4466	PHYS 4500
PHY 467	PHYS 4467	PHYS 4501
PHY 472	PHYS 4472	PHYS 4380
PHY 473	PHYS 4473	PHYS 4390
PHY 474	PHYS 4474	PHYS 4510
	PHYS 4515	PHYS 4370
PHY 500	PHYS 4500	PHYS 4790

*In 2007-08 only, PHYS 1500 was listed as PHYS 1212.

Courses Descriptions

1000.1(.2) Physics for Life Sciences I

Prerequisites: Nova Scotia grade 11 physics and Nova Scotia grade 12 math, or equivalent.

This algebra-based physics course offers an introduction to the foundations of physics. The emphasis is on the understanding and application of equations of motion, Newton’s Laws, the nature of forces, and the extension to

fluids. These ideas are applied to “real world” situations, including biological systems. This course does not satisfy the physics requirements for programs in Astrophysics, Chemistry, Engineering, or Physics. Students in these programs should take University Physics I and II.

Classes 3 hrs. and lab/tutorial 3 hrs. per week; 1 semester.

Note: Credit cannot be given to students who have already taken PHY 230.0.

Note: Students who wish to take PHYS 1101.1(.2) following PHYS 1000.1(.2) must obtain a grade of at least A in PHYS 1000.1(.2) and receive the permission of the chair in order to waive the standard prerequisite requirements for PHYS 1101.1(.2).

1001.1(.2) Physics for Life Sciences II

Prerequisite: PHYS 1000.1(.2).

This algebra-based physics course builds on the foundation of PHYS 1000.1(.2), and considers specific applications, such as thermodynamics, waves and sound, light and optics, electricity and magnetism, atomic physics and radioactivity. These ideas are applied to “real world” situations, including biological systems. This course does not satisfy the physics requirements for programs in Astrophysics, Chemistry, Engineering, or Physics. Students in these programs should take University Physics I and II.

Classes 3 hrs. and lab/tutorial 3 hrs. per week; 1 semester.

Note: Credit cannot be given to students who have already taken PHY 230.0.

1100.1(.2) University Physics I

Prerequisites: Nova Scotia Grade 12 physics and Nova Scotia grade 12 math pre-calculus, or equivalent.

This calculus-based physics course is intended primarily for (astro) physics and chemistry majors and engineers. Topics include kinematics, Newton’s laws of motion, conservation of energy and momentum, rotational dynamics, and Newton’s law of gravitation. Emphasis is placed on problem solving skills.

Classes 3 hrs. and lab/tutorial 3 hrs. per week; 1 semester.

Note: Credit cannot be given to students who have already taken PHY 205.0 or 221.0

1101.1(.2) University Physics II

Prerequisites: PHYS 1100.1(.2); and either MATH 1210.1(.2) or 1190.1(.2)

This calculus-based physics course is a continuation of PHYS 1100.1(.2), and covers the topics of oscillations and waves, thermodynamics, and electricity and magnetism.

Classes 3 hrs. and lab/tutorial 3 hrs. per week; 1 semester.

Note: Credit cannot be given to students who have already taken PHY 205.0 or 221.0

1500.1(.2) Introduction to Modern Physics

Prerequisites: PHYS 1100.1(.2); and either MATH 1210.1(.2) or 1190.1(.2)

The special theory of relativity and early ideas in quantum mechanics are introduced. Topics in relativity include departures from Newtonian theory, Lorentz transformations, space and time dilation, the "Twin Paradox", and relativistic dynamics. Topics in quantum mechanics include the quantum theory of light, the Bohr model of the atom, the wave nature of particles and the Schrödinger equation applied to simple one-dimensional problems.

1370.1(.2) [Cross-listed as PHIL 1255.1(.2)] Scientific Method

Prerequisites: Nova Scotia grade 11 physics or chemistry and Nova Scotia grade 12 math or equivalent; or permission of the instructors.

This course provides a historical and logical analysis of methods commonly used in science, and is normally taught by faculty from both the Department of Astronomy and Physics and the Department of Philosophy. Topics include science vs. pseudo-science, natural vs. social sciences, modes of reasoning, observation and experimentation, construction and empirical testing of theories and models, and thought experiments.

2200.1(.2) Introductory Mathematical Methods for Physicists

Prerequisites: PHYS 1101.1(.2) and MATH 1211.1(.2).

This course introduces the student to basic mathematical techniques in Physics. Topics include Taylor and binomial expansions, vector calculus, linear algebra, and eigensystems. An introduction to UNIX, elementary computer graphics, and the departmental computing system is also given.

Classes 3 hrs. and tutorial 1.5 hrs. per week; 1 semester.

Note: Credit cannot be given to students who already have a credit for MATH 2311.1(.2) and/or MATH 2321.1(.2).

2300.1(.2) Vibrations, Waves and Optics

Prerequisites: PHYS 1101.1(.2) and MATH 1211.1(.2).

This course focuses on the production, propagation and manipulation of waves including light. Topics include geometric optics, forced damped oscillators, elasticity and distortion, the wave equation, wave speed and propagation, polarisation, wave packets, interference and diffraction 3-D waves, plane and circular waves and physical optics.

Classes 3 hrs. and lab 3 hrs. per week; 1 semester.

2301.1(.2) Analytical Mechanics

Prerequisites: PHYS 2300.1(.2) or equivalent, MATH 2301.1(.2) and MATH 2311.1(.2).

This course continues on some of the ideas introduced in PHYS 2300.1(.2), and introduces the student to a broad range of other areas in classical mechanics. Topics include

coupled and 3-D oscillators, non-inertial reference frames, central forces (celestial mechanics), N-body dynamics, rigid bodies, angular momentum and torques, deformation and vibration of beams.

Note: Credit cannot be given to students who already have a credit for PHYS 2305.1(.2), Newtonian Mechanics.

2400.1(.2) Electricity and Magnetism

Prerequisites: PHYS 1101.1(.2), MATH 2301.1(.2), and MATH 2311.1(.2).

This course gives a comprehensive introduction to the self-consistent mathematical theory for electric and magnet fields which was developed during the latter half of the 19th century. Topics include electric field and potential, Gauss' law, capacitance, elementary circuit analysis, Ampère's law, the Law of Biot and Savart, magnetisation of matter, Faraday's law of inductance, and Maxwell's equations in integral and differential form.

Classes 3 hrs. and lab 3 hrs. per week; 1 semester.

3200.1(.2) Mathematical Methods in Physics I

Prerequisites: MATH 2311.1(.2), MATH 2301.1(.2), and MATH 2303.1(.2).

This course provides the student with the mathematical techniques needed to solve problems in advanced physics courses. Topics in complex analysis include the Cauchy-Riemann conditions, Cauchy Theorem and Integrals, Laurent expansions, and the calculus of residues. Topics in differential equations and the separation of variables, the Method of Frobenius and Sturm-Liouville theory.

Note: Credit cannot be given to students who already have a credit for MATH 3406.1(.2) and/or MATH 4437.1(.2).

3201.1(.2) Mathematical Methods in Physics II

Prerequisite: either PHYS 3200.1(.2) or MATH 3405.1(.2)/4436.1(.2).

This course is a continuation of PHYS 3200.1(.2) and covers additional topics in mathematical physics, including special functions (Bessel, Neumann, Lagrange, etc.), Green's functions, Fourier series and transforms, Laplace transforms, integro-differential equations, and Hilbert-Schmidt theory.

Note: Credit cannot be given to students who already have a credit for MATH 3406.1(.2) and/or MATH 4437.1(.2).

3210.1(.2) Computational Methods in Physics

Prerequisites: PHYS 3500.1(.2) and either PHYS 3200.1(.2) or MATH 3405.1(.2).

This course introduces the student to methods of solving mathematically difficult or tedious problems using the computer. After a brief introduction to Unix and Fortran or C, the course focuses on some of the algorithms most useful to a physicist, including root-finding, spline fitting, Richardson extrapolation, Romberg integration, Runge-Kutta and Monte Carlo methods. Student complete a term project which applies learned algorithms to problems in computational (astro) physics.

3300.1(.2) Classical Mechanics

Prerequisites: PHYS 1500.1(.2), 2301.1(.2), and MATH 2311.1(.2)

This advanced course in Classical Mechanics introduces the student to the calculus of variations, constrained problems, and generalised Lagrangian and Hamiltonian dynamics. Applications are made to oscillations, the “brachistochrone problem”, central force problems, rigid bodies, and the motion of tops. Additional topics include relativistic mechanics, canonical perturbation theory, and chaos.

3350.1(.2) Thermal Physics

Prerequisites: PHYS 3500.1(.2) and either PHYS 3200.1(.2) or MATH 3405.1(.2)/4436.1(.2).

This course gives a comprehensive overview of thermodynamics and statistical mechanics. Topics in thermodynamics include equations of state, the three laws of thermodynamics, the Maxwell relations, and the kinetic theory of gases. Topics in statistical mechanics include the idea of particle ensembles and the partition function, classical and quantum statistics, thermodynamics of magnetism, Bose-Einstein and Fermi-Dirac gases, and information theory.

3400.1(.2) Electrodynamics

Prerequisites: PHYS 1500.1(.2), 2400.1(.2), and either PHYS 3200.1(.2) or MATH 3405.1(.2)/4436.1(.2).

This course is a continuation of PHYS 2400.1(.2) which focused primarily on electro- and magnetostatics, and turns to the more general theory of electrodynamics. Topics include Maxwell’s equations in vacuo and matter, the Poynting vector, electromagnetic waves, wave guides, scalar and vector potentials, gauge transformations, Lienardt-Wiechart potentials, radiation from moving charges, and relativistic electrodynamics.

3500.1(.2) Quantum Mechanics I

Prerequisites: PHYS 1500.1(.2), MATH 2311.1(.2), and either MATH 2301.1(.2) or MATH 2321.1(.2).

This course builds on the foundations set in PHYS 1500.1(.2). Topics in this course include the (time-independent) Schrodinger equation, one-dimensional potentials, barriers and tunnelling, the Heisenberg Uncertainty Principle, Dirac notation, expectation values, the three-dimensional Schrodinger equation, single-electron atoms, spin, and identical particles.

3600.1(.2) Experimental Physics I

Prerequisites: PHYS 2300.1(.2) and 2400.1(.2)

This course provides the student with the necessary skills to be a successful experimental (astro)physicist. Students assemble labs from advanced experimental equipment including computers and other digital devices, perform the experiment possibly over several weeks, and communicate their results in a scientifically useful fashion.

Note: While this is a three (3) credit course, it will be taught over two semesters.

Lab 3 hrs. per week; 2 semesters.

4380.1(.2) Fluid Dynamics

Prerequisites: PHYS 3300.1(.2), and either PHYS 3201.1(.2) or MATH 3406.1(.2)/4437.1(.2).

This course introduces students to the fundamentals of fluid dynamics. Discussion embraces both compressible and incompressible fluids and includes the continuity equation, the Navier-Stokes equation, Bernoulli’s theorem, viscosity, the Reynolds number, vorticity, and numerous applications to “real world” problems. Some specialized numerical techniques for solving complex problems in fluid dynamics may also be discussed.

4390.1(.2) General Relativity

Prerequisites: PHYS 1500.1(.2), 3300.1(.2), and either PHYS 3201.1(.2) or MATH 3406.1(.2)/4437.1(.2).

This is an advanced course introducing Einstein’s theory of general relativity and the curvature of space-time. Topics shall include manifolds, Riemannian geometry, Einstein’s equations, and applications to cosmology and black holes.

4500.1(.2) Quantum Mechanics II

Prerequisites: PHYS 3300.1(.2), 3500.1(.2), and either PHYS 3201.1(.2) or MATH 3406.1(.2)/4437.1(.2).

This course is a continuation of PHYS 3500.1(.2), and covers topics such as time-independent perturbation theory, the variation principle, the Werner-Kremer-Boltzmann (WKB) approximation, time-dependent perturbation theory, the adiabatic approximation, and scattering.

4501.1(.2) Quantum Mechanics III

Prerequisite: PHYS 4500.1(.2).

This advanced course in Quantum Mechanics covers a selection of topics that may include scattering, lasers, relativistic quantum dynamics (Dirac theory), second quantization, and field theory.

4510.1(.2) Subatomic Physics

Prerequisite: PHYS 4500.1(.2).

This course provides an introduction to modern nuclear and particle physics. Topics may include the nucleon-nucleon interaction, the deuteron, the nuclear shell model, dynamical probes of nuclei (electron, photon, and hadron scattering), the structure of nucleons and mesons, electroweak

4600.1(.2) Experimental Physics II

Prerequisite: PHYS 3600.1(.2)

This course is designed primarily for honours physics students to study advanced topics in physics and/or astrophysics in the laboratory. Students are responsible for setting up and performing the experiments, writing computer programs to aid the analysis, and preparing and presenting their results in a professional manner. The majority of work will be project-based, each project conceived and built by the students from equipment available in the lab.

Note: While this is a three (3) credit hour course, it will be taught over two semesters.

Lab 3 hrs. per week; 2 semesters.

4790.0 Research Thesis

Prerequisite: honours standing.

A research project carried out by the student under the supervision of a faculty member in the Department throughout the Honours year. The project should be in the area of astrophysics for students in the honours astrophysics program. Results are written up in a formal thesis that adheres to standard University-set guidelines.

Directed study 3 hrs. per week; 2 semesters.

Political Science (POLI)

Chairperson, Professor	TBA A. Dobrowolsky, E. Keeble, R.Landes
Associate Professors	M. Doucet, S. Gaon, D. Naulls
Assistant Professor	L. Preyra (on leave)
Professor Emeritus	E. McBride

The Political Science Department offers students with diverse interests a wide range of topical, thought-provoking courses in four fields of study: *Canadian Politics*, *Comparative Politics*, *International Relations*, and *Political Thought*. The Department's aim is to provide students with a rich and rewarding learning experience, one that sharpens their critical skills, engages them in political ideas and practices, and grounds them in the world, locally and globally. The program thereby provides students with a solid foundation on which to build their future careers. For all these reasons, students are strongly encouraged to Major in Political Science and, for those interested in pursuing more advanced study, to apply to the Political Science Department's Honours program.

Departmental Policy for Majors

To earn a Major in Political Science, students must complete a minimum of forty-two (42) credit hours in Political Science courses. The Department requires six (6) credit hours at the 1000-level. Of these, three (3) credit hours must be in Political Science. The remaining three (3) credit hours may be either in Political Science or in one of the following cognate disciplines: Economics, History, Philosophy or Sociology. Students who intend to graduate with a Major in Political Science must complete a minimum of eighteen (18) credit hours (of the forty-two (42) required credits) at the 2000-level, chosen from among the courses surveying the core fields of the discipline: POLI 2304.0 Canadian Politics in the 21st Century, POLI 2380.0 Comparative Politics, POLI 2305.0 International Relations, and POLI 2335.0 History of Political Thought. The remaining eighteen (18) of the forty-two (42) required

credits must be completed in 3000-level and 4000-level Political Science courses.

Students require a minimum grade of C (2.00) in 1000 level Political Science Courses in order to declare a Major. Upon declaring a Major, students are also required to meet with the Department Chair or the Political Science Program Advisor, to review program requirements and course selection options.

Departmental Policy for Honours

The objective of the Bachelor of Arts Honours program in Political Science is to attract and graduate students with a demonstrated capacity to conduct original research. Students interested in pursuing postgraduate degrees are particularly encouraged to apply.

Admission Requirements

Students should officially apply for admission to the Honours program upon the completion of their 1000 and 2000-level Political Science course requirements. Forms are available from the Registrar's/Records Office. As part of the admissions process, the Department, in consultation with the Honours applicants, will assign an Honours advisor and will approve the major area of concentration.

In order to be considered for admission to the Political Science Honours program, a student must normally have a cumulative grade point average of at least 3.33 in both Political Science and non-Political Science courses.

Students are reminded that the admission requirements mentioned above constitute a minimum.

Requirements for Continuance in and for Graduation with Honours in Political Science

In order to continue in and to graduate with Honours standing, students must meet the Faculty of Arts requirements for the Honours Bachelor of Arts degree. Honours students must also achieve and maintain a minimum yearly and

cumulative grade point average of 3.33 in both Political Science and non-Political Science courses.

Honours students must complete a minimum of sixty (60) credit hours in Political Science, beginning with the 1000-level requirements of the Major (three (3) credit hours in Political Science and an additional three (3) credit hours in either Political Science or in one of the cognate disciplines listed above). Honours students must also complete a minimum of eighteen (18) credit hours at the 2000-level chosen from among the courses surveying the core fields of the discipline: POLI 2304.0 Canadian Politics in the 21st Century, POLI 2380.0 Comparative Politics, POLI 2305.0 International Relations, and POLI 2335.0 History of Political Thought. A maximum of six (6) credit hours in Political Science at the 1000-level, and twenty-four (24) credit hours in Political Science at the 2000-level, may be taken towards the Honours degree. The remaining credit hours of the sixty (60) required credits must be completed in 3000-level and 4000-level Political Science courses, including those specified below.

Honours students must complete at least three (3) credit hours in the POLI 4510.1 Honours Seminar course as well as three (3) credit hours in the POLI 4520.1 Honours Colloquium course, in addition to POLI 4500.0 (the Honours Essay course). The Department may consider as equivalent either two three (3) credit hour seminar courses, or a six (6) credit hour seminar in a cognate discipline, or upgraded senior-level courses in the Department, in lieu of the Honours seminar and/or colloquium requirements.

Honours students must submit an Honours essay (10,000 words) in their major area of concentration by March 15 of their final Honours year. The Honours advisor and Department must approve the Honours essay before a degree is recommended.

Honours students are encouraged to register for thirty (30) credit hours in the final Honours year.

Departmental Policy for Minors

To earn a Minor in Political Science students must complete at least twenty-four (24) credit hours in Political Science courses, including at least three (3) credit hours at the 1000-level in Political Science and an additional three (3) credit hours at the 1000-level either in Political Science or in one of the cognate disciplines listed above. A maximum of six (6) credit hours at the 1000-level may be taken toward the Minor. Remaining degree requirements must be drawn from Political Science courses at the 2000-level or higher.

In order to continue in and to graduate with a Minor in Political Science, students must achieve and maintain a minimum yearly and cumulative grade point average of 2.00 in both Political Science and non-Political Science courses.

Departmental Policy for Concentration

Students who intend to obtain a concentration in Political Science in partial fulfillment of the B.A. General degree (i.e., one with Double Arts Concentrations and a minimum of ninety (90) credit hours), must complete at least twenty-

four (24) credit hours in Political Science, of which a maximum of six (6) may be taken at the 1000-level. The student must also obtain a minimum cumulative grade point average of 2.00.

IMPORTANT

In order to enroll in any Political Science course at the 2000-level or higher, students must have successfully completed a minimum of six (6) credit hours at the 1000-level. Of these, three (3) credit hours must be in Political Science. The remaining three (3) credit hours may be either in Political Science or in one of the following cognate disciplines: Economics, History, Philosophy or Sociology. Selected courses at the 3000 and 4000-levels may have additional prerequisites as well. Please consult the course list below for further requirements.

Students are urged to be extremely careful not to register again for a course for which they have already earned credit. Academic Regulation 17(b) is extremely important to this matter.

Course Descriptions

1201.1.(2) Politics: Contemporary Issues

This course explores the multi-faceted nature of contemporary politics, and, in so doing, introduces student to various aspects of the Political Science discipline. The aim of the course is to convey how ideas, frameworks, institutions and actors relate to current political debates and ongoing democratic challenges, both locally and globally. Through a critical examination of significant political theories and practices students will develop a broad and general understanding of the nature, scope and range of political action in the contemporary world.

1210.1.(2) Political Ideas” “Isms” and Beliefs

An introduction to political ideologies (including liberalism, conservatism, socialism, fascism, feminism, anti-racism and green ideology) and their role in shaping modern political life. Particular attention is given to the meaning of “ideology” in general and its place in contemporary politics, as well as to the emergence of new ideologies and their relationship to social, economic and cultural forces.

1220.1.(2) Political Analysis

An introduction to the theoretical approaches and techniques used in analyzing political events and claims. Emphasis is placed on critical and institutional perspectives, as well as on debates over various approaches to political analysis and to the question of the interpretation of political issues and conflicts.

1230.1.(2) Law and Politics

An examination of the practical and theoretical connections between law and politics. The course will concentrate on contemporary public law issues and constitutional reform in liberal-democracies.

1240.1.(2) Politics and Business

An introduction to the relationship between politics and business. This course is based on developing an

understanding of the dynamics of business-government relations, with special emphasis on Canada from a comparative perspective. Special attention is given to business organization and lobbying, government regulation, and selected public policy issues and agencies.

1250.1(2) Politics and Globalization

This course will introduce student to the political, economic, social and cultural processes which commonly fall under the term *globalization*. The objective is to introduce students to some of the central global forces that are shaping our contemporary political world.

2304.0 Canadian Politics in the 21st Century

This course introduces students to the institutions, ideas and identities which structure and shape Canadian governance in the 21st century. Political features and forces are outlined, grounded historically and considered in light of current developments. Shifting political as well as economic, social and cultural climates are examined. Throughout, fundamental representational and democratic challenges are evaluated.

2305.0 International Relations

This course is an introduction to the study of world politics. It will explore the traditional and alternative schools of thought in the field of international relations in order to provide students with the analytical tools necessary to gain a better understanding of a world in transformation.

2307.1(2) Provincial Government and Politics

An analysis of the dynamics and structure of selected provincial government in Canada. Provincial political parties, voting behaviour, legislatures, bureaucracies and policy formulation constitute the core of this course. Inter-provincial and federal-provincial relations are examined.

2310.1(2) Government and the Media

An examination of the influence of the media, and the impact of government policy, especially as set out in federal and provincial legislation, on the growth and operation of the mass media in Canada. Particular attention will be given to the continuing debate over television and radio regulation and ownership, restraints on film and the press, and issues raised by new technology.

2314.1(2) Politics of the Developing Areas

An examination of political development in selected states in Asia, Africa, Latin America, or the Middle East.

2335.0 History of Political Thought

A survey of significant developments in Western political thought from the classical period of Athens to the 20th century through a focus on major Western political theorists. Key thinkers may include Socrates, Plato, Aristotle, Augustine, Machiavelli, Hobbes, Locke, Rousseau, Kant, Wollstonecraft, Marx, Goldman and Nietzsche.

2380.0 Comparative Politics

This course is designed as an introduction to the field of Comparative Politics, which will emphasize the comparative analysis of both political institutions and political processes.

2450.1(2) Women and Canadian Politics

This course explores various dimensions of women's participation in Canadian politics. Politics is broadly conceived and includes women's activism in and outside traditional political institutions: not only in the state, legislatures and political parties, but also in civil society (e.g., with the politics of the women's movement), and in the family. In addition, the course addresses contemporary feminist political debates and challenges. Throughout, women's multiple identities and the multi-faceted nature of women's experiences with politics are emphasized. While the primary focus is on Canadian women, other country studies may also be examined.

3205.1(2) Politics and Sex

This course introduces students to the interconnections between gender and sexual practices, with a particular focus on prostitution and international sex trafficking. It will examine such matters as morality, liberation, and exploitation, drawing, primarily, from multiple understandings of female sexuality.

3302.0 Democratic Theory and Cosmopolitanism

Prerequisite: Permission of instructor

An examination of such fundamental concepts in democratic theory as 'rights', 'equality', 'liberty', 'reciprocity', 'deliberation', and 'cosmopolitanism' from the modern era to the present. Special emphasis is placed on the shift of both theoretical and practical focus: from the questions of the equality of citizens in a nation-state to that of human diversity and difference in a cosmopolitan, global arena.

3312.1(2) American Government

An analysis of the American political system, its political culture, social base, constitutional order, governmental structure and policymaking processes. Special emphasis is placed on the party system, voting behaviour, and the Presidency.

3315.1(2) Canadian Foreign Policy

This course is an introduction to the study of Canadian foreign policy. Straddling the subfields of Canadian politics and international relations, this course provides students with tools to analyze Canada's role in the global and globalizing context.

3316.1(2) Politics in the European Union

A study of the institutions and policy-making processes of the European Union.

3321.1(2) International Organization

This course examines the concept of international organization. It will focus on the tensions between emerging forms of global governance and existing structures of inter-governmentalism. The course explores current trends and debates within organizations such as the United Nations (UN) and may examine areas such as peace and security, human rights, gender, economic development, environmental protection, and civil society.

3322.1(2) Global Political Economy

This course explores the theory and practice underlying the political forces structuring the global economy. Particular

attention will be paid to interactions between the global economy and international organizations such as the World Trade Organization (WTO), the World Bank, and the International Monetary Fund (IMF).

3330.0 Public Administration

A study of the structure and operation of the administrative branch of government, both in theory and practice. Included will be an examination of the evolution of the Canadian federal public administration and public service, with some attention for comparative purposes to related experiences in other nations. The administrative responsibilities and powers of the modern state will be assessed and a sampling of recent organizational theories will be undertaken.

3348.1.(2) Comparative Elections

A comparative analysis of the electoral process, including elections, electoral systems and voting behaviour.

3401.0 Scope and Methods of Political Science

An introduction to the concerns and methodologies of modern political science. Included will be a discussion of theories and approaches developed by the empirical school of political scientists.

3425.0 Spying and International Politics

An analysis of the development, role, techniques, and impact of spying on the conduct of international relations.

3445.0 Public Policy

A critical analysis of public policy formation, the content of public policies, and their impact upon society.

3446.0 Political Parties and Democratic Change

This course compares the historical evolution, as well as the contemporary promises and pitfalls of political parties. The party ideal is appraised in relation to changing political and representational realities. Given growing public dissatisfaction with political parties as democratic vehicles, representational alternatives, and electoral reforms are also contemplated. Here the challenges of other political forms, such as social movements, are examined. Students are encouraged to critically evaluate, compare and contrast political parties on all of these bases.

3456.1.(2) Issues in International Security

This course examines issues such as international conflict, transnational crime, environmental change and terrorism, taking such perspectives as national security, common security, cooperative security and human security.

3462.1.(2) Political Ideas of the Enlightenment

Prerequisite: POLI 2335.0, or permission of instructor.

A critical examination of the political ideas and theories that grew out of the modern European Enlightenment. Special attention is paid to Immanuel Kant's understanding of the nature, role and effects of "public reason" and to his assessment of the conditions necessary for international cooperation and peace. Other thinkers to be discussed may include John Locke, the Baron of Montesquieu, David Hume, Harriet Taylor and John Stuart Mill.

3463.1.(2) Counter-Enlightenment Thought: From Rousseau to Marx

Prerequisite: POLI 2335.0, or permission of instructor.

A survey and critical investigation of modern responses to liberal Enlightenment thought, from the analyses first undertaken by Jean-Jacques Rousseau and Edmund Burke, through to the crucial contributions to this tradition made by G.W.F. Hegel and Karl Marx. Special attention is paid to the critique of individualism and to alternative ideals of community and civil society.

3470.0 Empirical Democratic Theory

Prerequisite: One (1.0) POLI credit at the 1000 level.

An examination of the findings and impact of modern behavioral research and their impact on the theory and practice of democratic government. Particular attention will be given to the interplay between classical democratic theory and current political science research.

4317.1.(2) Charter Politics and Constitutional Change

A comparative examination of selected sources and authorities respecting fundamental law in democratic countries. The course will provide students of constitutional law with a theoretical basis for the analysis of constitutions and relevant judicial decisions.

4402.1.(2) Model United Nations

Prerequisite: POLI 3321.1.(2).

The objective of this course is to foster a greater understanding of the United Nations (UN) and its role within world politics. The course will revolve around the possible participation in a Model UN Conference either within Canada or abroad. Students will be given an opportunity to gain in-depth knowledge of the UN's activities and procedures. Students will be required to engage in activities outside of the classroom. The pedagogical base of this course is experiential learning.

4449.1.(2) Women and Public Policy

This course examines a number of contemporary debates and dilemmas in relation to women and public policy. The aim is to gain a better appreciation of the complexity of women's approaches to, and experiences of, various policy areas. The course begins by unpacking the nature and effects of the state and different theories of the state and then moves to explore a range of economic, social, political and legal policy concerns.

4451.1.(2) Gender and International Relations [WMST 4451.1.(2)]

This course explores theoretical and empirical issues raised by a "gender-based analysis" of international relations.

4465.1.(2) Modern Theories of the State

Prerequisite: POLI 2335.0.

An investigation of modern thought concerning the roles, scope, and limits of the state in society. This course emphasizes the historical roots of state theory through the study of such essential theorists as Jean Bodin, Thomas Hobbes, GWF Hegel, Mikhail Bakunin, Karl Marx and Friedrich Engels.

4466.1(.2) Contemporary Theories of the State

Prerequisite: POLI 4465.1(.2)

A survey of contemporary theories concerning the nature of the state in the present global, 'transnational' moment. The diversity of the theoretical field will be emphasized through an examination of liberal, Marxist, structuralist, feminist and continental approaches to state theory.

4493.1(.2) Global Social Movements

This course examines global social movements as new political forces within world politics. It will explore the main theoretical perspectives in the field of international relations that have addressed the political significance of global social movements. The course will also examine the forms of interaction between the constituents of global social movements (e.g. non-governmental organizations) and the institutions of global governance.

4494.1(.2) UK Politics in Transition

This course explores current debates in the United Kingdom (England, Scotland, Wales, and Northern Ireland). It evaluates the contemporary status of longstanding political structures, processes and discourses in the UK. It questions whether traditional state forms (centralized, unitary and welfarist); institutions (the British parliament, political parties, and the constitution); ideas (left/right); and identities (class) are being challenged and changed. It also examines "new politics" initiatives in the Scottish Parliament, as well as the Welsh and Northern Ireland Assemblies.

4500.0 Honours Reading Course

Prerequisite: open to honours students in political science.

Through regular meetings with their Honours Supervisor, students will use this course to prepare an honours essay in their major area of study.

4510.1(.2) Honours Seminar

The Honours Seminar will examine selected aspects of one of the fields of the discipline: Canadian Politics, Comparative Politics, International Relations and Political Thought.

4520.1(.2) Honours Colloquium

The Honours Colloquium will expose honours students to specialized dimensions of the discipline of Political Science, and offer opportunities to develop advanced research and writing skills.

4826.1(.2) – 4849.1(.2) Selected Topics in Political Science

The subject matter of particular half-credit courses will be announced from time to time by the Department. These courses will analyze specialized areas of political science not normally covered in our regular Departmental offerings.

4850.0 – 4875.0; 4876.1(.2) – 4899.1(.2) Directed Reading in Political Science

Prerequisite: permission of Department.

These courses, with the department's approval, are organized by an individual faculty member in agreement with the department as a whole, and are designed to supplement or provide an alternative to regular courses in political science, according to the special needs and interests of individual students and faculty members.

Psychology (PSYC)

Chairperson, Professor	V. Catano
Graduate Coordinator, Associate Professor	M. Fleming
Professors	A. Day, K. Hill, K. Kelloway, R. Konopasky
Associate Professors	J. Cameron, L. Francis, D. Gilin Oore, C. Holmvall, V. Stinson, S. Smith, P. Street
Assistant Professors	N. Conrad, M. Fisher, J. Ivanoff, L. Kocum, M. Patry
Adjunct Professors	J. Hurrell, L. Methot, S. Newsome
Professors Emeriti	D. Bruce, J. Chadwick-Jones

The Psychology Department offers a broad range of courses and programs designed to meet the needs of students from a variety of backgrounds and with varying degrees of interest in psychology. The Department offers an area of concentration for the general Bachelor of Science and Bachelor of Arts degrees, a major and honours for both the Bachelor of Arts and Bachelor of Science degrees, and a program of study leading to the Master of Science degree in applied psychology and a Doctor of Philosophy in Industrial/Organizational Psychology.

The Undergraduate Program in Psychology

The psychology undergraduate curriculum consists mainly of semester courses worth three (3) credit hours which are grouped into three broad categories—Group A, Group B, and Group C. Courses in Group A are representative of psychology as a natural science and offer instruction in the areas of (1) brain and behaviour, (2) biology, evolution, and behaviour, and (3) cognition. Courses in Group B are representative of psychology as a social science and provide instruction in the areas of (1) development, (2) social behaviour, and (3) personality and psychopathology. Courses in Group C are representative of psychology in general and include PSYC 1200.1(.2), and statistics and research methods courses, among others.

Psychology at the 1000 Level

Students who wish to major in psychology should begin by selecting foundation courses from PSYC 1210.1(.2), 1220.1(.2), 1230.1(.2), 1235.1(.2), 1240.1(.2), 1250.1(.2), and 1260.1(.2). Although recommended for majors, these 1000-level courses are open to other students and count towards Faculty of Arts' regulation 3d. Students may take as many of these courses as they wish; however, they should be guided in their selection by the stated prerequisites for 2000- and 3000-level courses. Additionally, students in the Faculty of Arts should be mindful of the need to complete at least forty-eight (48) credit hours at the 2000 level or higher.

PSYC 1200.1(.2) is NOT a prerequisite for other 1000-level psychology courses and is not intended for those who plan to major in psychology. PSYC 1200.1(.2) should be taken only by those students who are choosing psychology as an elective subject. However, Arts and Science students who have taken PSYC 1200.1(.2) and who then wish to major in psychology or to take other 1000 or higher level

courses may do so without losing credit recognition for PSYC 1200.1(.2).

Psychology as an Elective Subject

Students who wish to take psychology as an elective should begin with PSYC 1200.1(.2), Introduction to Psychology, which is a broad survey of the discipline. Completion of PSYC 1200.1(.2) will permit enrolment in selected psychology courses at the 2000 and 3000 levels. 4000-level psychology courses are normally available only to those planning an area of concentration or a major in the discipline. Students who meet the prerequisites of a 4000-level course or who obtain permission of the instructor, however, may register for the course. Arts students seeking to fulfil degree requirement 3d or who wish to minor in psychology, Science students seeking to fulfil degree requirement 3e, 6e, or 7b, or who wish to minor in psychology; and Commerce students seeking to fulfil degree requirement 5c should contact the Department Chairperson for guidance in selecting courses relevant to their needs.

Psychology as a Minor Program

Students who wish to minor in psychology, from whichever faculty, must complete the following requirements: (a) at least six (6) credit hours from courses in Group A and at least six (6) credit hours from courses in Group B; (b) at least twelve (12) credit hours at the 3000 level or higher; and (c) an additional number of credit hours in Psychology to meet at least the minimum required by the students' faculty regulations. For students in the Bachelor of Arts and Commerce degree programs, the minimum number of credit hours required is twenty-four (24); in the Bachelor of Science degree program, thirty (30).

Psychology as an Area of Concentration Bachelor of Science degree

Students taking a general Bachelor of Science degree may elect an area of concentration in psychology. The requirements are: (1) thirty (30) credit hours but not more than forty-two (42) credit hours in psychology; (2) at least six (6) credit hours from courses in Group A and six (6) credit hours from courses in Group B; (3) completion of PSYC 2340.1(.2) and 2350.1(.2); and (4) at least three (3) credit hours from 4000-level psychology courses. For students seeking a concentration in psychology, PSYC 2350.1(.2) is a prerequisite for all 4000-level psychology courses. Students who have taken another statistics class may check with the Department Chairperson to determine its equivalency. Students seeking a concentration in psychology are required to complete PSYC 2340.1(.2) and PSYC 2350.1(.2).

Bachelor of Arts Degree

Students taking a general Bachelor of Arts degree may elect an area of concentration in psychology. In addition to meeting the requirements for a Minor program specified above, students must complete at least three (3) credit hours at the 4000-level, PSYC 2340.1(.2) and PSYC 2350.1(.2). In addition, the Faculty of Arts requires students fulfilling a B.A. degree with Double Arts Concentration to complete a minimum of ninety (90) credit hours with at least twenty-four

(24) credit hours in Psychology; as well, students must maintain a minimum cumulative grade point average of 2.00. Further details are available from the chairperson.

Psychology as a Major Program

Psychology is both a natural and a social science. Thus students may major in psychology and obtain a Bachelor of Science or a Bachelor of Arts degree. The course requirements for a psychology major are the same for both faculties:

1. a minimum of forty-two (42) credit hours in psychology;
2. at least twelve (12) credit hours from courses in Group A and twelve (12) credit hours from courses in Group B;
3. completion of PSYC 2340.1(.2) and PSYC 2350.1(.2); and
4. at least eighteen (18) credit hours from 4000-level psychology courses.

For students majoring in psychology, PSYC 2350.1(.2) is a prerequisite for all 4000-level psychology courses. Students who have taken another statistics class may check with the Departmental Chairperson to determine its equivalency. Students who are taking Psychology as a major must maintain a minimum cumulative quality point average of 2.00 (an average grade of C) in the courses used to meet the minimum credit hour requirements for the major (Arts Regulation 7, Science Regulation 9).

Students seeking a double major in psychology and another subject must meet the requirements for a major in psychology as stated above. Students who are completing a double major in Psychology and Sociology/Criminology may substitute SOCI 2364.1 Research Design in place of PSYC 2340.1.

Students who intend to declare a major in psychology are advised to consult the Psychology Chairperson as to whether the Bachelor of Science or the Bachelor of Arts is better suited to their career goals. [Note: Students who have successfully completed MATH 207.1(.2) before 2003 may use that course to satisfy the PSYC 2340.1(.2) requirement.]

Psychology as an Honours Program

The Psychology Department offers honours study leading to a Bachelor of Arts (Honours) degree, a Bachelor of Science (Honours) degree, and a Certificate of Honours Standing (Honours Equivalency)—academic regulation 26. The honours program is intended for students of above average ability who wish to proceed to graduate work in psychology or related fields or who intend to pursue careers in psychology. For admission to honours in psychology, students at the time of application must have a minimum cumulative quality point average of 3.00 and must have completed at least eighteen (18) credit hours in psychology, including PSYC 2350.1(.2). These requirements are minimum standards only. Because the Department has limited resources for offering the honours program, some students who meet the minimum standards may have to be denied admission. The Department reviews applications for admission to honours as they are received. Applications

from students who do not meet the minimum standards as outlined above at the time of application will not be processed.

The requirements for honours in psychology follow the general regulations for the Faculties of Arts and Science as stated in the *Calendar*. The course requirements are as follows: a minimum of sixty (60) credit hours in psychology, including at least twelve (12) credit hours from courses in Group A and twelve (12) credit hours from courses in Group B. Of the minimum sixty (60) credit hours, at least thirty-six (36) must be at the 4000 level or above, including PSYC 4401.1(.2) Advanced Statistics; 4421.1(.2) History of Psychology; and PSYC 4500.1(.2) Honours Seminar. Honours students who wish to enrol in PSYC 4549.0, Honours Thesis, must first secure the consent of a member of the Department to supervise their work and then complete an Application for Directed Study form, available from the Registrar's Office. To determine a program of study that is appropriate to their future plans, honours students should consult with the Chairperson of the Department. [Note: Students who were accepted into the honours program prior to the start of the 2004-05 academic year should take PSYC 2340.1(2) in place of PSYC 4400.1(2).]

Co-operative Education in Psychology

The co-operative education program in psychology allows eligible students to complement their academic studies with experience in relevant work environments. The program involves the completion of a minimum of four terms of approved work experience, and generally takes one year longer to complete than the corresponding traditional degree. A "Co-operative Education" notation is added to the academic transcripts of students who successfully complete the requirements of the program in addition to their regular degree requirements.

Application to the program takes place via the Co-operative Education Office and is normally submitted after the second semester of Year 1. Admission to the program requires a minimum cumulative quality point average of 2.50 and a minimum quality point average of 3.00 in psychology courses.

Further detail concerning the requirements and regulations of the cooperative education program can be found in Section 3 of this *Calendar*, under Faculty of Science.

The Certificate in Human Resource Management

Students may enrol in the certificate program in human resources management as a stand-alone program, either prior to completing or following completion of a bachelor's degree. Students who major in psychology as part of either a Bachelor of Arts or Bachelor of Science degree may also obtain a certificate in Human Resource Management by selecting an appropriate set of interdisciplinary courses.

The combined program offers students a sound foundation in basic and applied topics relevant to either a career or graduate training in the field of Human Resource Management and related areas. Details on this certificate can be found under Human Resource Management in this *Calendar*.

THE GRADUATE PROGRAM IN PSYCHOLOGY

The Department offers a Master of Science degree in applied psychology with a concentration in Industrial/Organizational Psychology and a Ph.D. in Industrial/Organizational Psychology. There are a limited number of placements available in the program and competition for these positions is extremely high. For additional information on graduate programs see the *Graduate Academic Calendar*.

Course Descriptions

1200.1(.2) Introduction to Psychology (Group C)

A survey of the science and application of psychology.

Note: This course is recommended for students not planning a major in psychology. It may be used to satisfy one quarter of Faculty of Arts' regulation 3d. Please note that this course may not be used by B. Sc. Students to satisfy the requirement of a science elective under regulations 3.e., 6.e., 10.c., and 12.b. for B.Sc. degrees.

1210.1(.2) Mind and Brain (Group A)

An overview of the biological foundations of attributes of the brain including consciousness, memory, language, and perception.

1220.1(.2) Evolutionary Psychology (Group A)

An analysis of the biological events that shape human behaviour. Topics include evolution and social, sexual, and aggressive behaviour.

1230.1(.2) Memory (Group A)

A review of research and theory in memory.

1235.1(.2) Learning (Group A)

A review of the fundamental principles of learning and their applications to human behaviour.

1240.1(.2) Human Development (Group B)

An examination of theories of human development across the life span.

1250.1(.2) Social Behaviour (Group B)

An introduction to the study of social behaviour and to contemporary theory and research in the field.

1260.1(.2) Personality: Normal and Abnormal (Group B)

History, concepts, models and methods in personality theory and research.

2340.1(.2) Research Methods in Psychology (Group C)

Prerequisite: a minimum of six (6) credit hours at the 1000-level in PSYC.

This course familiarizes students with basic principles of experimental and correlational research design, survey design and construction, reliability, validity, qualitative methods, and research ethics.

Classes 3 hrs. and lab 1.5 hrs a week. 1 semester.

2350.1(.2) Psychological Statistics (Group C)

Prerequisite: PSYC 2340.1(.2) or SOCI 2364.1(.2) if doing a double major in Psychology and Sociology/Criminology.

Statistics with interpretation for the social sciences. Topics will advance areas learned in the prerequisite course and will cover simple and two-way ANOVA, regression, and correlation.

Classes 3 hrs. and lab 1.5 hrs. a week. 1 semester.

3307.1(.2) Biological Origins of Behaviour (Group A)

Prerequisite: three (3) credit hours in psychology at the 1000 level.

An examination of the evolutionary origins of language, parent-child relationships, courtship, mating, aggression, motivation, and emotion.

3309.1(.2) Human Factors and Performance (Group A)

Prerequisite: three (3) credit hours in psychology at the 1000 level.

An examination of human performance in technological environments including the design of tools, systems, and environments.

3310.1(.2) An Introduction to Cognitive Neuroscience (Group A)

Prerequisite: (PSYC 1210.1(.2) or 1230.1(.2)) and 2350.1(.2).

A review of the empirical research and theory in cognitive neuroscience, a sub-discipline of psychology that concerns the linkage between mind and brain. Students will be exposed to topics concerning the neural bases of sensation, object recognition, action, emotion, memory, language, attention, and executive control.

Classes 3 hrs. a week and lab 3 hrs a week. 1 semester.

3316.1(.2) Social Cognition and Emotion (Group B)

Prerequisite: one of the following courses: PSYC 1240.1(.2), 1250.1(.2), or 1260.1(.2).

An examination of the social aspects of cognition and emotion. Topics will include attitudes and their formation, impression formation, attribution theory, social biases, decision making, and the relation of emotion to behaviour.

3317.1(.2) Group Dynamics and Intergroup Relations (Group B)

Prerequisite: PSYC 1250.1(.2)

An examination of key topics in social psychology of group dynamics and intergroup relations. These include conceptualizations of groups and group behaviour, the roots and consequences of prejudice and stereotyping, theories of intergroup relations, social identity, and responses to discrimination.

3320.1(.2) Psychology and Law (Group B)

Prerequisite: three (3) credit hours in Psychology at the 1000 level.

A review of empirical studies of pre-sentence legal procedures, including the reliability of eyewitness testimony, the role of experts in the courts, jury selection, and subject apprehension and interview.

3327.1(.2) Industrial/Organizational Psychology (Group B)

Prerequisite: three (3) credit hours in psychology at the 1000 level.

Introduction to methods and problems in industrial/organizational psychology. Representative topics will be drawn from the area of organizational behaviour, personnel psychology, human factors, and consumer behaviour.

3329.1(.2) Child Development (Group B)

Prerequisite: PSYC 2340.1(.2)

A survey of physical, perceptual, cognitive, and social development of the child from infancy to preadolescence.

3332.1(.2) Adolescent Development (Group B)

Prerequisite three (3) credit hours in Psychology at the 1000 level.

An examination of the biological, cognitive, and personal growth of adolescents. Topics include physical growth patterns, development of interpersonal relationships, cognitive growth, and theories of adolescent development.

3335.1(.2) Abnormal Psychology: History and Theory (Group B)

Prerequisite: PSYC 1260.1(.2)

A focus on the essentials of history, theories of etiology, assessment, diagnosis and methods of treatment.

3336.1(.2) Abnormal Psychology: Specific Disorders (Group B)

Prerequisite: PSYC 3335.1(.2) which may be taken concurrently..

A course which focuses on the description, etiology, diagnosis and treatment of specific disorders.

3338.1(.2) Introduction to Forensic Psychology (Group B)

Prerequisite: PSYC 3335.1(.2), or equivalent; which may be taken concurrently.

A review of psychological methods, research and theory that is applied to legal system tasks; an introduction to forensic assessment, and treatment in a legal context.

3347.1(.2) Longevity and Aging (Group B)

Prerequisite: three (3) credit hours in psychology at the 1000 level.

An overview of the neuropsychological, physiological, clinical and personological aspects of the later phases of life. Normal and abnormal patterns of aging are examined. Topics include research from neuropsychology, neuroanatomy, personality, clinical psychology, gerontology and geriatrics.

3348.1(.2) Gender Roles (Group B) [WMST 3348.1(.2)]

Prerequisite: three (3) credit hours in Psychology at the 1000 level.

An introduction to the psychological concept of gender as it relates to behavioral, emotional, and cognitive development. Theories as to the sources of gender differences and similarities will be reviewed and discussed in relation to the impact of gender roles on intimate relationships, family, work, and physical and mental health.

3349.1(.2) Drugs and Behaviour (Group A)

Prerequisite: PSYC 1210.1(.2)

Effects of psychoactive drugs on normal and abnormal behaviour and on consciousness. Explanations are in terms of brain functioning. Discussion of methods used in the study of drug effects on animals and humans.

3351.1(.2) Prevention and Treatment of Addictions (Group B)

Prerequisite: three credit hours in psychology at the 1000 level.

An introduction to the field of addictions including the full continuum from low harmful involvement to chemical dependency and problem gambling, including a review of the major perspectives or models used to conceptualize addiction problems. The strategic process related to planning, delivering, and evaluating addiction-related prevention and treatment programs and services will also be reviewed.

3355.1(.2) Cognitive Psychology (Group A)

Prerequisite: one of the following courses: PSYC 1210.1(.2), 1230.1(.2), or 1235.1(.2).

A survey of basic perceptual and cognitive processes including attention, sensation, perception, pattern recognition, learning, and memory.

3360.1(.2) Applied Sport Psychology (Group B)

Prerequisite: three (3) credit hours in psychology at the 1000 level.

An examination of sport psychology as applied to performance enhancement, anxiety control, and psychologically healthy lifestyles. This course emphasizes the application of sport psychology to improve the quality of sport and life experiences.

3386.1(.2) Behavioral Analysis and Change (Group B)

Prerequisite: PSYC 1235.1(.2) and 2340.1(.2)
[2340.1(.2) may be taken concurrently.]

A review of the principles, procedures, and empirical and theoretical underpinnings of behaviour modification.

3389.1(.2) Psychology of Personal Adjustment (Group B)

Prerequisite: three (3) credit hours in Psychology at the 1000 level.

A comprehensive series of presentations covering the application of psychological concepts and principles to personal adjustment. Topics include awareness, past experiences, beliefs, critical thinking, control, values, motivation, stress, self-deception, and coping.

3392.1 (2) Occupational Health Psychology (Group B)

Prerequisites: Three credit hours in psychology at the 1000 level

This course examines current issues pertinent in occupational health psychology including workplace stress, violence in the workplace, and occupational safety. In addition to these content areas, the course will consider relevant legislation, preventive strategies, and the management of occupational health and safety issues in today's workplaces.

3393.1(.2) The Psychology of Leadership (Group B)

Prerequisite: PSYC 1250.1(.2)

An examination of leadership theories in the context of organizational systems. Special topics include, but are not limited to, women and leadership, team leadership, and leadership ethics. Practical applications are considered with respect to leadership in organizations.

3826.1(.2) – 3849.1(.2) Special Topics in Psychology (Group C)

Prerequisite: three (3) credit hours in psychology at the 1000 level.

Courses on selected psychological topics.

4401.1(.2) Advanced Statistics (Group C)

Prerequisite: PSYC 2350.1(.2)

The application and interpretation of factorial analysis of variance, repeated measures designs, multiple regression, and various correlation techniques for the social sciences.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

4407.1(.2) Introduction to Ethology (Group A)

Prerequisite: PSYC 2350.1(.2) and PSYC 1220.1(.2) or PSYC 3307.1(.2) or permission of instructor.

Introductory study of the principles of early and modern ethology. Topics include instinct and learning, communication, navigation, and behavioral genetics.

Classes 3 hrs. a week. 1 semester.

4410.1(.2) Human Neuropsychology (Group A)

Prerequisite: PSYC 3310.1(.2).

Background to the clinical understanding of brain-behavioral relations will be provided with special emphasis on higher cortical functions. An introduction to neuropsychological testing and its role in the assessment of neurobehavioral pathology.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

4411.1(.2) Advanced Cognitive Neuroscience (Group A)

Prerequisite: PSYC 2350.1(.2) and PSYC 3310.1(.2)

A seminar on contemporary cognitive neuroscience research and theory. Topics may include any of the following: perception, attention, consciousness, executive control, decision-making, memory, emotion, social neuroscience, neuroeconomics, neurolaw, and applied neuroscience.

4413.1(.2) Thinking and Reasoning (Group A)

Prerequisite: PSYC 2350.1(.2) and 3355.1(.2). Completion of 4401.1(.2) is advised.

An examination of higher-order cognitive processes including problem solving, concept formation, knowledge representation, language, reasoning, decision making, creativity and intelligence. Information-processing and connectionist models will be reviewed.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

4414.1(.2) Environmental Perception and Cognition (Group A)

Prerequisite: PSYC 2350.1(.2) and 3355.1(.2).

An examination of the manner in which individuals perceive, represent, and adapt to three-dimensional space, including discussions of way finding, route learning, spatial perception, and orientation.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

4417.1(.2) Interpersonal Relationships (Group B)

Prerequisite: PSYC 2350.1(.2) and one of the following courses: PSYC 1240.1(.2), 1250.1(.2), or 1260.1(.2).

Intensive coverage of aspects of interpersonal behaviour. Topics will include relationship development and maintenance, friendships, sibling relationships, liking and loving, social and cultural influences on interpersonal relationships, sexuality, and gender differences in interpersonal relationships, including dating behaviours and attitudes.

4418.1(.2) Environmental Psychology (Group A)

Prerequisite: PSYC 2350.1(.2).

The study of behaviour in its relation to the environment. Topics include personal space, crowding, the city, architectural design, and behaviour.

4420.1.(2) Disabilities (Group A)

Prerequisite: Twenty-four (24) credit hours in psychology including PSYC 2350.1(.2).

This course will examine the biological, psychological, and social impact of various types of acquired and developmental disabilities. This course is divided into three parts: (1) review genetic and environmental factors associated with developmental disabilities; (2) review of the physiological aspects of various types of acquired and developmental disabilities and the outcome; and (3) address the historical, political, ethical issues dealing with persons with disabilities in Canada.

4421.1.(2) History of Psychology (Group C)

Prerequisite: twenty-four (24) credit hours in psychology including PSYC 2350.1(.2).

An examination of the origins and development of modern psychology.

4424.1.(2) Vocational Psychology (Group B)

Prerequisite: PSYC 2350.1(.2) and PSYC 4441 (May be taken concurrently)

An examination of career development and vocational behaviour theories in the context of entering, adjusting to, and exiting the world of work. Special topics include, but are not limited to, career assessment practices, job search, and adjustment issues such as youth employment, unemployment, retirement and outplacement. The students are guided through a self assessment process that results in the construction of a personal career development plan.

4425.1.(2) The Psychology of Organizational Development (Group B)

Prerequisite: PSYC 2350.1(.2) and either PSYC 3327.1(.2) or MGMT 2383.1(.2).

An examination of strategies designed to improve organizational effectiveness using behavioral science knowledge. Attention will be devoted to understanding factors that influence the success of organizational change initiatives and the process of change.

4426.1.(2) Personnel Training and Development (Group B)

Prerequisite: PSYC 2350.1(.2) and either PSYC 3327.1(.2) or MGMT 2383.1(.2)

Intensive examination of topics related to training and systematic organizational development. Emphasis is on application of psychological concepts and principles of learning in the contexts of needs assessment, curriculum development, transfer of training, and evaluation.

4427.1.(2) Organizational Psychology (Group B)

Prerequisite: PSYC 2350.1(.2) and PSYC 3327.1(.2)

Extended coverage of topics in organizational behaviour with an emphasis on the application of psychological concepts to problems encountered in work environments. Topics may include the structure and climate of

organizational environments, leadership, communication, motivation and decision-making.

4428.1.(2) Personnel Psychology (Group B)

Prerequisite: PSYC 2350.1(.2) and 3327.1(.2).

Extended coverage of topics in personnel psychology with an emphasis on the application of psychological concepts to problems encountered in work environments. Topics may include job analysis, recruitment and selection, training and performance, performance evaluation, industrial relations, and occupational health and safety.

4429.1.(2) Psychology and Religion: A Survey (Group B) [RELS 4461.1.(2)]

Prerequisite: twenty-four (24) credit hours in psychology including PSYC 2350.1(.2), and one of REL 2201.0, 2220.1(.2), 2221.1(.2) or 2251.1(.2).

A survey of theory and research in the psychology of religion.

4432.1.(2) Attitudes and Persuasion (Group B)

Prerequisite: PSYC 1250.1(.2) and 2350.1(.2)

This course is designed to provide students with an introduction to attitude and persuasion research. Particular attention will be given to reviewing the various theoretical perspectives that have been proposed as explanations for the psychological processes underlying persuasion.

4434.1.(2) Personality (Group B)

Prerequisite: PSYC 1260.1(.2) and 2350.1(.2).

Examination of selected theories of personality through intuitive, rational, historical, and empirical methods.

4436.1.(2) Counselling and Psychotherapy (Group B)

Prerequisite: PSYC 2350.1(.2) and PSYC 3336.1(.2) which may be taken concurrently.

A review of theory, method, and practice in counselling and psychotherapy.

4438.1.(2) Advanced Forensic Psychology (Group B)

Prerequisite: PSYC 2350.1(.2) and 3338.1(.2).

A review of research on assessment tools, intervention effectiveness and epidemiology of criminal behaviour; the application of such research in forensic assessment, and treatment in a legal context.

4441.1.(2) Psychological Measurement (Group B)

Prerequisite: PSYC 2350.1(.2).

A review of the nature and use of psychological tests with an emphasis on norms, the interpretation of test scores, test reliability, and test validity.

4443.1.(2) Advanced Psychology and Law (Group B)

Prerequisite: PSYC 3320.1(.2); 2340.1(.2) and 2350.1(.2).

A closer examination of the research on several topics in the area of psychology and law that may include eyewitness testimony, children in the courts, police selection and

procedures, workplace harassment and discrimination, jury decision-making, and alternative dispute resolution.

4445.1(.2) Directed Research in Psychology (Group C)

Prerequisite: twenty-four (24) credit hours in psychology including PSYC 2350.1(.2).

Research experience for advanced students on problems in psychology. Students must secure the consent of a member of the Department to supervise their work before attempting to register for the course.

Classes and labs 6 hrs. a week. 1 semester.

4446.1(.2) Seminar in Psychology (Group C)

Prerequisite: twenty-four (24) credit hours in psychology including PSYC 2350.1(.2).

A seminar for advanced students on specialty areas in psychology. Extensive reading, oral presentations, and written reports or projects will ordinarily be required.

4450.1(.2) Behaviour Problems of Children (Group B)

Prerequisite: PSYC 2350.1(.2) and PSYC 3329.1(.2).

A review of emotional and behavioral problems exhibited by children, including a survey of classification systems, assessment, and treatment.

4456.1(.2) Advanced Counselling and Psychotherapy (Group B)

Prerequisite: PSYC 2350.1(.2) and PSYC 4436.1(.2).

Extended study of selected theories and related techniques. Course work may involve supervised, simulated practice in dyads or small groups.

4460.1(.2) Advanced Sport Psychology (Group B)

Prerequisite: PSYC 2350.1(.2) and PSYC 3360.1(.2).

An examination of human performance in sport. This course emphasizes stress management techniques, and interpersonal and psychological skills as they relate to the pursuit of excellence in sport and life.

4489.1(.2) Positive Psychology (Group B)

Prerequisite: PSYC 2350.1(.2) and 3389.1(.2).

A comprehensive series of presentations covering the application of "positive" psychological concepts and principles to personal growth and well-being. Topics include communication, relationships, support, and authenticity.

4490.1(.2) Health Psychology (Group B)

Prerequisite: PSYC 2350.1(.2)

An examination of the psychological factors involved in health, illness, and treatment. Topics include health research methods, health promotion, modification of health behaviours, stress, coping, social support, and personality.

4497.1(.2) Community Psychology (Group B)

Prerequisite: PSYC 1250.1(.2) and 2350.1(.2).

A review of the theoretical and empirical foundations of community psychology. The course explores the development of psychosocial environments, methods of assessing community characteristics and their relevance to mental health, and perspectives in community development and social change. Students will be introduced to applied psychology in relation to consultation, epidemiology, and prevention methods.

4500.1(.2) Honours Seminar (Group C)

Prerequisite: at least forty-two (42) credit hours in Psychology and final year of honours program, seventy five (75) credit hours.

This is a seminar designed for honours students. It reviews the current state of theory and research in psychology and prepares honours students for study in graduate and professional programs related to psychology. Extensive reading, oral presentations, and reports or projects will be required.

Seminar.

4549.0 Honours Thesis (Group C)

Prerequisite: honours standing.

A research project in psychology that will serve as the basis for a written thesis. Honours students must secure the consent of a member of the Department to supervise their work before attempting to register for the course.

Classes and lab 6 hrs. a week. 2 semesters.

Religious Studies (RELS)

Chairperson, Professor	P. Bowlby
Professor	T. Murphy
Associate Professors	M. Abdul-Masih, A. Dalton
Assistant Professor	N. Erhard, A. Soucy
Professor Emeritus	E. Stiegman

The Religious Studies Department offers courses on the religious dimensions of human life in contemporary societies and cultures. Courses on religion and culture are offered as a way to explore various disciplines and their approaches to the study of religion or to engage in a debate around a theme structured to include both religious and non-religious views. Such courses may examine a theme comparatively in order to show the views of different religious traditions or a theme may be presented in terms of a debate between religious and non-religious understandings. Courses on the comparative study of religions include surveys of the major religious traditions of the world as well as courses which compare characteristics of religious life across several religious traditions. Examining religious diversity in Canada and around the world is also part of the study of comparative religions. By virtue of its character and history, Saint Mary's University has a special responsibility to teach courses on Christianity. The Religious Studies Department offers a number of courses on the Bible, on issues of debate within the Christian Tradition, and the formative role of Christianity in Western Culture and Tradition.

Electives

Students seeking an elective may take any Religious Studies course at the 1000 or 2000 level. Students who have completed 60 credit hours of university course work and have completed a minimum of three (3) credit hours at the 1000 level and 3 credit hours at the 2000 level may register for a 3000 level course in Religious Studies to complete a degree requirement for an elective at the 3000 level.

Religious Studies courses at the 3000 level or above are normally for students completing a Religious Studies Major or Honours, a Religious Studies BA Concentration or a Minor in Religious Studies. Students are advised to check specific courses at the 3000 level for prerequisites.

Degree Requirements

Religious Studies courses at the 1,000, 2,000 or 3,000 level satisfy a humanities requirement in the Arts Faculty; free electives in the Commerce Faculty and the humanities requirements in the Faculty of Science.

A Minor in Religious Studies

A minor in Religious Studies may be completed by taking twenty-four (24) credit hours in Religious Studies. Six (6) credit hours may be at the 1000 level; eighteen (18) of the credit hours must be at the 2000 level or above. An overall grade point average of 2.00 must be maintained in the twenty-four (24) credit hours. In a Religious Studies minor students must complete at least twelve (12) of the twenty-four (24) required credit hours at Saint Mary's.

B.A. Concentration Requirement in Religious Studies.

Only students in the ninety (90) credit hour B.A. may complete the concentration requirement in Religious Studies. The requirement may be completed by taking twenty-four (24) credit hours in Religious Studies. The credits toward the concentration requirement in Religious Studies must include the following:

1. Three (3) credit hours from the courses in Group A;
2. Three (3) credit hours from the courses in Group B;
3. Three (3) credit hours from the courses in Group C;
4. In the twenty-four (24) credit hours, six (6) credit hours may be at the 1000 level; no more than 12 credit hours may be at the 2000 level, and six (6) credit hours at the 3000 level or above. Students may take one (1) of the 4000 level seminars in religious studies: (RELS 4100.1(.2) Religion and International Development; RELS 4300.1(.2) Gender and Asian Religious Traditions, RELS 4387.1(.2) Religious Pluralism; 4390 Religion and Society in Atlantic Canada; RELS 4400.1(.2) Comparative Religious Ethics; RELS 4500.1(.2) Religions and Orientalism); and/or 4481 Theories and Methods in the Study of Religion.;
5. An overall grade point average of at least 2.00 must be maintained in the twenty-four (24) credit hours in Religious Studies.

A Major in Religious Studies

Students majoring in Religious Studies must fulfill the following requirements:

1. The equivalent of thirty-nine (39) credit hours in the Department. Normally, these will be distributed as follows:
 - a) Six (6) credit hours at the 1000 level;
 - b) Fifteen (15) credit hours at the 2000 level or above;
 - c) Twelve (12) credit hours at the 3000 level;
 - d) At least six (6) credit hours from each of Group A, Group B, and Group C as described at the end of the Religious Studies course listing;
2. An overall minimum grade point average of 2.00 in the courses counted toward the major;
3. Majors must complete the designated seminar for Majors from among the following courses in Religious Studies: RELS 4050.1(.2) Religious Traditions in Canada; RELS 4390.1(.2); Religion and Society in Atlantic Canada; RELS 4100.1(.2) Religion and International Development; RELS 4300.1(.2) Gender and Asian Religious Traditions, RELS 4387.1(.2) Religious Pluralism; RELS 4400.1(.2) Comparative Religious Ethics; RELS 4500.1(.2) Religions and Orientalism.

4. Majors must also complete RELS 4481.1(.2) Theories and Methods in the Study of Religions. Normally this course is only offered in alternating academic years.
5. While not required for the completion of the major, the Department of Religious Studies recommends the completion of six (6) credit hours in a foreign language from among Hebrew, Greek, Latin, Chinese, Japanese, Arabic, French, Spanish or German (or an alternative acceptable to the Department).

Honours in Religious Studies

An honours student must complete sixty-three (63) credit hours in Religious Studies courses which include:

1. All of the requirements for a Religious Studies major [thirty-nine (39) credit hours];
2. An additional twelve (12) credit hours at the 3000 level in Religious Studies and an additional six (6) credit hours at the 4000 level either in the Religious Studies seminars (RELS 4050.1(.2) Religious Traditions in Canada; 4100.1(.2) Religion and International Development; RELS 4300.1(.2) Gender and Asian Religious Traditions, RELS 4387.1(.2) Religious Pluralism; RELS 4400.1(.2) Comparative Religious Ethics; RELS 4500.1(.2) Religions and Orientalism.) or in directed reading or special topics courses at the 4000 level
3. In addition to the sixty-three (63) credit hours in Religious Studies students must complete at least six (6) credit hours in a language chosen from among: Hebrew, Greek, Latin, Chinese, Japanese, Arabic, French, Spanish and German or other language acceptable to the department;
4. Religious Studies 4000 Honours Thesis Research and 4001 Honours Thesis Writing.

Admission to an honours program normally requires Department approval no later than when a student has completed sixty (60) credit hours. In addition to the Faculty of Arts requirements for honours, a minimum grade point average of 3.00 in Religious Studies courses is required for admission to, and continuation in, the honours program.

Student Counseling

Students completing a minor, a concentration, a major and honours must have their Religious Studies courses approved by the Chairperson on an annual basis. In some instances, majors and honours students will be requested to take prerequisites for Departmental courses. Suggested prerequisites are kept on file in the Department. With renumbered or restructured courses, students are advised that they are not eligible to take a course for credit if they already have a credit for a comparable course, even if that course was taken at a different level.

Notes:

With renumbered or restructured courses, students are advised that they are not eligible to take a course for credit

if they already have a credit for a comparable course, even if that course was taken at a different level.

Department policy calls for no prerequisites on courses at the 1000 or 2000 level. Religious Studies courses at the 3000 level will have the following prerequisites:

3000 level courses normally require that students be registered in a Religious Studies Major, BA Concentration or a Minor.

Course Descriptions

1210.1(.2) Introduction to Religion

Religion as a subject of study is relatively new, starting only in the nineteenth century. This course will firstly deal with how religion became an object of study and the approaches and theories that have been used to come to grips with how religion fits into people's lives. It will also look at characteristic ways that the ultimate reality is approached and how religious life fits into contemporary culture.

1211.1 (.2) Introduction to Religious Experience

The course will introduce students to the many dimensions of the human experience of the sacred inspired by religious texts, ritual, chant and music; by mysticism, sacred places either in nature or in temples and in art of all kinds.

1220.1(.2) Introduction to Comparative Religions, I

Religious Diversity in Canada has come to include the Hindu and Buddhist traditions of South Asia and the Chinese and Japanese traditions. This course examines these religious traditions both in the context of their historical origins and their adaptations to Canadian Society.

1221.1(.2) Introduction to Comparative Religions, II

Religious Diversity in Canada includes Judaism, Christianity, and Islam. This course examines these religious traditions both in the context of their historical origins and their adaptations to Canadian Society.

1251.1(.2) Religion in Contemporary Culture

This course explores the role of religion in contemporary culture, particularly North American culture. Portrayals of religious people as well as the employment of symbols and themes from various world religions will be identified within selected pieces of contemporary art, film, literature, music, Internet, and other media. We will also consider emerging religious trends and whether certain cultural practices are functioning in a religious role.

Courses at the 2000 level may be used by students to complete their humanities requirement or as an elective in their degree program.

2305.1(.2) Women in Christianity [WMST 3305.1(.2)]

This course calls attention to the unconventional attitude of Jesus toward women; it studies the prominence of women in the New Testament, in contrast to early restrictions of their leadership roles. Did Christianity conform, from the beginning, to patriarchal society, betraying its own insight that in Christ "there is neither male nor female" (Galatians

3:28). Has Christian tradition legitimated male dominance? What can the cause of women's equality hope for from Christianity?

2323.1(.2) The Islamic Religious Tradition

Islam is one of the most rapidly expanding religious traditions in the world. This course will examine the origins of Islam, its fundamental teachings in the Qu'ran and in the works of some of its major teachers. In addition, the course will survey the history of Islam and contemporary developments in selected areas.

2325.1(.2) Myth and Story

The telling of stories and the recounting of myths in ritual settings are two major characteristics of religious traditions. The course will examine in translation stories and myths from a variety of literary and oral traditions and cover major theories of approach to mythic narrative. Myths and stories will be studied within the religious context of religious traditions. Major theses will be analyzed and compared across religious traditions.

2326.1(.2) The Hindu Religious Tradition

"Hinduism" is the name westerners give to the religious tradition of South Asia. The course will examine the historical development and literary monuments, such as the "Bhagavadgita", that express the religious life of South Asian peoples.

2327.1(.2) The Buddhist Religious Tradition

The Buddhist religious tradition was founded in South Asia, and moved to China, Japan and Southeast Asia. The founding of Buddhism will be examined through the teachings concerning the life of Siddhartha. Ch'an or Zen Buddhism will provide an insight into Chinese and Japanese Buddhism.

2330.1 (.2) Spirituality and Work

Is the emerging (or re-emerging) interest in spirituality in the workplace enabling more individual fulfillment and better decision-making or is it creating new conflicts and more exclusionary workplace practices? What influences do religious traditions and worldviews have on how we work together? The increasing globalization of business and communication, the need for more qualified immigrants to Canada, and the growing diversity of people in many workplaces is forcing re-examination of inherited attitudes and expectations about work. These changes require deep understanding of what spirituality, as the deepest source of values, can mean as workplaces change and people make choices about work, vocation, or calling. This course explores the potential, the benefits and the dangers of bringing spirituality into the workplace.

2333.1(.2) Women and Religion Today

[WMST 2333.1(.2)]

Women's groups are having an important impact on traditional forms of religious belief and practice in the world. This course will examine some of the contemporary spiritual movements influenced primarily by women. It will include women's roles in mainline religions, such as women priests, monks, and ministers, and religiously inspired liberation movements. Radically new religious

expressions, such as goddess worship and other pagan forms will also be discussed.

2334.1(.2) Christian Spirituality Today

A study of Christianity as experienced today focusing on the topics of prayer, community building toward justice and peace in the world. The focus is on spiritual texts from different aspects of the Christian tradition.

2343.1(.2) Jewish Religious Tradition

The course examines the origin and development of the Jewish faith as it is remembered in the Hebrew Scriptures and tradition. Selected contemporary debates in Jewish faith and tradition will be studied.

2345.1(.2) Chinese Religious Traditions

This course will explore the Chinese religious landscape and explore how Buddhism, Confucianism, Daoism and "popular religion" relate to one another. A guiding question will be whether we can talk meaningfully about discrete religious traditions in China or whether it would be more appropriate to stress the unity of a single category of "Chinese Religion". Approaching the subject from an anthropological perspective, this course is as much about ghosts and lotteries as it is about Chinese philosophy.

2347.1(.2) Ecology and Religion

The course reviews the phenomenon of human ecology in order to advance to further questions: In the human relationship to nature, does nature have rights? To reduce pollution, may the rich deprive the poor of advanced technology? Is a low-consumption life-style desirable in itself? Should we leave development and progress to the experts? Such questions prepare the ground for a theology that finds religious meaning in the worldly realities of science, commerce, and government.

2351.1(.2) Love

Our culture has represented love, variously, as effecting self-fulfillment, the affirmation of another personality, union with deity, merit for a future life; or, as sex, a passing neurosis, an unreasoned self-annihilation, or a social contrivance. This course explores the assumptions and implications of these views, particularly as they involve ultimate human concerns, that is, religion. The course can be continued into RELS 352.2 where a coordinate theme is studied in a similar manner.

2352.1(.2) Death

The student considers such questions as what dying is really like, whether dying provides a valuable point of view of living, whether people continue in some form of existence after dying, how one is to understand the symbols in religious talk about death, and why mythologies deal so heavily in death.

2375.1(.2) The Catholic Tradition in Modern Literature **[ENGL 2328.1(.2)]**

2376.1(.2) The Bible and English Literature **ENGL 2327.1(.2)]**

2377.1(.2) Introduction to the Bible

The course introduces the Hebrew Scriptures/Old Testament. Students are introduced to the text along with the cultural and historical context of the biblical literature. The course also examines the meaning and relevance of these scriptures for today.

2378.1(.2) Introduction to the Bible

The course introduces the New Testament scriptures of the Christian tradition. Students are introduced to the text along with the cultural and historical context of the biblical literature. The course examines the meaning and relevance of the New Testament today.

2380.1 (.2) Vietnamese Religious Traditions

This course explores religion in the Vietnamese context and how it relates to social issues, like the construction of a national identity, politics and gender. The course will also examine the role religion has played in the lives of overseas Vietnamese.

3303.1(.2) Christian Origins

This course treats the formation and development of Christianity as seen through the letters of Paul. It examines the origin of Pauline Churches, their separation from Judaism, their struggles, beliefs, and worship.

3306.1(.2) Women in Antiquity I [CLAS 3352.1(.2)]

3307.1(.2) Women in Antiquity II [CLAS 3353.1(.2)]

3311.1(.2) Jesus of Nazareth

Jesus of Nazareth: Did Jesus really exist? What did he teach? Why was he killed? What does the resurrection mean? In examining these questions, the course will survey the many responses to Jesus' question, "Who do men say that I am?"

3312.1(.2) Theologies of Liberation

How has the life and teaching of Jesus made justice the central issue in Christianity today? What is liberation theology in the third world? Is capitalism opposed to the teaching of Jesus? What is Jesus' teaching about the poor, the oppressed, human rights and violent revolution?

3313.1(.2) Art in Late Antiquity and Europe to 14th Century [CLAS 3313.1(.2)]

3314.1(.2) Greek Sanctuaries [CLAS 3317.1(12)]

Prerequisite: 3 credit hours in Classics, and 3 credit hours in one of the following: Classics, History, Anthropology or Religious Studies

This course explores ancient Greek religion and the role of the sanctuary in Greek culture. Students will study the archaeological remains and documentary evidence for the role and function of domestic, civic, and pan-hellenic sanctuaries (e.g., household cults, the Athenian Acropolis, Olympia, Delphi). Students will also consider sites which provide examples of specialty cults (healing, oracular, mystery religions) or which illustrate particular social, political or archaeological issues.

3316.1(.2) Anthropology of Religion [ANTH 3316.1 (.2)]

Prerequisite: any one of ANTH 1202.1(.2), RELS 1210.1(.2), 1211.1(.2), 1220.1(.2), 1221.1(.2), 1251.1(.2)

This course surveys major developments in the anthropological study of religions. The course will provide a solid theoretical foundation for the field study of contemporary religions.

3328.1(.2) The Catholic Church Today

The Catholic Church has radically changed. What does it teach today about faith, revelation, God, Jesus Christ, Sacraments, ethics, and human destiny? Students will be introduced to a brief historical development on each of these teachings.

3330.1 (.2) Spirituality in the Workplace

Through case studies in the literature, and guest lecturers engaging in practices that support spirituality in the workplace, students will make the connection between the theory and practical developments in real workplaces. Class seminars will explore need for spirituality in the workplace, corporate responses to that need, and the external influences shaping the future of work. Guest lecturers will contribute first hand experience of the challenges and dilemmas facing business leaders, managers and employees seeking ways to "bring their whole selves to work." Transformative learning exercises will enable students to explore their own responses to challenges and dilemmas around spirituality in the workplace.

3336.1(.2) Creation and Evolution: The Religious Issues

The theory of evolution is a powerful tool for answering scientific questions about life in this world. The success of the scientific enterprise has led many people to seek answers to their religious questions in "evolutionary" ideas. On the other hand, the biblical account of creation is a fruitful source of insight into religious questions about why the world is as we find it. The central importance of biblical truth for Christians and Jews had led many of them to seek answers to scientific questions in the creation story. What are the relevant religious questions?

3337.1(.2) Religions and Art: The East

Art and architecture have given concrete expression to religious ideas and ideals in South Asia. The course will examine historically both Buddhist and Hindu art and architecture in association with the religious conceptions fundamental to these traditions.

3338.1(.2) Religions and Art: The West

In what ways may art be religious? Through a rapid thematic survey of the visual arts in Western civilization and an enquiry into the relationship between religious experience and the arts, the student is led to recognize various levels of religiousness in works of art.

3348.1(.2) Religion and Ecological Issues in the Developing World [IDST 3348.1(.2)]

This course will examine the religious and moral issues involved in contemporary debate around the implementation of environmental programs in the so-called developing nations. Population control, competing interests in natural resources, and the role of women's groups will

be among the topics discussed. Attention will be paid to the religious voices involved.

3349.1(.2) Science and Religion

In this course we will explore the relationship between science and religion. In the past this relationship was defined mainly by difference, difference in method, understanding of knowledge and language. Because of contemporary crises such as poverty and oppression world-wide and ecological crisis, religion and science are finding new reasons to cooperate. Religious issues involved in this cooperation such as women's critique, new religious movements and environmental concerns will be examined in this course.

3351.1 (.2) Field Research Methods

Prerequisite: Students must be declared majors or honours students in Religious Studies or Anthropology. Students completing a BA Concentration in Religious Studies may register in this course with the permission of the instructor.

This course provides students with the appropriate tools for conducting field-based research on contemporary religions. It will involve hands-on application of the research techniques.

3354.1(.2) Aboriginal Peoples, Religion, and the Justice System

This course will focus on the elements of religious and spiritual systems that are relevant in relations between aboriginal people and the Canadian criminal justice system. It will examine the historical and political context, key religious and ethical concepts and practices of aboriginal peoples, and the movement to employ Native spirituality in shaping responses.

3355.1(.2) Religion and Social Issues in Canada

The question of the interaction of religion and society is a key issue for religion because all religion seeks to influence the behavior of its adherents. While some religious groups are content to do so by appeal to persons as individuals, many religious groups often take public stands on public policy, organize pressure groups, or even form political parties. This course will examine the influence of religion on social issues in Canada. Representative personalities and organizations from various religious traditions will be studied.

3356.1(.2) Religions in Film

Feature films and documentaries about religions and religious issues have proliferated in recent years. This course will examine a variety of topics which may include: how selected religious traditions such as Buddhism, Judaism, Hinduism, Christianity and Islam are presented in films; how films depict religious symbols and religious life, how religious and ethical issues are presented in the film narratives and documentary discussions.

3357.1(.2) Being Human: Christian Understanding

How does God relate to humans and how do humans relate to God? The course deals with this question by following the historical development of the theologies on the topic. Beginning with the Hebrew and the Christian scriptures, the course moves on to study authors such as Augustine,

Aquinas, Luther and Rahner. The course will also include consideration of contemporary religious experience and questions such as the roles and images of women, the issue of religious pluralism, and the ecology issue.

3358.1(.2) Religious Diversity in Canada

Prerequisite: at least six (6) credit hours in RELS.

In recent decades, religious diversity in Canada has come to incorporate Hindus, Buddhists, Muslims, multiple denominations of Christianity and many new religious movements. This course will examine both the history of religious diversity in Canada and the impact of the Charter of Human Rights and the Multiculturalism legislation. Selected examples of how new religious traditions are adapting in Canadian Society will also be studied.

Classes and seminars 3 hrs. a week. 1 semester.

3359.1(.2) The Buddhist Path: Ritual, Meditation and Wisdom

The course will examine the characteristics of the Buddhist teachings about the path to enlightenment in the three principal schools of Buddhism: Hinayana, Mahayana, and Vajrayana. The focus of the course will be on the types of ritual, the theory and practice of meditation, and the wisdom teachings of the three traditions. Fieldwork may be a required part of the course.

3360.1(.2) Engaged Buddhism

Prerequisite: RELS 2327.1(.2) or 3359.1(.2) or permission of instructor.

This course will examine Buddhist principles and practices as they have been and are applied to social, economic and political problems around the world. Topics include Buddhist perspectives on ethical relativism and absolutism, the relationship of social change and personal transformation, community development vs. globalization, what "progress" and "best practices" mean across cultures, health and well being, environment, education, nonviolence and peace activism. Students will explore the essential roles of meditation, contemplation, critical thinking, and compassionate action individually and in small group interaction. Term paper topics will be decided on an individual basis according to students' interests.

3366.1(.2) Worldview: Anthropological Approaches [ANTH 3366.1(.2)]

3370.1(.2) Introduction to the Qur'an

An examination of the Qur'an as scripture. The course includes its sources, structure, style, transmission, sciences, interpretation and basic themes.

3371.1(.2) Life of Muhammad

A study of the life of Muhammad, the Prophet of Islam. The course examines his background, career as a prophet and his impact on history.

3372.1 (.2) Islamic Cultures and Civilizations

From its foundations in the Middle East or West Asia Islam has shaped and been shaped by its history and presence in Africa, Europe, and from Persia through South Asia, China

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and South East Asia. The course will examine the diverse contributions of Islam in the cultures of Asia, Africa, Europe and North America.

3826.1(.2) - 3849.1(.2) Special Topics in Religious Studies

3876.1(.2) - 3899.1(.2) Directed Readings in Religious Studies

Prerequisite: Declared major, concentration, or minor in Religious Studies.

Directed Reading courses permit students to pursue independent research topics which are not part of the normal curriculum. Students must apply to department faculty to enroll in a directed reading course.

4000.1(.2) Honours Thesis Research

Prerequisite: Declared in the Honours degree program in Religious Studies

Under the supervision of faculty in religious studies, students will develop and honours thesis topic and complete the research for an honours thesis. Normally students will present their topic and research findings in a departmental seminar.

4001.1(.2) Honours Thesis Writing

Prerequisite: Declared in the Honours degree program in Religious Studies

Under the supervision of faculty in religious studies, students will write an honours thesis based on the topic and research completed in RELS 4000.1(.2). Evaluation of the thesis will be by all faculty in religious studies.

4050.1(.2) Religious Traditions in Canada

Prerequisite: Declared Major or Honours in Religious Studies and completion of a minimum of 60 credit hours of university courses or permission of the instructor.

This course is a research seminar examining themes about historical and current issues involving religions in Canada and especially Atlantic Canada. Special emphasis will be given to comparative studies of Canadian themes in relation to North American and International patterns.

4100.1(.2) Religion and International Development

Prerequisite: Declared Major or Honours in Religious Studies or International Development Studies and completion of a minimum of 60 credit hours of university courses, or permission of instructor.

This course explores the role of religions in development. Historical, theoretical and practical dimensions are studied under such topics as: religion and colonialism, religion and social capital in developing countries, the manner of presence of religions in developing societies, religion based NGOs, engaged religion, indigenous religions today, and the increase of evangelical and fundamentalist religions in the developing world. The course requires a high level of seminar participation and research.

4300.1(.2) Gender and Asian Religious Traditions

Prerequisite: Declared Major or Honours in Religious Studies, International Development Studies, or Women and Gender Studies and completion of a minimum of 60 credit hours of university courses, or permission of instructor.

In this course we will examine the gender aspects of religious traditions in South, Southeast and East Asia. Women are often portrayed in such roles as daughters, mothers, wives, goddesses, demonesses, temptresses, Buddhas and bodhisattvas. This portrayal is upheld by cultural systems in which both men and women participate, and can best be understood by a critical analysis of the societies in which these religions are embedded. Attention will be given to the ways that gender informs religious institutions, individual identity and practice, and the historical development of Asian religious traditions.

4365.1 (.2) Myth: Anthropological Approaches [ANTH 4365.1 (.2)]

4387.1(.2) Religious Pluralism

Prerequisite: Declared Major or Honours in Religious Studies and completion of a minimum of 60 credit hours of university courses, or permission of instructor.

In Canada and in countries around the world, interpreters religious pluralism frequently situate their analysis of religion within social theories about secularism, pluralism, globalization, multiculturalism and human rights. This course will examine those theories and their impact on the social location of religions and religious diversity in multicultural societies.

4390.1(.2) Religion and Society in Atlantic Canada

Prerequisite: Declared Major or Honours in Religious Studies and completion of a minimum of 60 credit hours of university courses or permission of the instructor.

An historical examination of the relationship between religion and society in Atlantic Canada from the beginning of European settlement to the present. Themes to be considered include religion and the formation of regional/ethnic identities, religion and politics, religion and movements of social reform, and the impact of secularization on Atlantic Canadian society. Topics will be examined in the broader context of Canadian history and the evolution of the trans-Atlantic world.

4400.1(.2) Comparative Religious Ethics

Prerequisite: Declared Major or Honours in Religious Studies, International Development Studies, or Women and Gender Studies and completion of a minimum of 60 credit hours of university courses.

First, we will explore and compare formative stories of exemplary lives that embodied basic moral teachings of Judaism, Christianity, Islam, Indigenous Traditions, and Buddhism. We will work from these stories to determine what moral sources and frameworks inform their lives. In this research seminar, the students will investigate the relationship between these models and a contemporary theme informed by complex, real-life situations. The specific theme will vary but will include such topics as

distributive justice, families and sexual moralities, freedom and responsibility, and war/terrorism and peace. We will examine methodological issues of comparative religious ethics in light of the above explorations.

4461.1(.2) Psychology and Religion: A Survey
[PSYC 4429.1(.2)]

4481.1(.2) Theories and Methods in the Study of Religions

Prerequisite: Declared Major or Honours in Religious Studies and completion of 42 credit hours of university courses.

The study of religious traditions includes detailed studies of specific religions, their historical development, and cultural expressions. It includes the study of sacred texts, philosophies, theologies, rituals, sacred images and spaces, and the broad cultural significance of the religious in relation to other aspects of culture. Such multi-cultural and cross-cultural studies began in the nineteenth century and have employed diverse methodologies and theories about how best to study religions. This course will examine the history of the study of religions and review selectively the contemporary debates about the various strategies for the study of religions.

4500.1(.2) Religions and Orientalism

Prerequisite: Prerequisite: Declared Major or Honours in Religious Studies and completion of a minimum of 60 credit hours of university courses, or permission of instructor.

The course will explore Orientalist representations of religious traditions as an objective “other”. Special focus will be given to the ways in which scholars in the humanities, religious writers, and the interpreters of sacred texts contribute to the formation of various forms of Orientalism.

4590.0-4595.0 Honours Seminars in Religious Studies

Prerequisite: fourth-year honours status and permission of Department.

The three general areas in which the Department offers courses are noted below, together with the courses which fall into each area. Since this is only a partial list, please consult the Chairperson for updates and further clarifications.

4826.1(.2) - 4849.1(.2) Special Topics in Religious Studies

These courses will investigate in depth a specific topic or set of topics in Religious Studies. The topic will vary from year to year.

4850.0 – 4875.0 and 4876.1(.2) – 4899.1(.2) Directed Readings in Religious Studies

Prerequisite: permission of Department.

These courses are organized by individual faculty members in agreement with the Department as a whole; they are designed to supplement or provide an alternative to regular courses in Religious Studies according to the special needs and interests of students. Course content can be proposed by the student.

Group A (Religion and Culture)

- 1210.1(.2) Introduction to Religion
- 1211.1(.2) Introduction to Religious Experience
- 1251.1(.2) Religion in Contemporary Culture
- 2319.1(.2) Suffering
- 2325.1(.2) Myth and Story
- 2330.1(.2) Spirituality and Work
- 2333.1(.2) Women and Religion Today
- 2347.1(.2) Ecology & Religion
- 2351.1(.2) Love
- 2352.1(.2) Death
- 3306.1(.2) Women in Antiquity I
- 3307.1(.2) Women in Antiquity II
- 3314.1(.2) Greek Sanctuaries
- 3316.1(.2) Anthropology of Religion
- 3330.1(.2) Spirituality in the Workplace
- 3336.1(.2) Creation and Evolution: The Religious Issues
- 3348.1(.2) Religion and Ecological Issues in the Developing World
- 3349.1(.2) Science and Religion
- 3351.1(.2) Field Research on Religions
- 3355.1(.2) Religion and Social Issues in Canada
- 3356.1(.2) Religions in Film
- 3366.1(.2) Worldview: Anthropological Approaches
- 4100.1(.2) Religion and International Development
- 4365.1(.2) Myth: Anthropological Approaches
- 4387.1(.2) Religious Pluralism
- 4400.1(.2) Comparative Religious Ethics
- 4429.1(.2) Psychology and Religion: A Survey

Group B (Comparative Religions)

- 1220.1(.2) Introduction to Comparative Religion I
- 1221.1(.2) Introduction to Comparative Religion 2
- 2323.1(.2) The Islamic Religious Tradition
- 2325.1(.2) Myth and Story
- 2326.1(.2) The Hindu Religious Tradition
- 2327.1(.2) The Buddhist Religious Tradition
- 2340.1(.2) Japanese Religious Traditions
- 2341.1(.2) Violence and Non-Violence: East and West
- 2343.1(.2) Jewish Religious Tradition
- 2345.1(.2) Chinese Religious Traditions
- 2380.1(.2) Vietnamese Religious Traditions
- 3316.1(.2) Anthropology of Religion
- 3336.1(.2) Creation and Evolution: The Religious Issues
- 3337.1(.2) Religions and Art: The East
- 3351.1(.2) Field Research on Religions

3354.1(.2) Aboriginal Peoples, Religion and the Justice System
3358.1(.2) Religious Diversity in Canada
3359.1(.2) The Buddhist Path: Ritual, Meditation and Wisdom
3360.1(.2) Engaged Buddhism
3370.1(.2) Introduction to the Qur'an
3371.1(.2) Life of Muhammed
3372.1(.2) Islamic Cultures and Civilizations
4050.1(.2) Religions in Canada
4300.1(.2) Gender and Asian Religious Traditions
4365.1(.2) Myth: Anthropological Approaches
4387.1(.2) Religious Pluralism

Group C (Christianity and Culture)

1221.1(.2) Introduction to Comparative Religion 2
1251.1(.2) Religion in Contemporary Culture
2305.1(.2) Women in Christianity
2334.1(.2) Christian Spirituality Today
2375.1(.2) The Catholic Traditions in Modern Literature
2376.1(.2) The Bible and English Literature
2377.1(.2) Introduction to the Bible
2378.1(.2) Introduction to the Bible
3303.1(.2) Christian Origins
3306.1(.2) Women in Antiquity I
3307.1(.2) Women in Antiquity II
3311.1(.2) Jesus of Nazareth
3312.1(.2) Theologies of Liberation
3313.1(.2) Art in Late Antiquity and Europe to 14th Century
3314.1(.2) Greek Sanctuaries
3328.1(.2) The Catholic Church Today
3329.1(.2) Christianity and Contemporary Moral Issues
3338.1(.2) Religions and Art: The West
3351.1(.2) Field Research on Religions
3357.1(.2) Being Human: Christian Understanding
4050.1(.2) Religions in Canada
4390.1(.2) Religion and Society in Atlantic Canada
4500.1(.2) Religions and Orientalism

Sociology (SOCI)

Chairperson, Professor E. Tastsoglou
Professors G. Barrett, L. Christiansen-Ruffman, J. McMullan, H. Veltmeyer
Associate Professors S. Bell, M. Byers, D. Crocker, V. Johnson, D. Perrier, S. Schneider, A. Schulte-Bockholt, M. VanderPlaat
Assistant Professors Z. Bayatrizi, K. Bonnycastle, M. Ighodaro, A. MacNevin, M. Rajiva, R. Westhaver,
Coordinator of Criminology: Graduate Studies D. Crocker
Adjunct Professors R. Cosper, B. Cottrell, S. Perrott

Department website:
<http://www.smu.ca/academic/arts/sociology/>

Department Mission

The Department offers programs of study that are designed to provide students with a strong undergraduate experience in both sociology and criminology. Majors and honours programs are offered in each field. Students are particularly encouraged to complete a double major program in sociology and criminology. The Department also offers a Master's degree. Courses are also mounted that support such other academic programs as those in Asian Studies, Atlantic Canada Studies, International Development Studies, Linguistics, and Women's Studies. For details on graduate programs, refer to the Graduate Academic Calendar.

Major Program

The major in Sociology requires the completion of the following thirty-six (36) credit hours:

- SOCI 1210.1(.2) Introductory Sociology with a minimum grade of C
- SOCI 1211.1(.2) Critical Issues in Social Analysis with a minimum grade of C
- SOCI 2362.1(.2) Classical Sociological Theory
- SOCI 2363.1(.2) Contemporary Sociological Theory
- SOCI 2364.1(.2) Research Design
- SOCI 2365.1(.2) Data Analysis
- Twelve (12) credit hours in Sociology at the 3000 level or above
- Six (6) credit hour seminar in Sociology at the 4000 level – note that directed readings courses in Sociology do not satisfy this requirement

FOR STUDENTS COMPLETING A DOUBLE MAJOR IN SOCIOLOGY AND CRIMINOLOGY, ONLY TWELVE (12) CREDIT HOURS CAN BE DOUBLE COUNTED FOR CROSS-LISTED COURSES.

Suggested Schedule

The following schedule is suggested for students majoring in Sociology:

Year 1:

- ENGL 1205.1(.2) Introduction to Literature
- 9 credit hours of introductory courses in the following humanities (except PHIL 1200): Classics; History; Religious Studies; Modern Languages courses on literature and culture (a maximum of 6 credit hours can be counted from any one area).
- SOCI 1210.1(.2) Introductory Sociology with a minimum grade of C.
- SOCI 1211.1(.2) Critical Issues in Social Analysis with a minimum grade of C.
- Six (6) credit hours from a social science other than Sociology.
- Six (6) credit hours of from one or two of the following: PHIL 1200.0 Critical Thinking, Mathematics, a language other than English, or a natural science other than Psychology.

Year 2:

- SOCI 2362.1(.2) Classical Sociological Theory
- SOCI 2363.1(.2) Contemporary Sociological Theory
- SOCI 2364.1(.2) Research Design
- SOCI 2365.1(.2) Data Analysis
- Twelve (12) credit hours in Arts at the 2000 level or above
- Six (6) credit hours of electives

Year 3:

- Twelve (12) credit hours in SOCI at the 3000 level
- Twelve (12) credit hours in Arts at the 2000 level or above
- Six (6) credit hours of electives

Year 4:

- Six (6) credit hour seminar in Sociology at the 4000 level – note that directed readings courses in Sociology do not satisfy this requirement
- Twelve (12) credit hours in Arts at the 2000 level or above
- Six (6) credit hours of Arts electives at any level
- Six (6) credit hours of electives

Honours Program

This is a selective program. Applicants for admission must:

- have completed at least 60 credit hours;
- have a cumulative GPA of at least 3.00;
- have a cumulative GPA in Sociology courses of 3.30;
- have a faculty member's written agreement to serve as a supervisor for the honours thesis, SOCI 4530.0.

In exceptional circumstances, the Department may consider applicants who do not have a CGPA of 3.30 in Sociology courses (but who have a 3.00 overall).

The deadline for application is 1 April of the year before students wish to begin the honours program and register in the Honours Seminar course, SOCI 4530.0.

For honours in Sociology, students must complete sixty-six (66) credit hours as follows:

- SOCI 1210.1(.2) Introductory Sociology with a minimum grade of C
- SOCI 1211.1(.2) Critical Issues in Social Analysis with a minimum grade of C
- SOCI 2362.1(.2) Classical Sociological Theory
- SOCI 2363.1(.2) Contemporary Sociological Theory
- SOCI 2364.1(.2) Research Design
- SOCI 2365.1(.2) Data Analysis
- Twelve (12) credit hours in Sociology at the 3000 level or above
- Twenty-four credit hours in Sociology at the 4000 level – with a maximum from directed readings courses in Sociology (SOCI 4406.0, 4407.0, 4408.0, 4409.1(.2) or 4410.1(.2))
- SOCI 4530.0 Honours Seminar
- SOCI 4493.1(.2) Advanced Research Methods
- Either SOCI 4495.1(.2) or SOCI 4496.1(.2) Advanced Sociological Theory

To continue in and graduate from the Honours program, a student must achieve and maintain a minimum grade point average of 3.30 in Sociology.

Concentration in Sociology

Students in a ninety (90) credit hour B.A. program with a concentration in Sociology are required to complete twenty-four (24) Sociology credit hours with a minimum grade point average of 2.00. Courses cross-listed with Criminology may not be double counted.

Minor Program

The minor in sociology requires twenty-four (24) credit hours in sociology completed with a minimum grade point average of C. These courses are:

1. Introductory Sociology [1210.1(.2)] and either Understanding Society [1212.1(.2)] or Critical Issues in Social Analysis [1211.1(.2)].
2. The equivalent of eighteen (18) credit hours in sociology at the 3000 or 4000 level

Note: For students enrolled as double majors in both sociology and criminology or for students with a major in criminology and a minor in sociology a maximum of 12 credit hours can be double counted for cross-listed courses.

Course Descriptions

1210.1(.2) Introductory Sociology

This course is intended to give a basic introduction to the discipline. It will examine the sociological imagination which understands human life as fundamentally explained by our membership in social groups. Particular attention will be given to the basic theories, concepts and methods through which this view is explored. This course is required for SOCI 1211.1(.2).

1211.1(.2) Critical Issues in Social Analysis

Prerequisite: SOCI 1210.1(.2).

This course is for potential majors. It will introduce them to theory and research in an area which is a specialty of particular members of faculty. This material is intended to tie directly into the required 300-level theory and methods courses and to expose students to the practice of sociology as a scientific research activity.

2362.1(.2) Classical Sociological Theory

Prerequisite: SOC 200.0; or SOCI 1210.1(.2) and SOCI 1211.1(.2).

A critical examination of the major themes of social analysis in the 19th century, with particular emphasis on the classical tradition exemplified by the writings of Karl Marx, Emile Durkheim and Max Weber.

2363.1(.2) Contemporary Sociological Theory

Prerequisite: SOC 200.0; or SOCI 1210.1(.2) and SOCI 1211.1(.2); and SOCI 2362.1(.2).

A critical examination of the major themes of social analysis in the 20th century, with particular emphasis on current theoretical issues and differences in theoretical approaches to problems in sociological analysis.

2364.1(.2) Research Design [CRIM 2364.1(.2)]

Prerequisite: SOC 200.0; or SOCI 1210.1(.2) and 1211.1(.2).

This course examines the place of research in sociology and the relationship of sociology to science. It examines concepts, measurement, research designs, and techniques of data collection. The course introduces students to a variety of approaches to research and data collection and emphasizes that methods of research are closely related to theory, the nature of research questions and design considerations.

2365.1(.2) Data Analysis

Prerequisite: SOC 200.0; or SOCI 1210.1(.2), 1211.1(.2); and SOCI 2364.1(.2).

This course, which is a sequel to SOCI 2364.1(.2), covers the analysis of data and report writing. Analysis of a variety of types of data is considered, and statistics and quantitative methods are introduced. The course includes a number of exercises in analysis and report writing structured to introduce the student progressively to the means by which sociologists draw conclusions from observations.

3210.1 (.2) Social Difference and Human Rights [CRIM 3210.1 (.2)]

Prerequisites: SOCI 1210.1 (.2) and SOCI 1211.1 (.2)

This course addresses the issues of social difference and human rights by critically examining the roles played by mainstream institutions in producing and sustaining cultural dominance, exploitation and social inequalities. It will also examine alternative public policies intended to address and change socio-political domination and systemic inequities. This approach allows the experience of social difference-based discrimination to be acknowledged and, at the same time, explore ways to remedy social inequities.

3220.1 (.2) 'Race', Colonialism and Anti-Racist Discourse [CRIM 3220.1 (.2)]

Prerequisites: Completion of the SOCI 1210.1 (.2) and SOCI 1211.1 (.2)

This course is designed to critically examine the theoretical understanding of 'race' and racism, colonialism, principles of anti-racism discourse and praxis. It will provide a critical interrogation of issues such as equity, social justice, human rights and domination, as they relate to 'race' and colonialism, ethnic and Diaspora politics, nation-building and membership, citizenship and identify sexual oppression and heterosexual privilege.

3302.0 Social Problems

Prerequisite: SOC 200.0; or SOCI 1210.1(.2) and either SOCI 1211.1(.2) or 1212.1(.2).

Major social problems affecting Canadians will be analyzed. These range from alcohol use and sexual behaviour to poverty and mental health. The part played by interest groups and social movements in defining and reacting to these problems will be a focus of the course.

3306.1(.2) Sociology of Education [EDUC 3307.1(.2)]

3308.0 Urban Sociology

3310.1(.2) Society and the Environment

Prerequisite: SOC 200.0; or SOCI 1210.1(.2) and either SOCI 1211.1(.2) or 1212.1(.2).

This course will be an examination of selected Nova Scotia environmental issues; acid rain, forestry/wildlife, toxic wastes, and uranium exploration and mining, from an ecological perspective. The class will address the basic question: can environmental problems be resolved within our society? Students will be expected to analyze critically the perspectives of the provincial and federal governments, industry and environmental organizations.

3314.0 Sociology of Health and Illness

Prerequisite: SOC 200.0; or SOCI 1210.1(.2) and either SOCI 1211.1(.2) or 1212.1(.2).

This course investigates the social aspects of health and illness and the consequence of these notions to medical practice. Health and illness are often considered reflective of an objective biological state. In this course we will examine the social-historical forces which inform this perception and

explore its connection to other topics including: the development of biomedicine, the “medicalization of behaviour,” cross-cultural and historical perspectives on the experience of pain and dying, gender and health and the social meaning of illness.

3315.0 Penal Governance and Federal Imprisonment in Canada [CRIM 3305.0]

Prerequisite: SOC 200.0; or SOCI 1210.1(.2) and either SOCI 1211.1(.2) or 1212.1(.2).

This course introduces students to critical sociological and legal analyses of penological institutions and practices, with a primary focus on Canadian federal penitentiaries. The first half of the course sets out the major historical and contemporary transformations technologies of penal punishment. The second half examines current research on Canadian federal penal policy and practices in relation to 1) various penal subject populations and 2) available techniques of power.

3318.1(.2) State, Crime, and Power in Developing Countries [CRIM 3318.1(.2)]

Prerequisite: Completion of the criminology core program requirements

This course is an interdisciplinary exercise designed for students in Criminology, International Development Studies, Political Science, and Sociology. Course participants will: (a) learn about the colonial origins of crime in Latin American; (b) be introduced to the basics of Latin American criminological thinking such as Liberation Criminology; (c) explore the various dimensions of criminal activity (street, organized, state and corporate) in developing countries; and (d) study the detrimental effects of crime, corruption and abuse of power on the societies of the South.

3319.0 Reform and Revolution in Latin America

Prerequisite: SOC 200.0; or SOCI 1210.1(.2) and either SOCI 1211.1(.2) or 1212.1(.2).

This course examines the conditions and social structure that underlie movements toward reform and revolution in Latin America. Major political and social trends on the continent will be explored in terms of various themes such as the role of the church, the military, United States intervention, aid and trade, land tenure and the multinational corporations. Special case studies will include revolutions in Mexico, Cuba and Nicaragua; and Chile under Allende and Pinochet.

3322.0 Political Sociology

Prerequisite: SOC 200.0; or SOCI 1210.1(.2) and either SOCI 1211.1(.2) or 1212.1(.2); or six (6) credit hours in POLI.

Prevailing theories of radical or dissident behaviour will be assessed critically and alternate emerging approaches suggested. Protest and radical movements in Europe, Latin America and elsewhere will be considered.

3327.0 Social Policy

3328.1(.2) Social Gerontology

Prerequisite: SOC 200.0; or SOCI 1210.1(.2) and either SOCI 1211.1(.2) or 1212.1(.2).

An overview of the manner in which society and older people interact. The course examines such topics as social participation and adjustment, economic situations, problems of the elderly, policies and services designed to assist the elderly.

3329.1(.2) The Family in Later Life

Prerequisite: SOC 200.0; or SOCI 1210.1(.2) and either SOCI 1211.1(.2) or 1212.1(.2).

An examination of the relationships between the older person and the family. Topics studied include intergenerational relations, grandparent roles, marital status, sexual relationships, problems presented by dependent older people, and family support. Older women and widowhood will receive special attention. Cross-national and cross-cultural comparisons will be undertaken.

3332.0 Sociology of Atlantic Canada

3333.0 Social Movements

Prerequisite: SOC 200.0; or SOCI 1210.1(.2) and either SOCI 1211.1(.2) or 1212.1(.2).

Analysis of the origin and development of social movements and their role in social change. The political and sociological sources of social movements will be stressed, as well as their institutional and ideological transformations. The course will have a comparative focus, with attention to Canadian social movements in this century. Social gospel, agrarian socialism, trade unionism, social credit, cooperatives, and nationalism will be examined as diverse expressions of Canadian social life.

3334.0, 3381.0-3382.0 Selected Issues in Criminology [CRIM 3315.0-3316.0]

3336.1(.2) Work and Occupations in Contemporary Society

3337.1(.2) Leisure in Contemporary Society

3339.1(.2) The Sociology of Language [LING 2339.1(.2)]

Prerequisite: SOC 200.0; or SOCI 1210.1(.2) and either SOCI 1211.1(.2) or 1212.1(.2); or declared minor in Linguistics.

This course provides an introduction to the major areas of the sociology of language. Special attention is paid to language and social relations in Canada, particularly to the present-day situation. Standard topics in the sociology of language are treated, including language and social interaction; the use of language by social classes, men and women, ethnic groups and regions; dialects and social groups, bilingualism and multilingualism; language and nationalism; language maintenance and language shift; and language planning.

3340.0 Ethnic and Minority Groups

Prerequisite: SOC 200.0; or SOCI 1210.1(.2) and either SOCI 1211.1(.2) or 1212.1(.2); or six (6) credit hours in ANTH.

An analysis of racial, ethnic, and minority group structure and of inter-group processes in different societies, with special emphasis given to Canadian society.

3345.1(.2) Women, Law and the State [CRIM 3320.1(.2)]

3346.1(.2) Crime and the Media

Prerequisite: SOCI 1210.1(.2) and 1211.1(.2).

The focus of this course is on the depiction of crime in various media of mass communication. Area of study includes corporate crime, violent crime, gangs, organized crime and terrorism. This course also examines how gender, race and class are related to the way crime is depicted in the mass media.

3350.1(.2)-3351.1(.2) Contemporary Issues in Sociology

Prerequisite: SOC 200.0; or SOCI 1210.1(.2) and either SOCI 1211.1(.2) or 1212.1(.2).

The course will provide an opportunity for students to study contemporary substantive issues in considerable depth and detail.

3352.1(.2) The Mass Media

Prerequisite: SOC 200.0; or SOCI 1210.1(.2) and either SOCI 1211.1(.2) or 1212.1(.2).

This course is intended to lay the foundation for critical inquiry in the area of media and mass communication. The objectives of this course are a) to examine the mediums of mass communication in both a Canadian and global context, and b) to study the products of these mediums critically in order to understand how they are used to define cultures and individuals. Of particular interest to this course is the examination of how differences in individuals (such as ethnicity, class, gender and sexuality) are both produced by and dealt with in the mass media.

3353.1(.2) Industry and Labour in Contemporary Society

3354.0 Policing and Society [CRIM 3307.0]

3355.1(.2) Corporate Crime [CRIM 3308.1(.2)]

3356.1(.2) Victimology [CRIM 3309.1(.2)]

3357.1(.2) Criminal Law [CRIM 3310.1(.2)]

3359.0 Young Offenders and Juvenile Justice [CRIM 3312.0]

3366.1(.2) Field Methods in Sociolinguistics I [LING 3366.1(.2)]

Prerequisite: six (6) credit hours in SOCI or LING; or permission of instructor.

An introduction to techniques of collecting sociolinguistics data in the field. The course focuses on the kinds of

linguistic and social information needed to describe languages and their variation and use.

3367.1(.2) Field Methods in Sociolinguistics II [LING 3367.1(.2)]

Prerequisite: SOCI 3366.1(.2); or equivalent course, e.g. LING 2310.1(.2).

A continuation of SOCI 3366.1(.2). Students gain experience in the actual collection of data on a language.

3371.1(.2) Evaluating Social Programs

3372.1(.2) Social Impact Analysis

3385.1(.2) Problems of Development [IDST 3485.1(.2)]

Prerequisite: SOC 200.0; or SOCI 1210.1(.2) and either SOCI 1211.1(.2) or 1212.1(.2); or a course in ECON or POLI.

This course will provide an introduction into concepts and theories of development and underdevelopment with particular reference to problems of Third World societies. The main emphasis will be on the various theories advanced in explanation of the historical development of less developed societies and their position in a growing global economy. The major lines of research associated with these theories will also be reviewed.

3386.1(.2) Sociology of Developing Societies [IDST 3386.1(.2)]

Prerequisite: SOC 200.0; or SOCI 1210.1(.2) and either SOCI 1211.1(.2) or 1212.1(.2); or six (6) credit hours in ECON or POLI.

This course examines the conditions of economic and social development in the Third World. The role of colonial empires in the creation of these conditions and of the world system in maintaining them will be scrutinized. Problems discussed will include trade relations, foreign aid, land distribution, industrialization, class structures, the role of the estate, and the position of women. Illustrative case studies on these problems will range across different countries in the Third World (Africa, Latin America and Asia).

3387.1(.2) Women and Development [WMST 3387.1(.2)]

Prerequisite: SOC 200.0; or SOCI 1210.1(.2) and either SOCI 1211.1(.2) or 1212.1(.2); or IDST 3301.0.

This course will examine the role of women in development. It will examine the changing structure of the division of labour by gender in different international, regional and community contexts, and the interaction between the economics and politics of class and gender in different societies at different levels of development. This course will also address issues such as: the incorporation of subsistence economies into modern market economies; the establishment of labour-intensive multinational industries, particularly those drawing on female labour; the relationship between the household and the formal and informal economies and patterns of female migration; and the role of women in the transition from rural to urban/industrial worlds.

3388.1(.2)-3389.1(.2) Selected Issues in Criminology [CRIM 3313.1(.2)-3314.1(.2)]

Prerequisite: SOC 200.0; or SOCI 1210.1(.2) and either SOCI 1211.1(.2) or 1212.1(.2).

These courses are designed to enable a student to examine a particular criminological issue in detail.

3390.1(.2) Gender, Race and Justice [CRIM 3306.1(.2)]

Prerequisite: SOC 200.0; or SOCI 1210.1(.2) and either SOCI 1211.1(.2) or 1212.1(.2).

This course is concerned with the relevance of race and gender to contemporary justice issues and the administration of the criminal justice system.

3391.0 Rural Sociology

Prerequisite: SOC 200.0; or SOCI 1210.1(.2) and either SOCI 1211.1(.2) or 1212.1(.2).

This course explores a variety of themes and theoretical perspectives in Rural Sociology. Using the contrasting concepts of 'community' and 'locality' as focal points, the first part of the course examines key sociological concepts such as cohesion, exclusion, identity, gender, class and power. The second part of the course explores the context within which rural communities struggle for survival. Issues such as globalization, decentralization and modernity are considered. The final theme of the course is rural renewal. Case material on cooperativism, the role of non-governmental organizations, watershed stewardship and community organization are examined.

3393.1(.2) Woman Battery and the Criminal Justice System [CRIM 3322.1(.2)]**3394.1(.2) Crime Prevention Through Social Development [CRIM 3325.1(.2)]**

Prerequisite: Completion of the criminology core program requirements

This course focuses on social development approaches to crime prevention; that is, preventing criminal predispositions from developing in the first place, primarily by addressing factors that put children and youth at risk of future delinquency and criminal offending. This course places equal emphasis on both theory and practice, mixing an academic content with a hands-on learning experience where students apply concepts and strategies to real situations (working with "at-risk" children in a structured social development program).

3395.1(.2) Organized Crime [CRIM 3326.1(.2)]

Prerequisite: Completion of the criminology core program requirements.

This course provides an introduction to the subject of organized crime and its control in North America. The course applies sociological, criminological, and economic theory to understand the rise and proliferation of criminal organizations and organized crime activities. It also explores dominant organized crime genres, activities, and recent trends. The course also explores strategies and laws to combat organized crime.

4210.1 (.2) Forced Migration and Transnationalism

Prerequisites: SOCI 2363.1 (.2) and SOCI 2365.1 (.2)

This course is designed to critically examine the historical and contemporary understanding of forced migration and transnationalism, displacement, migration (voluntary and involuntary), refugee issues, and transnational social spaces, as well as issues of citizenship and ethnic identity. It will also examine colonialism and cultural hegemony as it pertains to Euro/North American political relations with Africa and other nations in the south.

4220.1 (.2) Power, Equity and Global Issues

Prerequisites: SOCI 2363.1 (.2); or SOCI 2365.1 (.2)

This course is designed to examine power, equity, and global issues through a critical anti-racist lens. A critical anti-racist discursive framework/praxis demands unequivocal democratic citizenship rights, qualitative social justice, and respect for human rights and freedoms promised by the International Human Rights Laws and Conventions. It addresses questions such as: What is power? Is it the domination of individuals, socio-racial groupings, geographical locations, and societies at large? How does power manifest itself in a global context?

4404.1(.2) Issues in Juvenile Justice [CRIM 4402.1(.2)]**4405.0 Sociology of Labour****4406.0 Directed Reading in Sociology**

Prerequisite: honours standing.

This course provides an opportunity for honours students to read in depth in an area of sociology not normally covered by regular Departmental course offerings. Students are expected to demonstrate initiative and independence.

Note: This course does not constitute a 4000-level seminar in fulfillment of requirement (c) for majors.

4407.0-4408.0 and 4409.1(.2)-4410.1(.2) Directed Readings in Sociology

Prerequisite: SOCI 2363.1(.2) and 2365.1(.2).

These courses provide an opportunity for students to read in depth in an area of sociology not normally covered by regular Departmental course offerings. Students are expected to demonstrate some initiative and independence.

Note: These courses do not constitute a 4000-level seminar in fulfillment of requirement (c) for majors.

4411.1(.2) The Politics of Youth Crime [CRIM 4414.1(.2)]**4413.0 Sociology of Identity**

Prerequisite: SOCI 2363.1(.2) and 2365.1(.2).

This is a seminar which will explore methodological, theoretical and substantive issues in a sociological approach to social identities. In particular, we shall examine some of the ways in which the form and character of the link between

persons and social institutions has been understood in order to enhance our own appreciation of this fundamental problem in the social sciences.

4414.0 Sociology of Knowledge and Science

4417.0 Seminar on Endangered Languages [LING 4417.0]

Prerequisite: at least sixty (60) credit hours.

The existence of many of the world's 6,000 languages is threatened and most will probably not survive the next century. In this seminar, students explore the social forces affecting language maintenance. Language growth, decline and death are considered in the global context of linguistic diversity.

4419.0 Sociology of the Environment

Prerequisite: SOCI 2363.1(.2) and 2365.1(.2); or ENV 3300.1(.2) or a declared major in IDST.

This course provides a critical examination of sustainable development. Following an introduction to ecology and human ecology, a variety of sociological perspectives on the environment are explored: neo-Malthusianism, market-led approaches, political ecology, ecofeminism and social constructionism. The second part of the course focuses on a variety of 'sources' and 'sinks'. We explore societal causes of environmental problems and the prospects for sustainable solutions. Topics will include aquatic resources, forests and wetlands, land and agriculture, water, energy, air pollution and toxicity.

4420.0 Comparative Regional Development

4421.1(.2) War as Crime [CRIM 4421.1(.2)]

Prerequisite: Completion of the criminology core program requirements.

The 20th century as seen two world wars and numerous other conflicts. The so-called 'Cold War' turned hot in many parts of the developing world and cost the lives of tens of millions and maimed countless others. With the new millennium, novel forms of warfare and military technologies have been introduced which again largely victimize the societies of the 'Global South'. This seminar analyses the criminal dimensions and true costs of military conflict. It is organized as an interdisciplinary exercise designed for students from Criminology, International

4422.1(.2) Gender and Development: Theory and Method [IDST 4422.1(.2)/WMST 4422.1(.2)]

Prerequisite: SOCI 2363.1(.2) and 2365.1(.2).

This seminar will examine the role of women and development in the Third World. It will discuss the interrelationship of various development and feminist theories; methodological approaches to the study of women and development will also be examined. This course will provide students with a conceptual overview and practical tools for understanding the problems faced by women in developing countries.

4423.1(.2) Gender and Development: Policy and Practice [IDST 4423.1(.2); WMST 4423.1(.2)]

Prerequisite: SOCI 2363.1(.2) and 2365.1(.2).

This seminar will examine case studies of the role of women in the development process in various Third World countries. It will provide an analysis of the gender dimensions of programs and policies that affect women in different international, regional and community contexts. Case studies will focus on a number of specific issues such as work, education, health and empowerment. These will vary from year to year.

4425.0 Corporate Power

Prerequisite: SOCI 2363.1(.2) and 2365.1(.2).

The course will focus on the social dynamics of globalization - a trend towards worldwide reach, impact, or connectedness of social phenomena. The issues addressed are diverse but will include questions about the social agencies of globalization, such as the transnational corporation, and the structural forces involved. The global dynamics of such institutions, as well as their social impacts will be explored from a Political Economy perspective.

4431.0 Law in Society [CRIM 4400.0]

Prerequisite: SOCI 2363.1(.2) and 2365.1(.2) or completion of the core requirements in criminology.

An in-depth study of the relationship between law and society. This seminar will examine law as a product of a social system and as an instrument of social change. Emphasis will also be placed on the social forces affecting judicial behaviour and the determinants and purposes of legislation as the link between values and interests. Attention will also be direct to law as a profession, and jurisprudence as an evolving discipline with special emphasis on issues in the administration of justice.

4432.1(.2) Gender and Law [CRIM 4401.1(.2)/WMST 4432.1(.2)]

Prerequisite: SOCI 2363.1(.2) and 2365.1(.2) or completion of the core requirements in criminology.

By providing an examination of the gendered nature of conventional understandings of law, social control and deviance, this seminar will identify and challenge the ideology of sameness that has pervaded male-stream legal theory. It will also consider the implication of these gendered assumptions for the reproduction of inequality. Specific issues concerning the impact of law on women's lives will be explored in order to illustrate the relation between law, gender and power.

4440.0; 4441.0; 4442.1(.2)-4444.1(.2) Selected Studies in Sociological Analysis

Prerequisite: SOCI 2363.1(.2) and 2365.1(.2).

An upper level seminar which examines selected methods of analysis in sociology. The specific methods and the range of problems to which they are applied will vary with the instructor's areas of specialized interest and expertise.

4448.0 Feminist Analysis [WMST 4448.0]

Prerequisite: SOCI 2363.1(.2) and 2365.1(.2).

This seminar focuses on problems of studying women, including sex bias in research. It analyzes contemporary experiences using theories and methodologies of feminist sociology, global feminism, and women's studies.

4450.0; 4451.1(.2); 4452.1(.2) Selected Topic

Prerequisite: SOCI 2363.1(.2) and 2365.1(.2).

A seminar course which examines questions within an area of specialization and enables a student to study a particular sociological issue in detail.

4461.1(.2) Survey Analysis

Prerequisite: SOCI 2364.1(.2) and either 2365.1(.2) or CRIM 2302.1(.2).

The seminar is designed to introduce students to the analysis of survey data and to the use of SPSS computer programs. Topics covered include editing and coding of survey data, univariate analysis including such procedures as graphic presentation of data, measures of central tendency and variability, normal distribution, bivariate table, and scale construction.

4462.1(.2) Quantitative Methodology

Prerequisite: SOCI 4461.1(.2).

Advanced level seminar in analysis of quantitative data in Sociology. Topics covered include: the concept of association between variables, measures of association, multivariate analyses, regression techniques, inferential statistics and the research report.

4468.1(.2) Women's Organizations and Change**4480.0 Ethnicity and the Canadian State****4481.0 Gender, Ethnicity and Migration [IDST 4481.1(.2)]**

Prerequisite: SOC 2363.1(.2) and 2365.1(.2).

This seminar course will investigate first, the lived experience of immigrant, ethnic and racial minority women and men in the course of the migration process and selected spheres of social life, such as employment, family, education, ethno-cultural and indigenous organizations; secondly, the social organization of such experience by the larger "relations of ruling" (class-, gender-, ethnicity/race and nation-state- based) in the context of the historical development of the Canadian state and the world economy. Migration movements, global labour markets, geo-political factors, Canadian emigration and settlement laws and policies, multiculturalism and race relations will be some of the major topics addressed.

4482.1(.2) Gender and International Migration [WMST 4482.1(.2)/IDST 4452.2(.2)]

Prerequisite: completion of the Criminology core program requirements or SOCI 2363.1(.2) and 2365.1(.2).

This is a course on the theory and practice of international migration taking an explicitly gendered perspective. It discusses the conceptual and theoretical frameworks on migration and gender and migration; the history of selected migration movements with a focus on the role of women; women in the migratory process, employment and family issues; the impact/consequences of international migration on development; contemporary migration policies; forced migration and refugee issues; gender and trans-nationalism.

4493.1(.2) [593.1(.2)] Advanced Research Methods

Prerequisite: SOCI 2364.1(.2) and either 2365.1(.2) or CRIM 2302.1(.2).

This course will examine a range of quantitative and qualitative research methods in areas, which reflect the interests of students and faculty. The course will explore strengths and weaknesses of different approaches, and the appropriate selection and application of various data collection and analytical techniques. Topics covered may include survey research, interview techniques, field research, historical and documentary analysis.

4495.1(.2)-4496.1(.2) [4595.1(.2)-4596.1(.2)] Advanced Sociological Theory

Prerequisite: SOCI 2363.1(.2) and 2365.1(.2).

Presentation of various topics of interest to advanced students. From time to time, depending on student interest and faculty availability, this course will consider particular theorists and such matters as constructing social theories, traditions of theoretical writing, and new directions and problems in the field.

4509.1(.2) Directed Reading: Advanced Studies in Sociology

Prerequisite: one of SOCI 4407.0 to 4410.1(.2) and permission of instructor.

This course allows students to pursue a sub-area of sociology in considerable depth. Students are expected to demonstrate considerable initiative and independence.

Note: This course does not constitute a 4000-level seminar in fulfillment of requirement (c) for majors.

4530.0 Honours Seminar [CRIM 4500.0]

Prerequisite: enrolment in honours program.

The purpose of this seminar is to aid students in the preparation of an honours thesis on a topic agreeable to both the student and the faculty. The thesis should be approximately 10,000 words of text and should demonstrate an integration of theoretical, analytical and methodological skills appropriate to a degree at the honours level. It is expected that there will be an empirical component to the thesis.

Spanish (SPAN)

Chairperson, Modern Languages and Classics
Associate Professor G. Nahrebecky

Assistant Professor A. Spires

Courses and programs in Spanish are offered by the
Department of Modern Languages and Classics

Department Policy - Modern Languages and Classics

1. Enrollment in some language courses involves the following formal placement procedures.

All students seeking entry into language courses who have not previously taken a language course at Saint Mary's University must complete and return the Language Profile Form to the Department of Modern Languages and Classics.

Based on the information provided in the Language Profile Form, students may receive notification from the Department to appear for an oral interview and/or a written placement test at a designated time.

The Department of Modern Languages determines the appropriate course placement for each student

- (i) Permission to register or remain in a particular language course can be refused if the Department judges that the student's knowledge exceeds the level for that course.
- (ii) Native speakers are not eligible to receive advanced credit for language courses.
- (iii) Completion of Advanced Standing (transfer) courses does not exempt a student from taking the placement test.

2. The student's eligibility to enroll in language, culture, and literature courses, and in specific sections of those courses, is determined by the Chairperson in consultation with the instructor in light of the student's ability level in the language concerned, previous course work completed at university or elsewhere, and overall size of the course or section of a course. In matters of placement, the decision of the Chairperson is final.

3. In order to ensure the academic integrity in language courses, especially at the lower levels of instruction, the Department of Modern Languages and Classics does not allow native or near-native speakers of a particular target language to enroll in courses at the 2000 level or lower.

Students who misrepresent their knowledge of any given language by providing inaccurate or incomplete information about their linguistic educational history will be subject to disciplinary action as laid out in Academic Regulation 19.

4. The Department of Modern Languages and Classics supports a policy of regular class attendance by students.

Frequent, unexplained absences from class will result in a lowering of the final grade in a manner to be determined by each faculty member.

5. Students should note that courses in literature and/or culture fulfill the BA Humanities requirement 3(c) but do not fulfill the 3(b) requirement. The courses designated with an * in front of the number satisfy the 3(c) requirement.

Programs in Spanish and Hispanic Culture

The following programs are available in the area of Spanish and Hispanic Culture: a major, a minor, a concentration, and a Certificate in Spanish Language and Hispanic Studies.

Major in Spanish or Hispanic Studies

A major in Hispanic Studies (SPS) consists of at least thirty-six (36) credit hours, twenty-four (24) of which must be at the 3000 level or above. Courses counting towards the major are normally chosen from among the SPAN courses in language, literature, culture. After consultation with the Coordinator for Spanish or the Chairperson of Modern Languages and Classics, these can be supplemented [to a maximum of twelve (12) credit hours] by courses from other disciplines whose principal subjects are the arts, history or current reality of Spain and Spanish-speaking Latin America.

Concentration in Spanish

To obtain a concentration in Spanish in partial fulfillment of the B.A. General Degree (i.e. one with a Double Arts Concentration and a minimum of ninety (90) credit hours), a minimum of twenty-four (24) credit hours in Spanish is required. At most 6 credit hours can be at the 1000 level. Also, the minimum grade point average is 2.00.

Minor in Spanish or Hispanic Studies

A minor in Spanish consists of twenty-four (24) credit hours, with at least twelve (12) of these being at the 3000 level or above. Normally, the first twelve (12) credit hour courses for the minor will be 1000 and 2000 level Spanish language courses, followed by twelve (12) credit hours be chosen from offerings in literature and cultural studies. Students entering the minor program with previous knowledge of Spanish should consult the Coordinator for Spanish. A minimum cumulative grade point average of 2.00 is required for courses in the minor program.

Certificate in Spanish Language and Hispanic Culture (Cert. H.C.)

The certificate program in Spanish Language and Hispanic Culture is designed to provide linguistic and cultural knowledge to persons interested in studying and/or working in a Spanish-speaking country. It consists of twenty-four (24) credit hours and is intended for undergraduate students and persons already holding degrees in any discipline.

Admission

Admission to the certificate program requires a formal application for admission and the official approval of the Coordinator for Spanish. Application forms are available from the Registrar. Students majoring in Spanish at Saint Mary's University are not eligible for this program. Eighteen (18) of the twenty-four (24) credit hours must be completed at Saint Mary's.

Program Courses

The program consists of twelve (12) required credit hours in language, SPAN 1100.0 and/or 2204.1(.2), 2205.1(.2), 2206.1(.2) 2230.1(.2), 2231.1(.2), 3303.1(.2) 3306.1(.2) and /or and a number of optional credit hours. These optional credit hours must be at the 3000 level or above and will be chosen from the following courses:

SPAN 3304.1(.2) Americas: The Changing Face of Latin America

SPAN 3310.1(.2) Latin American Culture

SPAN 4876-4899.1(.2) Independent Study I

HIST 2375.0 Modern Latin America

HIST 3402.1(.2) Aspects of Global History

Other courses are possible, subject to the approval of the Coordinator for Spanish.

Requirements for Graduation

A minimum cumulative grade point average of 2.00 in this certificate program is required. Students who have completed all the courses without being officially admitted to the program will not be accredited.

Course Descriptions**1100.0 Introduction to the Spanish Language**

Designed to offer a firm initial competency in speaking and writing Spanish. This course requires regular attendance and a willingness to participate.

2204.1(.2) Intermediate Spanish I

Prerequisite: SPAN 1100.0 with a minimum grade of C (or equivalent).

This course is a continuation of elementary Spanish, with emphasis on comprehension, conversation, reading, and writing.

2205.1(.2) Intermediate Spanish II

Prerequisite: SPAN 2204.1(.2) with a minimum grade of C (or equivalent).

This course is a continuation of Intermediate Spanish I, SPAN 204.1(.2).

2206.1(.2) Intermediate Spanish Communication Skills

Prerequisite: SPAN 1100.0 with a minimum grade of C. Concurrent enrollment in SPAN 2204.1(.2) and/or SPAN 2205.1(.2) is strongly recommended.

This course builds on basic language skills acquired in previous study to enhance the student's ability to communicate in Spanish. Students will practice how to structure and manage conversations at an intermediate level in order to increase their oral proficiency in the language.

Thorough advanced preparation is required for each class, where oral activities predominate.

2230.1(.2) Spanish for Business I

Prerequisite: SPAN 1100.0 with a minimum grade of C, or equivalent preparation in Spanish.

Designed to acquaint students with basic Spanish language forms used in business, including the specialized terminology of oral and written commercial communication. The cultural aspects of business negotiations in Spanish-speaking countries, together with the economic and political profiles of various Latin American nations and Spain, will be explored. The course emphasizes the development of conversational proficiency through the use of discussion and experiential exercises, and will also include written assignments.

2231.1(.2) Spanish for Business II

Prerequisite: SPAN 1100.0 with a minimum grade of C.

Designed to assist students in furthering their development of oral and written communication skills for the business world. Students will broaden their working vocabulary of business terminology in Spanish and their knowledge of commercial practices in the Spanish-speaking world. Oral and written assignments will provide an understanding of the economic, social, and political panorama of Spanish-speaking Latin America and Spain.

3303.1(.2) Advanced Oral and Written Spanish I

Prerequisite: SPAN 2204.1(.2) and 2205.1(.2) with a minimum grade of C.

This course is designed to build upon and refine the students' ability to comprehend and to communicate effectively in Spanish.

***3304.1(.2) Americas: The Changing Face of Latin America**

Given in English, this course is an introduction to selected aspects of present-day Latin America and the Caribbean through a screening of video material and selected readings. The course focuses on a wide range of issues, and may include economic development, migration, racial identity, and the role of women, religion, and the work of creative artists, national sovereignty, and revolution. This course contributes to satisfying the Faculty of Arts humanities 3c requirement but does not fulfill the 3b requirement.

3306.1(.2) Advanced Oral and Written Spanish II

Prerequisite: SPAN 3303.1(.2).

This course is a continuation of Advanced Oral and Written Spanish I, SPAN 3303.1(.2).

SPAN 3307.1(.2) Advanced Spanish Conversation Through Film

Prerequisite: SPAN 2204.1(.2) and 2205.1(.2) with a minimum grade of C

Designed for students who are learning Spanish as a second language, this course uses current Spanish-language films

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produced in Latin America and Spain as a springboard for in-class conversation about Hispanic culture, while also providing a review of grammatical structures at the advanced level. This course is taught entirely in Spanish.

***3310.1(.2) Latin America Culture**

Prerequisite: SPAN 2204.1(.2) and 2205.1(.2) with a minimum grade of C.

This course introduces a broad range of cultural and artistic manifestations of Latin America, both past and present. Topics may include indigenous cultures in the Americas, the importance of European culture to the New World, and the effort to preserve a distinct Latin American culture. The course will be conducted entirely in Spanish.

3312.1 (.2) Introduction to Latin American Literature

Prerequisite: 6.0 credit hours in Spanish at the 2000-level or equivalent, with a minimum grade of "C".

Designed for students who are learning Spanish as a second language, this course provides an overview of Latin American literature across a range of possible genres: narrative, poetry, theatre, and the essay. In addition to introducing students to the dynamics of these various forms of literary expression, this course uses literary texts as windows for looking into their historical backdrop, and the social, political, and cultural issues that they raise. This course is conducted entirely in Spanish.

Women and Gender Studies (WMST)

Program Coordinator: S. Bell, Sociology and Criminology
Adjunct Professors A. Anis, D. Stiles

The Saint Mary's Women and Gender Studies program is designed to facilitate cooperation with other universities in the Halifax area. The program offers an interdisciplinary Bachelor of Arts degree in Women and Gender Studies and an Honours degree as well as a minor in Women and Gender Studies for students majoring in other disciplines.

Courses in Women and Gender Studies lead to a fuller understanding of women's lives, culture, ways of knowing, struggles for social justice and change, and feminist theories and methodologies. Students in the program learn about the forms and structures of discrimination that prevent women from participating equally in society. They learn how many of the personal problems that confront women are generated by society rather than being particular to the individual. They study the process by which women's issues become public and lead to social change.

Women and Gender Studies programs and departments have now become established throughout Canada and internationally. They are widely recognized as playing an important role in broadening our definition of knowledge and helping amend the bias and narrowness of many disciplines and courses.

Governments and large institutions are now acknowledging the need to work towards sexual equality; consequently graduates

4876.1(.2) – 4899.1(.2) Independent (Directed) Study

Prerequisite: permission of instructor.

A tutorial course open to students who wish to study a particular topic, subject, or author largely through independent reading and research. Registration in the course is made after consultation with the appropriate member of the Department, who will organize the program of studies.

who can demonstrate their expertise in this area can expect opportunities to find practical uses for their knowledge.

Note: Admissions to the Major and Honours in Women and Gender Studies are suspended for 2008-2009.

Requirements for a Major

- 1.** Students must complete thirty-six (36) credit hours in Women and Gender Studies. Normally they will accomplish this by taking the following courses:
 - a.** WMST 1200.1(.2)
 - b.** WMST 4420.1(.2) and 4421.1(.2)
 - c.** the equivalent of six (6) credit hours with a clear focus on feminist theory, feminist methodology, and/or feminist analysis [e.g., such courses as WMST 4448.0 (from Saint Mary's); WOM 2210 A/B, 3310 A/B, 3311 A/B (from Mount Saint Vincent); or WOST 3500 A/B (from Dalhousie)].
 - d.** twenty-seven (27) additional WMST credit hours offered by Saint Mary's, Mount Saint Vincent, and Dalhousie Universities. Courses from the latter two institutions are subject to the established Saint Mary's regulations governing transfer credits and will be processed through the established Letter of Permission system.

2. All courses for the major must be approved by the Coordinator of the WMST program at Saint Mary's.
3. Students must satisfy all the requirements for a major in the Faculty of Arts as delineated in Section 3 of this *Calendar*.

Requirements for an Honours

1. For admission to honours in Women and Gender Studies, students must have a minimum grade point average of 3.0 in Women and Gender Studies courses. This average must be maintained for continuance in the honours program.
2. In addition to the requirements for a major in Women and Gender Studies, students must complete twenty-four (24) credit hours as follows:
 - a. either twenty-four (24) credit hours from Women and Gender Studies, or eighteen (18) credit hours from Women and Gender Studies and six (6) credit hours from a discipline related to the student's interest. Courses in which the content is women and gender studies related, but are not officially cross-listed as Women and Gender Studies, may be substituted for Women and Gender Studies credits with the permission of the Coordinator. Students are also encouraged to take advantage of course offerings in Women and Gender Studies Programs at Mount Saint Vincent and Dalhousie Universities.
 - b. Honours Seminar (WMST 4520.0), which will include an honours thesis. The honours thesis should be in an area of Women and Gender Studies of interest to the student; be approved by the instructor; and demonstrate knowledge of theory and methodology of Women and Gender Studies in the area chosen.
3. Students must meet the requirements for honours in the Faculty of Arts as delineated in this *Calendar*.
4. Students may do double honours in Women and Gender Studies and another area of their choice according to the Faculty of Arts regulations set down in this *Calendar*. They must also meet any additional requirements of the second academic program involved.

Requirements for a Minor

In addition to the general requirements for a minor outlined in Faculty of Arts Regulation 6(a), students should ensure that they complete six (6) credit hours from either WMST 4420.1(.2) and WMST 4421.1(.2) or six (6) credit hours described in 1(c) above.

Note: The abbreviation for undergraduate courses in Women and Gender Studies is WMST.

For details on the Joint Master of Arts in Women and Gender Studies see the *Graduate Academic Calendar*.

Course Descriptions

1200.1(.2) Focus on Women

This course presents a variety of perspectives on the role, function, and expression of women. It focuses on women using a variety of disciplines in both the humanities (e.g., classics, English, history, linguistics, and religious studies) and the social sciences (e.g., anthropology, economics, political science, and sociology).

2305.1(.2) Women in Christianity [RELS 2305.1(.2)]

2333.1(.2) Women and Religion Today [2333.1(.2)]

2385.1(.2) Philosophical Issues in Feminism [PHIL 2385.1(.2)]

2800.0 – 2825.0 and 2826.1(.2) - 2849.1(.2) Special Topics in Women and Gender Studies

Prerequisite: at least three (3) credit hours in WMST.

These are combined lecture-seminar courses on a selected topic in Women and Gender Studies. Course content will vary from year to year. These courses allow students to take advantage of offerings in other departments relevant to a Women and Gender Studies degree.

3303.1(.2) Sex, Gender and Society [ANTH 3303.1(.2)]

Prerequisite: ANTH 1202.1(.2), 1290.1(.2), or one (3 credit hour) social science credit.

3317.0 Writing by Women [ENGL 2317.0]

Prerequisite: at least six (6) credit hours, or permission of instructor.

3320.0 Women in Canadian Society [SOCI 3320.0]

Prerequisite: SOCI 1200.0; or SOCI 1210 and either 1211/1212 or six (6) credit hours in WMST.

3321.1(.2) Women, Law and the State [CRIM 3320.1(.2)]

3341.1(.2) Women and the Media [SOCI 3341.1(.2)]

3348.1(.2) Psychology of Gender Roles [PSYC 3348.1(.2)]

Prerequisite: one of PSYC 1200.1(.2), 1240.1(.2), 1250.1(.2), and 1260.1(.2).

3349.1(.2) Women and the Economy [ECON 2349.1(.2)]

3352.1(.2) Women in Antiquity I [CLAS 3352.1(.2)]

3353.1(.2) Women in Antiquity II [CLAS 3353.1(.2)]

3387.1(.2) Women and Development [SOCI 3387.1(.2)]

Prerequisite: at least six (6) credit hours in WMST, political science, economics or sociology.

3393.1(.2) Women Battery and the Criminal Justice System [CRIM 3393.1(.2)]

4220.1 (.2) Power, Equity and Global Issues [SOCI 4220.1(.2)]

Prerequisites: SOCI 2363.1 (.2); or SOCI 3351.1 (.2)

4300.1(.2) Gender and Asian Religious Traditions [RELS 4300.1(.2)]

4404.1(.2)-4405.1(.2) and 4406.0 Contemporary Issues of Feminism

Prerequisite: at least twelve (12) credit hours in WMST or permission of instructor.

These courses provide an opportunity for students to study in considerable depth and detail selected contemporary issues of feminism both within and outside of academia. For example, a course might focus on inequality of women in the labour force, the role of unpaid work, violence and its use against women, the colonization of knowledge within academia, or on technology including the impact of new reproductive technologies and their control of women.

4417.1(.2) Feminist Literary Theory [ENGL 4417.1(.2)]

4421.1(.2) Seminar on Women and Gender Studies

Prerequisite: at least twenty-four (24) credit hours in WMST courses.

Students will develop their analytic skills and apply feminist methodologies and analysis in carrying out their proposed research.

4422.1(.2) Gender and Development: Theory and Method [SOCI 4422.1(.2)]

Prerequisite: theory and methods courses in WMST or sociology or permission of instructor.

4423.1(.2) Gender and Development: Policy and Practice [SOCI 4423.1(.2)]

Prerequisite: theory and methods courses in WMST or sociology or permission of instructor.

4427.1(.2) Language, Gender and Power [ENGL 4427.1(.2)/LING 3427.1(.2)]

Prerequisite: at least nine (9) credit hours at the 300-level or above.

4432.1(.2) Gender and Law [SOCI 4432.1(.2)/CRIM 4401.1(.2)]

4433.1(.2) Women's Literature in France [FREN 4433.1(.2)]

4434.1(.2) Women's Literature in French Canada [FREN 4434.1(.2)]

4448.0 Feminist Analysis [SOCI 4448.0]

Prerequisite: previous or concurrent theory and methods courses in WMST or sociology or permission of instructor.

4449.1(.2) Women and Public Policy [POLI 4449.1(.2)]

4461.1(.2) Polemical Writing by Women [ENGL 4461.1(.2)]

4482.1(.2) Gender and International Migration [SOCI 4482.1(.2)]

4514.1(.2) and 4515.1(.2), 4516.0 Advanced Directed Readings in Women and Gender Studies

Prerequisite: admission into honours in Women and Gender Studies or permission of instructor.

4520.0 Honours Seminar

Prerequisite: admission into honours in Women and Gender Studies.

The purpose of the honours seminar is to aid students in the preparation of their honours theses. Students will deepen their knowledge of feminist theory, methodology, historical, and theoretical perspectives in the disciplines related to the topic of their honours theses. They will develop their research proposals and complete their honours theses within the context of this course.

4585.1(.2) Feminist Philosophy [PHIL 4585.1(.2)]

4850.0 – 4875.0 and 4876.1(.2)-4899.1(.2) Directed Readings In Women and Gender Studies

Prerequisite: at least twenty-four (24) credit hours in WMST courses.

These courses offer students an opportunity to pursue advanced readings and research in a particular area of Women and Gender Studies. The students and professors will design the programs of study together.

Financial Information
Student Awards and
Financial Aid

Section
5

Financial Information

It is the responsibility of all students to be familiar with university regulations pertaining to financial matters.

At the time of publication, fees and financial policies for the 2009-2010 academic year had not yet been determined. The fees and financial policies listed in this Section are those for 2008-2009 and are subject to change before September 1, 2009. All fee calculations are made at registration without prejudice and are subject to confirmation and adjustment at a later date.

Visit our website for more current information:

Web site: <http://www.smu.ca/administration/financialservices>

Payment due dates will be:

Fall Term: September 18, 2009

Winter Term: January 14, 2010

(Fees and Policies listed below were those in effect for 2008-2009)

1. Tuition Fees – Undergraduate Level Courses

See Note 1 for **reduced** rates for Nova Scotia Residents

	Canadian	International(note 2)
Tuition per 3 credit hour course		
Arts	\$558.00	\$1,116.00
Business	\$558.00	\$1,116.00
Science	\$568.00	\$1,126.00
Engineering:		
1000 level	\$423.50	\$981.50
2000 level	\$568.00	\$1,126.00
Co-Op Work Term	\$500.00	\$500.00
Campus Renewal	\$32.00	\$32.00

Note 1:

Nova Scotia Canadian Residents received the Nova Scotia University Tuition Bursary in 2008-2009 equal to \$76.10 per 3 credit hour course. This bursary will increase to \$102.20 per 3 credit hour course in 2009-10.

Nova Scotia Resident - Two criteria are used to identify students that are residents of Nova Scotia:

- Nova Scotia residents are defined as those students in receipt of a Nova Scotia student loan
- For Canadian and Permanent Resident students without a student loan, Nova Scotia residency is determined using the following guidelines:
 - Students entering university immediately after Nova Scotia high school completion (i.e. within the last twelve (12) months), or
 - the province of permanent home address on the date of application for admission must be Nova Scotia.

- Further clarification is available at <http://studentloans.ednet.ns.ca/>

Note 2: International fees above include **Differential Fees**, explained in paragraph 4, below.

Students seeking additional information on matters related to undergraduate fee assessments should address their inquiries and correspondence to:

Accounts Receivable, Financial Services
Saint Mary's University
Halifax, Nova Scotia
B3H 3C3 Canada

Telephone: 902.420.5473

Fax: 902.496.8184

E-mail: accounts.receivable@smu.ca

2. Tuition Fees – Graduate Level Courses

Please see the Graduate Calendar for details.

3. Compulsory Student Fees - Undergraduate and Graduate

3.1 Campus Renewal Fee

To provide for campus renewal and renovation, all students are assessed a Campus Renewal Fee. The fee is assessed based on the number of registered credit hours. For example in 2008-9, a six (6) credit hour course, was assessed \$64.00 while a (3) credit hour course was assessed, \$32.00.

3.2 Student Fees

Students' Association and Journal fees are compulsory for all students. Compulsory medical plan details are described in Section 7 of this *Calendar*. Fees applied in 2008-9 were as follows:

		Per Term	Per Academic Year
Students' Association	Full Time	\$62.85	\$125.70
	Part Time	20.19	40.38
The Journal Newspaper		2.00	4.00
U-Pass Metro Bus	4 months	57.50	
	8 months		115.00
Canadian Medical	Single		134.00
	Family		289.00
International Medical	Single		900.50
	2 person Family		1,801.00
	3 or more Person		2,701.50
Canadian / Intl Dental	Family		
	Single		78.00
	Family		146.00

4. International Differential Fees and International Status

Any student who is not a Canadian Citizen or a Permanent Resident must pay an international differential fee. The fee is assessed on a per credit hour basis and equals \$ 558.00 per 3 credit hour course.

Landed Immigration or Permanent Citizenship papers that support a change to a student's file must be presented to the Registrar's Office. The international differential fee will be dropped for the next term following the receipt of notification of change in immigration status.

International students who send money in advance and withdraw from the University after registration or do not register will have the funds returned to their country of origin less any required University deposits, administrative fees and service charges assessed by financial institutions.

5. Sample Fee Calculations - 2008-2009

5.1 *Canadian Student: Undergraduate Arts Program*
24 credit hours in Arts and 6 credit hours in Science.

	1 st Term	2 nd Term	Total
Tuition:*			
24 credit hrs in Arts	\$2,232.00	\$2,232.00	\$4,464.00
6 credit hours Science	568.00	568.00	1,136.00
Medical	134.00	0.00	134.00
Dental	78.00	0.00	78.00
Student Fees & Upass	179.85	64.85	244.70
Campus Renewal Fees	160.00	160.00	320.00
Total	\$3,351.85	\$3,024.85	\$6,376.70

<i>NS Resident Bursary**</i>	\$ -380.50	\$ -380.50	\$ -761.00
Total - NS Resident**	\$2,971.35	\$2,644.35	\$5,615.70

** See above for definition of a Nova Scotia Resident. This bursary will increase to \$102.20 per 3 credit hour course (or \$511.00 per term in the above example) in 2009-2010.

5.2 *International Student: 30 credit hours in Business*

	1 st Term	2 nd Term	Total
Tuition	\$2,790.00	\$2,790.00	\$5,580.00
Medical	900.50	0.00	900.50
Dental	78.00	0.00	78.00
Student Fees & Upass	179.85	64.85	244.70
Campus Renewal Fees	160.00	160.00	320.00
Differential	2,790.00	2,790.00	5,580.00
Total	\$6,898.35	\$5,804.85	\$12,703.20

5.3 *Part time Canadian Student taking 6 credit hours in Science (3 in each term).*

	1 st Semester	2 nd Semester	Total
Tuition*	\$568.00	\$568.00	\$1,136.00
Student Fees	22.19	22.19	44.38
Campus Renewal Fees	32.00	32.00	64.00
Total	\$622.19	\$622.19	\$1,244.38

<i>NS Resident Bursary**</i>	\$ -76.10	\$ -76.10	\$ -152.20
Total - NS Resident**	\$546.09	\$546.09	\$1,092.18

** See above for definition of a Nova Scotia Resident. This bursary will increase to \$102.20 per 3 credit hour course in 2009-2010

6. Class Withdrawals and Refunds

6.1 The deadlines for academic withdrawal differ from those for financial adjustment of tuition and related fees. Please refer to the refund schedule.

6.2 Non-attendance in class does not constitute an official withdrawal. You must drop your courses online through Self Service Banner (<http://selfservice.smu.ca>) or you will be responsible for all tuition and related charges.

6.3 Students who officially withdraw on or before the last day to add or drop courses will receive a refund less a \$50.00 administrative processing fee.

6.4 Students who officially withdraw after the last day to add or drop courses are eligible for a proportional adjustment of tuition and differential fees over a four week period. Student fees, medical, dental and U-Pass are non-refundable after this date. See the refund schedule for details.

6.5 The following tuition and differential refund schedule was in effect for 2008-2009.

Tuition, campus renewal and differential refund schedule:

	1 st Term Fall – 2008	2 nd Term Winter – 2009
Refund 70%	Sept 13 – Sept 19	Jan 15 - Jan 21
Refund 55%	Sept 20 - Sept 26	Jan 22- Jan 28
Refund 40%	Sep 27 - Oct 3	Jan 29 - Feb 4
Refund 25%	Oct 4 - Oct 10	Feb 5 - Feb 11

Please note: Student service fees are non refundable after the last day to add courses.

6.6 Where a student withdrawal results in a credit balance, the student may be eligible for a refund. Prior to refunding a credit balance, Student Accounts will review the student's funding arrangements to determine if a third party (e.g., Canada Student loan, US Student loan - FFELP program, or sponsor) has a claim on the credit balance. Where the credit balance has no priority claims or if the credit balance exceeds those claims, a refund will be made upon request.

6.7 Students who leave the University without officially withdrawing and who subsequently officially apply for and are granted a retroactive withdrawal by the Registrar's Office, will be charged a \$50.00 administration processing fee in addition to the regular University fees assessed up to the official withdrawal date established by the Registrar. Student service fees such as medical, dental metro transit pass, student union and Journal fees are non-refundable for retroactive withdrawals.

7. Special Fees

Complete Withdrawal – processing fee	\$50.00
Binding of Master's Thesis (3 copies)	50.00
Academic Appeal	30.00
NSF Cheque Fee	20.00
Identification Card Replacement	15.00

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Parking - Sept 1, 2008- Aug 31, 2009

Students	General	\$235.00
	Underground	\$460.00

8. Residence Fees

8.1 Accommodations and Meal Plans are described in Section 7 of the Calendar. The residence application fee is \$25.00.

8.2 Room Rates

The following are the rates for 2008-2009. Rates for 2009-2010 had not been set at time of printing this *Calendar*.

Room and Board	Per Term	Per Academic Year
Single Room		
Meal Plan 1	\$3,877.50	\$7,755.00
Meal Plan 2	4,030.00	8,060.00
Meal Plan 3	4,155.00	8,310.00
Meal Plan 4	4,305.00	8,610.00
Double Room		
Meal Plan 1	\$3,447.50	\$6,895.00
Meal Plan 2	3,600.00	7,200.00
Meal Plan 3	3,725.00	7,450.00
Meal Plan 4	3,875.00	7,750.00
Room Only		
Apartment	\$2,050.00	\$4,100.00
Senior Suites		
Shared Bath, kitchen	2,725.00	5,450.00
Private Bath, no kitchen	2,637.50	5,275.00

8.3 Residence Withdrawal and Refunds

If the Student withdraws from the University at any point during the first semester, the Student will be assessed room fees for the entire first semester and will forfeit the \$500 residence confirmation deposit. If the Student withdraws from the University during the second semester, the student will be assessed room fees for the entire academic year. If the Student withdraws from residence and does not simultaneously withdraw from the University, or if the Student is dismissed by the University from residence, the Student is not eligible for an adjustment of room fees and will be assessed fees for the entire academic year. The minimum charge for residence is \$500.00 regardless of the date of withdrawal.

9. Payment of Fees

Payment due dates for 2009-2010 are as follows

Fall: September 18, 2009

Winter: January 14, 2010

9.1 Methods of Payment

Payment can be made by internet and tele-banking as Saint Mary's University is set up as a vendor with all major banks. Other methods of payment include; debit bank card, money order, draft, Visa, MasterCard, American Express and cheque. Cheques should be drawn on a Canadian Financial Institution and made payable to "Saint Mary's University". Web credit card payments can be made through Self Service - visit <http://selfservice.smu.ca>.

Students whose fees are to be paid by government or third party sponsors(excluding Student Loan Programs) are required to present a signed statement, certificate or other appropriate supporting document to the Student Accounts office before the payment due date.

9.2 Students paying all or part of their tuition with a loan must meet University fee deadlines.

9.3 Students paying with Canada Student Loan Assistance are strongly encouraged to make application early so the loan arrives before the payment due date. Loans arriving after the deadline are subject to interest charges.

9.4 The University reserves the right to require full payment at the time of registration. Example: In the fall, students are required to bring their Student Loan assessment with them when their loan is signed. If the assessment shows sufficient funding for the winter term the loan will be signed for fall fees only. If the assessment indicates there is no winter funding, the loan will be signed for an amount to cover the fall plus winter tuition.

9.6 Second Semester Fee Payment:

New and continuing students are required to pay tuition fees on or before January 14 (tentative).

9.8 Late Payment or Unpaid Accounts

Students who have not paid all fees may have their registration cancelled at the discretion of the Registrar and upon the recommendation of the Manager, Account Services. A student whose registration has been cancelled for non-payment of fees must pay all outstanding fees and an additional fee of \$50.00 prior to consideration of reinstatement by the Registrar.

Students whose accounts are in arrears will not be permitted to register until their account has been paid in full.

9.9 Interest Charges

Accounts outstanding after 18 September in the first semester and/or after 14 January in the second will be charged weekly interest at a rate of (12.68% per annum).

Students who do not pay summer school fees by the payment due dates will be charged interest.

Students paying with loans should note University fee deadlines are applicable and interest charges apply equally to all students.

Students whose accounts are in arrears will be denied marks, transcripts, tuition tax receipts and may be denied graduation.

9.10 Late Registration: Payment deadlines must be met.

In special circumstances, the University reserves the right to require pre-payment in excess of the first semester portion of tuition and residence charges.

Student Awards and Financial Aid Programs

We understand that financing your education can be challenging, but remember, it's an investment in your future. We are committed to ensuring your success by providing **\$4.2 million in scholarships, bursaries, and awards** each year to students.

Renewable Entrance Scholarships: Saint Mary's University guarantees a minimum total scholarship offer to any high school graduate with a Scholarship Average of 80% and higher. Apply by March 15 to be automatically considered. Students with an 80% average and above who apply by March 15 are also guaranteed a space in residence!

\$14,000 total value/ \$3,500 per year (renewable) - Scholarship Average 95%+. The award will be continued during the recipient's undergraduate program provided the student maintains a minimum 3.67 grade point average (GPA) each year in a minimum of 30 credit hours.

\$8,000 total value/ \$2,000 per year (renewable) - Scholarship Average 90-94.99%. The award will be continued during the recipient's undergraduate program provided the student maintains a minimum 3.67 grade point average each year in a minimum of 30 credit hours. Should the recipient achieve a GPA of 4.00 or above in any academic year, the value of their award will be increased for that year.

\$4,000 total value /\$1,000 (renewable) – Scholarship Average 85-89.99%. The award is valued will be continued during the recipient's undergraduate program provided the student maintains a minimum 3.67 grade point average each year in a minimum of 30 credit hours. Should the recipient achieve a GPA of 3.80 or above in any academic year, the value of their award will be increased for that year.

\$3,500 total value/\$500 (renewable) - Scholarship Average 80-84.99%. This scholarship is valued at \$500 (CAD) for the first year and \$1,000 per year for three additional years, should the recipient achieve a GPA of 3.67 or above in any academic year, in a minimum of 30 credit hours.

Entrance Scholarships (non- renewable) are also awarded to high school students who begin their studies in January.

Students who apply after March 15 will be considered for Entrance Scholarships as resources permit.

Saint Mary's University encourages and rewards continuous improvement. Students may be eligible for a higher valued Entrance Scholarship should their final grades place them in a higher scholarship band. Students may even be considered for an Entrance Scholarship if they did not receive one upon application. If applicable, students should request reassessment or consideration by July 31.

To calculate a Scholarship Average: A scholarship average is determined by using the admission average then adding bonus points for AP, IB, or grade 12 enriched

courses. Scholarship averages are calculated to two decimal points and are not rounded. Please note that Saint Mary's calculates an admission average by using the five required courses for the program the student has applied. Averages may vary from one program to another.

Transfer (Achievement) Scholarships: Saint Mary's University awards Entrance Scholarships to transfer students who:

- Have obtained a minimum QPA of 3.67 in a minimum of 30 credit hours of full time enrollment in their previous university.
- Begin their studies in September.
- Register in a minimum of 30 credit hours.
- Transfer from a Canadian university or a university outside Canada where Saint Mary's University has established a formal articulation agreement.

Presidential Scholarships - \$36,000 total value/ \$9,000 per year (renewable)

Santamarian Scholarships - \$20,000 total value/ \$5,000 per year (renewable)

A limited number of Presidential and Santamarian Scholarships are awarded on the basis of:

- A **very high aggregate score** (as calculated by the Admissions Office). Successful candidates typically have a Scholarship average of 95% or above. Recipients of these awards will be determined by their overall placement in relation to other candidates.
- A **résumé**, which should comment on such things as involvement in community service, participation in student government, athletic achievement, extra curricular activities and volunteer and /or paid work.

The Presidential/Santamarian Recommendation Form can be downloaded from the Saint Mary's University web site <http://www.smu.ca/scholarships> or obtained by telephoning the Admissions Office at 902.420.5415.

Students will be considered for these scholarships when all of the above information has been received by March 15.

International Baccalaureate Scholarship- \$32,000 total value/ \$8,000 per year (renewable)

An International Baccalaureate Recommendation Form is to be completed by the IB Coordinator once the overall predictor score is available. Diploma candidates will be considered for this scholarship once this form has been submitted to the Admissions Office, Saint Mary's University. Please fax no later than **March 15**. Fax: 902.496.8100.

The award available to both domestic and international IB Diploma candidates. It is awarded on the basis of an overall predictor score of 36 or above

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Applicants should also include a résumé with information on such things as involvement in community service, participation in student government and athletic achievement. In addition, the completed International Baccalaureate Recommendation Form must be submitted under separate cover, by the high school IB Coordinator.

Recipients of this award will be determined by their overall placement in relation to other Diploma candidates. A candidate's overall ranking will be determined by the Admissions Office.

A minimum grade point average of 3.8 is required for renewal of this scholarship.

Note: The deadline for all Presidential, Santamarian and International Baccalaureate Scholarship consideration is March 15 (Only applications accompanied by supporting documentation are considered). Scholarships are announced no later than April 15.

Named Entrance Scholarships/ Bursary Awards

Saint Mary's University offers a number of prestigious Named Entrance Scholarship/ Bursary awards. These awards are open to potential high school graduates. The Named Entrance Scholarship/Bursary application form is available online at: www.smu.ca/canadianscholarships or www.smu.ca/internationalscholarships

Note: Students will be considered for the most appropriate award; therefore no additional application is required.

The deadline for Named Entrance Scholarship/Bursary consideration is March 15 (Only complete applications are considered). Scholarships are announced no later than April 15.

For information on scholarships and admission status, please contact admission.status@smu.ca.

2. Achievement Scholarships

Value: \$1,000.00 to \$3,500.00

Students who qualify for the Dean's List are considered each year as they progress satisfactorily toward a **FIRST** undergraduate degree.

Please note that students who receive a Renewable Entrance Scholarship are not eligible to receive an Achievement Award.

Students must have completed 30 credit hours in the preceding 12 Month Period of Study July 1, 2008 to June 30, 2009. All courses are used within this time frame for GPA calculations. Successful recipients must be registered as full-time (9 credit hours per semester) at Saint Mary's University in the following academic year. No application is required.

Students are responsible for notifying the Financial Aid and Awards Office of late course completions, grade changes

and courses completed on Letter of Permission. These must reach the Financial Aid and Awards Office by May 25.

3. Named Undergraduate Awards

A growing number of University-administered scholarships and bursaries are available to qualifying students at Saint Mary's University. Many of these awards have been established by generous Alumni, parents of Alumni, corporations and friends of the University. Financial support from these benefactors provides significant assistance to both the University and the annual recipients of the awards. The entire University Community is grateful for this generosity and support. Others are encouraged to support Saint Mary's in this manner. Should you wish to establish a scholarship or bursary at Saint Mary's, please contact the Director of Development.

Detailed award values, criteria, and application information for the named undergraduate scholarships and bursaries can be obtained from the Financial Aid and Awards Office or by accessing Student Services through the Saint Mary's University homepage.

The scholarship application deadline for the 2009-2010 academic year is 1 May 2009.

Saint Mary's University Undergraduate Scholarship Regulations and Application Procedures

a. By 1 May, candidates for scholarships must apply each year to the Financial Aid and Awards Office. Named Undergraduate Scholarships, Alumni Leadership Awards, and Faculty Union Scholarships require applications. Application packages are available from early February until the deadline of 1 May. Applications are not required for Achievement Scholarships.

b. Each award is granted for one academic year only. However, scholarships may be renewed each year on a competitive basis providing the students reapply or re-qualify.

Only one-half of the value of any scholarship or bursary awarded by the University will be credited to the student's account during each of the two semesters. Unless the value of the scholarship or bursary is equal to or greater than the total fees for the year, payment is required by the student (section 3a & 3b). If the award exceeds the total semester's charges, refunds will be given by Accounts Receivable, Financial Services, to those students requesting them, after 15 November for the first semester and after 28 February for the second semester.

c. Students are responsible for notifying the Financial Aid and Awards Office of **late course completions and grade changes** which were not recorded at the time when scholarship applications were filed. These must reach the Financial Aid and Awards Office by **25 May**.

Note: The criteria for awarding entrance and continuing scholarships is currently under review, which may well result in revisions to these criteria.

d. In order to be considered for an undergraduate scholarship, students must be registered in an undergraduate degree program at Saint Mary's University. Courses taken at other institutions during the regular academic year and accepted as transfer credits at Saint Mary's University will be considered by the Senate Scholarship Committee provided that they appear on the student's record by 25 May or that the student notifies the Financial Aid and Awards Office in writing of any possible transfer credits by that date.

e. Students who receive Named Undergraduate Scholarships from Saint Mary's must register according to the criteria outlined in the letter from the Financial Aid and Awards Office.

f. Students who are full-time in one semester and part-time in another or withdraw or complete their studies after one semester will receive one half of their scholarship.

g. Students who receive scholarships and fail to qualify for a renewal may re-enter the competition for scholarships should they subsequently re-qualify.

h. Scholarships can be considered taxable income. A T-4A form will automatically be prepared by the University.

i. At registration, scholarship recipients are required to pay the balance of fees not covered by the award. If you have been awarded a Saint Mary's University scholarship, the value of which is equal to or greater than \$400.00, no tuition deposit is required for registration.

4. Mature Students

Students accepted on the basis of mature admission who show potential for high academic achievement may be considered for an entrance award through the Continuing Education Office. Letters of application should be sent to the Director of Continuing Education with an updated résumé and previous academic transcripts.

5. Demonstrators and Teaching Assistantships

In some departments, positions as laboratory demonstrators or research/teaching assistants are available for Saint Mary's University students. For more information please contact the appropriate department.

6. Awards Administered by the Donor (External Awards)

For information concerning these external awards application procedures, eligibility, and addresses, please contact the Financial Aid and Awards Office or access Student Services through the Saint Mary's University homepage.

7. Canada Student Loans Program

Students requiring financial assistance to help meet their educational expenses should apply for Canada Student Loans. (Exception: Residents of Quebec apply for Quebec Student Loans.) Application is made to the province in which the student is a resident.

Students are encouraged to apply before 30 June (30 May for Quebec) to avoid late payment charges at the University. Applications are available directly from the provincial

Student Aid Offices. Nova Scotia residents should apply online at <http://studentloans.ednet.ns.ca>

Notification of Award

Students found eligible for Canada Student Loans from Nova Scotia will be sent their notification and documents in the mail. Canada Student Loans and/or bursaries from most other provinces are sent directly to the University.

Students should check the **Provincial Awards Board** located in Student Services on the fourth floor of the O'Donnell-Hennessey Student Centre. Notices of any funds received are posted here as well as relative information or special instructions pertaining to each province. Funds will be held at the Financial Services, McNally Main, until students sign for them.

Canada Student Loans Program: Part-Time Loans Plan

Guaranteed loans for part-time students attending post-secondary institutions are available under this program funded by the Federal Government. Students apply to the Provincial Student Aid Office in their Province of Study.

Canada Student Loans Programs: Interest Relief Plan

The Canadian Government will pay the interest on full-time or part-time Canada Student Loans on behalf of the debtor if he/she is experiencing financial hardship due to unemployment or disability. Applications for Interest-Relief forms are available in local banks or through Provincial Student Aid offices.

Detailed information regarding financial aid eligibility, application procedures, and appeals may be obtained from the appropriate Provincial Student Aid Office. Assistance with more complicated appeals is available by contacting the Financial Aid & Awards Office.

Nova Scotia

Student Aid Office
Telephone 902-424-8420 General Inquiries
Voice Response Unit 902-424-7737
TDD 902-424-2058
Toll free in Nova Scotia
1-800-565-8420 General Inquiries
1-800-565-7737 Voice Response Unit
www.studentloans.ednet.ns.ca

New Brunswick

Student Financial and Support Services
Voice Response: 506-453-4796 (Fredericton area) or
1-800-667-5626 (Atlantic Provinces, Ontario, and Quebec only)
www.studentaid.gnb.ca

Newfoundland and Labrador

Student Financial Services
709-729-4244 Recording
709-729-5849 Information and Assistance
1-888-657-0800
www.edu.nov.nl.ca/studentaid

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Ontario

Student Assistance Program
Ministry of Colleges and Universities
Student Support Branch
189 Red River Road, 4th Floor
PO Box 4500
Thunder Bay, Ontario
P7B 6G9
1-807-343-7260
1-800-465-3013 (within Ontario)
<http://osap.gov.on.ca>

Prince Edward Island

Student Aid Office
902-368-4640
www.studentloans.pe.ca

Quebec

Direction generale de l'aide
financiere aux etudiants
1035, de la Chevrotiere

Quebec, Quebec
G1R 5K9
418-643-3750
24-hour automated service 418-646-4505 or
1-888-345-4505
www.meq.gouv.qc.ca/afe

Note: Addresses for Student Aid Offices in other provinces are available upon request from the Financial Aid and Awards Office.

United States Student Loan Programs

Saint Mary's University is a certified institution for the United States FFELP (Family Federal Education Loan Program). Specific documentation is required from students to administer this loan program. Please contact the Financial Aid and Awards Office for detailed instructions on qualifying for the FFELP Program.

Centres and Institutes

Section

6

Centres and Institutes

Atlantic Canada Centre for Environmental Science

The Atlantic Canada Centre for Environmental Science was established at Saint Mary's University in 1991. Its primary function is to foster interdisciplinary research related to the environment.

Objectives

The purposes and functions of the Centre are to provide:

1. a mechanism for interdisciplinary research relating to the environment;
2. opportunities for interaction of faculty and departments in a common theme; and
3. a focal point to facilitate discussions with business and government agencies for research grants and contracts relating to environmental subjects.

Structure

Membership of the Centre is open to Saint Mary's faculty members and other qualified professionals interested in any aspect of Environmental Science in the broadest sense of the term.

Research

Members of the Centre are engaged in a wide range of activities including studies of climate change and its impacts, air, soil and water pollution, geothermal energy, hydrocarbon separation processes, impacts of mining on the landscape, weathering of rocks and treatment of mine tailings, environmental impacts on ecosystems, conservation, habitat restoration, coastal zone management, fisheries management, effects of pollution on fish parasites, microbial insecticides, and palaeoenvironment analysis. Contact: G. Pe-Piper. Phone: 902-420-5744; fax: 902-496-8104; e-mail: gpiper@smu.ca.

The Atlantic Metropolis Centre for Research On Immigration, Integration and Diversity

The Metropolis Centre in Atlantic Canada is a consortium of academic researchers, government representatives, and non-governmental organizations dedicated to pursuing policy-relevant research related to immigration, population migrations and cultural diversity. Established in January, 2004, the Atlantic Metropolis Centre is a catalyst for inter-jurisdictional and inter-sectoral cooperation in Atlantic Canada. Building on the strength of the region's universities, the Centre's eight regionally distributed research clusters or "domains" bring together researchers, community organizations, immigrant service providers and federal, provincial and municipal policy makers.

Collectively, the domains are investigating "pull" and "push" factors that influence population migrations to and from the region, including cultural and family networks; economic opportunities; educational and linguistic barriers;

access to culturally sensitive health and legal services; security, safe community, and human rights issues; gender and immigrant women; political structures; international refugee flows; and the increasingly complex nature of citizenship and national identity in a period of accelerating globalization.

Through its affiliations with four other national Metropolis Centres (established in 1996), the Atlantic Metropolis Centre brings the perspectives and concerns of the Atlantic region into play in addressing the national policy priorities of the Metropolis Project. Facilitated by these networks and the transnational linkages arising out of the international arm of the Metropolis Project, Centre research teams contribute to new knowledge concerning population migrations, investigate models for influencing migration of particular relevance to Atlantic Canada, and contribute to effective policy development and practices in the region.

The primary objectives of the Centre are as follows:

- develop the Centre as a regional clearing-house for research on immigration and diversity;
- stimulate capacity-building for policy-relevant research on these issues in the region, train graduate students, and create forums and materials for public education and debate;
- enhance recognition of the rich history of migration and of cultural diversity in Atlantic Canada;
- investigate the complex relationships between the size of immigrant communities, the rate of integration, and the degree of cross-cultural dialogue;
- ensure that policy makers and service providers in Atlantic Canada are provided with timely research drawing on experiences in other regions and/or other countries; and
- provide a window on global developments that might impact the region, such as refugee flows, attitudes towards multiculturalism in other countries, and images of Atlantic Canada abroad.

The AMC's Halifax administrative office is located at 5670 Spring Garden Rd., Suite #509, Halifax N.S. B3J 1H6. Tel. 902-422-0863; Fax. 902-420-5121; Email metropolis@ns.aliantzinc.ca

The Canadian Centre for Ethics and Public Affairs

In the spring of 2003, Saint Mary's University and the Atlantic School of Theology (AST) established the Canadian Centre for Ethics in Public Affairs (CCEPA), located on the AST campus in Halifax. CCEPA provides an arena for critical thinking, public discussion and research into current ethical challenges in our society. The platform is a collaborative one, focusing on building connections across disciplines and communities. CCEPA partners with the major shapers of public life – government, business, NGOs and public service agencies.

The Centre joins the expertise of academics with the experience of community leaders and policy-makers to assist its partners as they seek to integrate ethics into their public practices and policies. CCEPA advances ethical practices in public affairs through five program areas: research, education, information brokering, consultation and training as well as public discussion and awareness. The first of its kind in Atlantic Canada, the Centre has been designated as a high priority in the strategic plan of both AST and Saint Mary's; is sponsored jointly by the two institutions; and is a direct result of the formal affiliation, achieved in 2002.

The Centre is located at 630 Francklyn St., Halifax, NS, B3H 3B5; Tel 902.428.4731; Email: info@CCEPA.ca; Website: www.ccepa.ca

Business Development Centre

The Saint Mary's University Business Development Centre (SMUBDC) was established in 1989 as part of the University's community outreach initiatives. Two basic objectives guide SMUBDC in its operations:

1. introducing the challenges and opportunities facing today's organizations to Saint Mary's Commerce and MBA students while providing career training to these students; and
2. providing private and public sector clients with cost-effective business consulting and counselling services.

Involvement at SMUBDC, either through the Business Consulting course and/or part-time or summer employment, allows students to experience the impact that business planning and financial management have on an organization. By working with SMUBDC and its clients, students are better able to understand the relationship between management, marketing, accounting, and finance in a practical business setting. Past students have said that participation at the Centre "is definitely a positive working experience for any business student" and "provides excellent grounds for students to apply their business knowledge in today's marketplace."

SMUBDC focuses on giving students hands-on experience and linking them with both the business community and with potential employers. By combining students with experienced business consultants and university resources, SMUBDC offers students a unique chance to collaborate with potential and existing business ventures. SMUBDC offers a wide range of business consulting and counselling services including business planning, market and promotional planning, financial statement preparation, community development planning, customized training, and special projects.

SMUBDC's office is located in downtown Halifax at 1546 Barrington Street close to Spring Garden Road. For more information about SMUBDC or its Business Consulting course, visit the SMUBDC's website at www.smu.ca/smubdc; or call SMUBDC at 902-429-2992. We look forward to working with you.

CN Centre for Occupational Health and Safety

The CN Centre for Occupational Health and Safety was created in 2002. The CN Centre is the only centre of its kind in Canada and fits the missions of both CN and Saint Mary's. Building on Saint Mary's strengths in human resource management and industrial and organizational psychology, the CN Centre conducts interdisciplinary research in occupational health and safety. Faculty members and students from a diverse range of disciplines such as psychology, sociology and management, collaborate to conduct innovative research.

Occupational health and safety research focuses on the protection and promotion of the safety, health, well-being and work-life quality of the workforce. Saint Mary's has the largest concentration of academic occupational health psychologist in the country. Two Canada Research Chairs and a Senior Research Fellow specializing in occupational health and safety research are appointed to the Centre. The CN Centre has expertise in assessing occupational stress, safety leadership training, promoting a positive safety culture, and investigating workplace violence.

The activities of the CN Centre can be classified under three broad headings, namely, Research, Education and Intervention. As a Saint Mary's University centre of research excellence, our primary role is to coordinate and conduct research and build research capacity through education. In addition, the CN Centre undertakes intervention projects in order to directly influence occupational health and safety. Through these activities the CN Centre aims to be a '*centre of influence*' to enhance the health and safety of Canadians.

Public and private sectors benefit from educational, job training, assessment and program development opportunities provided by the CN Centre for Occupational Health and Safety.

The Centre is located at Saint Mary's University, 5960 Inglis St., Halifax, NS, B3H 3C3; Tel: 902-491-6253; Fax: (902) 496-8135; Email: cncohs@smu.ca; Website: www.smu.ca/CN/

Centre of Excellence in Accounting and Reporting for Co-operatives (CEARC)

CEARC was formed in 2007 and is located in the management department of Sobey School of Business, Saint Mary's University, Halifax, Nova Scotia. The Centre's work is overseen by a Board of Directors, with an Executive Director managing the day to day work of CEARC. An advisory board directs the research goals and oversees the use of resources.

The Centre's research work is a collaborative effort and includes partnering with other researchers and universities on particular projects. One example is the Centres involvement in an international research project looking at the issue of classification of co-operative member's shares as equity or liabilities and in particular in identifying the

characteristics and economic behaviour of co-operative member shares. A major project being undertaken by CEARC over the next three years is the development of a draft voluntary international Statement of Recommended Practice (iSORP) for Accounting and Reporting by Co-operatives.

The CEARC approach to research is one aimed at improving communication and discourse between researchers and practitioners. The dissemination of papers, encouragement of comment and suggestions from the co-operators and accountants, and reconsideration of papers and proposals following analysis, forms an integral part of the process of researching and developing understanding of co-operative accounting. Website: www.coopaccounting.coop

Centre for Leadership Excellence

The Centre for Leadership Excellence (CLE) at Saint Mary's University is unique in Atlantic Canada.

The Centre was co-founded by the Department of Psychology, which maintains the largest faculty in Industrial/Organizational Psychology in the country, and the Department of Management at the Sobey School of Business, renown for its expertise in human resource management programs.

The CLE is supported in part by the Strategic Initiative Fund of the Office of the Vice-President, Academic and Research.

Leadership is essential if businesses are to achieve and sustain productivity and growth, inspire investor confidence and attract and retain talent.

Globalization and technological advances have produced an environment in which business and government continually need respond rapidly to changing demands. Developing and executing an effective corporate strategy in such an environment requires leadership excellence.

Demographic data show that we are moving towards a leadership shortage. Identifying and developing the leaders of tomorrow must be at the top of today's business agenda.

The CLE:

- helps business, industry, government and other organizations identify and develop leadership potential among their current workers and new recruits;
- assists leaders in learning new skills and enhancing those they already have so that they can better respond to the challenges they face every day in a business environment that is constantly shifting and making new demands;
- provides best practice advice and information in organizational development, giving leaders the people management infrastructure they need to sustain a motivating, productive and healthy workplace;
- offers opportunities for graduate students in Industrial-Organizational Psychology, Management and the EMBA program to gain experience in consulting and applied research.

The expertise of the CLE is leadership. The CLE provides consulting and research services in the fields of leadership identification, leadership development and leadership performance.

- Identify leadership needs
- Define promotion and recruitment needs
- Develop and train leaders
- Assess leadership effectiveness
- Plan strategic succession
- Provide leadership coaching

The CLE also provides a diverse range of services to help leaders maximize the performance of managers and employees while building a better workplace.

- Develop performance assessment, review and performance processes
- Measure and increase motivation, morale and job satisfaction
- Assess and improve team function
- Manage culture and diversity
- Assess and minimize workplace stress
- Measure and enhance occupational health and safety

Further information is available at www.smu.ca/cle

Centre for Spirituality in the Workplace

The newly created Centre for Spirituality in the Workplace at Saint Mary's University is the first academic-based centre for work and spirituality in Canada. The Centre is a catalyst for work and spirituality research, teaching, and service through collaboration across departments, disciplines, and sectors; to promote, foster and nourish the idea of spirituality in the workplace. The Centre encourages the academic community to discover the means to implement spirituality and work through teaching, research, and community service. The Centre participates in the development of courses and conferences on work and spirituality for interested local and regional community members. The Centre also partners with other academic-based centres on Spirituality and Work.

Gorsebrook Research Institute for Atlantic Canada Studies

The Gorsebrook Research Institute for Atlantic Canada Studies was established at Saint Mary's University in 1982 to enhance and strengthen the research component of the University's Atlantic Canada Studies program. The Institute is an interdisciplinary research centre concerned with social, economic, and cultural issues specific to Canada's Atlantic Region. The Institute offers research associate positions to visiting professors, post-doctoral fellows, and graduate students. The Institute offers a research fellowship each year to a full-time graduate student in ACS.

Objectives

The aims of the Gorsebrook Research Institute are to encourage and facilitate interdisciplinary research pertaining

to the Atlantic provinces; to act as an Atlantic Canada resource base and data centre for universities, governments, and the private sector; to facilitate collaborative research; to promote interdisciplinary and interuniversity cooperation, and to encourage university community outreach through collaborative research projects.

The Gorsebrook Research Institute houses the Canada Research Chair in Atlantic Canada Studies, a Senior Research Fellow, and affiliated researchers. The GRI also has a number of inter-related research centres.

The Centre for New Media Qualitative Research

facilitates inter- and transdisciplinary qualitative research using traditional and new media. The facility serves as a training centre for students and researchers interested in building their qualitative research skill set, and offers learning and training opportunities for community partners.

The Centre for the Social Study of Sport and Health

encourages interdisciplinary research on issues relating to sport, physical activity and healthful living; enhances communication between researchers, the sporting community and government; disseminates research on sport and health issues through conferences, symposia and public forums; and fosters interdisciplinary undergraduate and graduate degree programming relating to sport, health, and society.

The **Austin Willis Moving Images Centre** is a multimedia service facility and research centre focusing on the collection, preservation and analysis of film.

Ongoing research initiatives include the **Office of Aboriginal and Northern Research** which is an expansion of the **Labrador Project**, a collaborative effort involving the Institute, the Innu Nation of Labrador and the Department of the Environment. This project provides research input relating to environmental and educational issues, and is involved in helping the Innu Nation prepare for self-government. This new Office now includes collaborative research projects with other Aboriginal groups in Atlantic Canada, as well as ongoing participation in international networks such as the University of the Arctic.

Additional activities include faculty seminars, workshops, public forums, and conferences. The Institute has published more than a dozen books over the past ten years, and has national and international links with various universities, institutes, publishers, and government departments. The Institute is located on the Saint Mary's campus, and can be reached at 902 420-5668; fax: 902 496-8135; or email: gorsebrook@smu.ca

The Institute for Computational Astrophysics (ICA)

The Institute for Computational Astrophysics was established in December, 2001 as a partial fulfillment of Saint Mary's new vision for research and graduate studies. The ICA has five full time faculty members, all of whom are members of the Department of Astronomy and Physics. The faculty members include the University's first Tier 1 Canada

Research Chair (CRC) and a Tier 2 CRC. Other members currently include three post doctoral fellows, five graduate students, and two external scientific members. The ICA graduated its first Ph. D. in 2008.

The ICA is also the focus of ACEnet at Saint Mary's. ACEnet is a consortium of nine Atlantic Canadian universities formed to provide high performance computational facilities for academic researchers. The Director of the ICA currently serves as the Principal Investigator of ACEnet and serves as part of the national organization to manage jointly the activities of ACEnet and the other six consortia covering the other regions of the country. While Saint Mary's researchers may use any ACEnet computational capability, Saint Mary's is distinguished by having ACEnet high quality visualization tools on campus, including an immersive environment called a data cave. One key ability of a data cave is to allow the three dimensional visualization of complex astrophysical calculations performed by ICA members.

The aim of the ICA is to utilize the highest levels of computational capability to model objects of astronomical interest from the relatively small sizes of objects in the solar system to the size of the universe as a whole. Members of the ICA work to develop and utilize state of the art computational tools to simulate astrophysical phenomena on these scales. Unlike most other areas of science in which the researcher can actively design and perform experiments to test hypotheses on how the items being experimented upon respond, astronomers and astrophysicists can only examine the information that comes to us from the object. Progressively better models of astrophysical phenomena produced by computer simulations allow us to compare with observed results to confirm or reject the models and to deduce new observations to make. The interactions between ICA members and observationally oriented faculty of the Department of Astronomy and Physics allow us to continually refine, improve, and understand our simulations.

The ICA is located in the McNally Building, MM311 and can be reached by phone at 902-420-5105; by fax at 902-496-8218; or by email at icaadmin@ap.smu.ca. The ICA home page may be found at www.ica.smu.ca

Regional Analytical Centre

The Regional Analytical Centre is administrated directly under the Faculty of Science. The centre consists of two units: the Electron Microscopy Unit and the Geochemical Unit. With state-of-the-art analytical facilities, the centre provides high-quality micro-morphological, micro-structural and chemical analyses to researchers and teaching groups at universities as well as scientists in government and industry throughout the region.

The EM lab is equipped to perform scanning and transmission electron microscopy analyses of most geological, chemical and biological materials. The geochemical lab is equipped with an X-ray fluorescence spectrometer and a Carbon Nitrogen, Sulfur analyzer. The principal focus of the geochemical lab is to utilize non-destructive analytical x-ray fluorescence (XRF) to determine elemental concentrations in environmental samples.

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Professional assistance is available for consultation, service needs, customization of techniques, and training.

The main office of the centre is located in the Science Building, Room 422. The technician can be reached by telephone at 902-420-5709; fax: 902-496-8268; or e-mail: xiang.yang@smu.ca.

Website – Electron Microscopy lab: <http://fgsr.smu.ca/emc/>
- Geochem. Lab: <http://www.smu.ca/institutes/rgc/>



Resources and Services

Section
7

Resources and Services

Alumni Association

When you graduate from Saint Mary's University, you become part of one of the most active and loyal alumni networks in the country boasting more than 38,000 members around the world. The Alumni Association is committed to helping you stay connected to Saint Mary's and to your fellow graduates through a wide range of events, programs and services.

In 2006, the Saint Mary's University Alumni Association affirmed a commitment to become "the best connected Alumni Association in Canada within ten years." This goal is supported by four key pillars that drive all Association activities: 1. Raising the profile of our alumni; 2. Increasing opportunities to work with current students, thereby building strong ties with future alumni; 3. Support of University fundraising initiatives; and 4. Support of Saint Mary's profile in both the business community and the community-at-large so that student enrolment will flourish.

The Alumni Association Executive is a group of volunteers who are selected by their alumni peers. They are responsible for planning and implementing the Association's programs and services. The Association Executive consists of a President, Past President, Vice-President, Treasurer, and eleven other members. Members of the Executive normally serve three-year terms, meeting once a month. Six of the Association representatives also serve on the University's Board of Governors.

The Alumni Association hosts an Annual Meeting and Dinner which is usually held in September each year as part of Alumni Weekend. All alumni are encouraged to attend the Annual Meeting/Dinner which is one of the most anticipated events each year.

The Association consists of a number of committees:

- **Alumni Benefits & Services Committee:** This committee reviews all current alumni benefits and services. These include, but are not limited to, diploma/degree framing, special insurance group rates, and a discounted Alumni Association credit card. A full listing of benefits and services may be found on the Alumni website at www.smu.ca/alumni.
- **Student / Young Alumni Committee:** This newly established committee is focused on providing current students with direction, mentoring and support by connecting them with recent graduates.
- **Awards Committee:** The Awards Committee reviews current awards programs and makes recommendations to the Executive as a whole. (Examples: Father William A. Stewart, S.J. Teaching Medal recipient, Leadership Awards, and Distinguished Community Service Award recipient)
- **Golf Tournament Committee:** This committee reviews current venue/price and considers alternatives. It assists in the planning and organization of the annual Alumni Tournament

- **Nominations Committee:** This committee considers and submits names to the University for honorary degrees. Members prepare a list of candidates to serve on the Alumni Executive and as alumni representatives on the Board of Governors.
- **Alumni Dinner Committee:** Plans and organizes the Alumni Dinner, a highlight event of the year, which is usually held in the Fall.
- **Ad Hoc Committees:** These committees are formed as necessary.

The Alumni Association is always pleased to hear from alumni members who are interested in participating. For further details, contact the Alumni Office at 902.420.5420 or email; us at alumnioffice@smu.ca

Art Gallery

Metcalfe, Robin, B.A. (Hons.) (Dalhousie), Director/Curator
Zingone, Robert, B.A. (Toronto), M.F.A. (NSCAD),
Assistant Curator

Constructed to National Gallery of Canada standards and opened in October, 1971, Saint Mary's University Art Gallery was the first purpose-built university art gallery in Halifax. It is located on the ground floor of the Loyola Building.

The gallery focuses on contemporary art, featuring both emerging and established artists active on the regional, national and international levels. Occasional historical exhibitions provide depth and context. New exhibitions open every 6-8 weeks, with a total of 10-12 exhibitions a year. The gallery produces publications for all temporary exhibitions that it originates, and hosts frequent panels, lectures and artists' presentations. Boasting one of the finest pianos in the region, the gallery also serves as a venue for performances, concerts, readings and lectures on various subjects.

From its inception, the gallery has maintained a permanent collection, currently comprising over 1,500 individual works, primarily by contemporary Canadian artists. The collection houses many works by Nelly Beveridge Gray, including watercolours and rubbings of historic reliefs in Mesoamerica, Europe and Asia. Gray's collection of pre-Columbian ceramics is complemented by works of Nova Scotia ceramists such as Alma and Ernst Lorenzen. Many works from the collection are on display on campus, including commissioned works by John Greer and Matthew Reichertz. Recent acquisitions represent contemporary artists associated with the Nova Scotia College of Art and Design University, such as Gerald Ferguson, Kelly Mark, and Mitchel Wiebe and Lucy Pullen.

Gallery hours are Tuesday to Sunday, 12:00-5:00 p.m.
Website: www.smuartgallery.ca
Phone: 902.420.5445

Athletics and Recreation

The Department of Athletics & Recreation organizes and runs a variety of activities, providing an opportunity for all students, faculty and staff of Saint Mary's University to participate on a number of different levels.

Varsity Sports

Saint Mary's University is a member of the Atlantic University Sport (AUS) and the Canadian Interuniversity Sport (CIS). Our varsity teams compete in regularly scheduled league play with other universities in the Atlantic region and non-conference competitions with teams across Canada and in the United States.

Athletic Facilities

The centre of activity at Saint Mary's University is **The Tower Fitness Centre** which opened in June 1987. The Tower houses a double-sided gymnasium with retractable seating, running track, squash courts, cardio centre, weight room, group fitness room, sauna, steam room, offices, lounge, locker rooms, sports medicine clinic and equipment distribution area. Along with the **Alumni Arena** and **Huskies Stadium**, these facilities are home for the Huskies 13 varsity programs and also serve as the central location for Intramural & Club Programs.

Intramurals and Recreation

Intramural and recreational programs focus on participation, fun and the opportunity to meet new people! Whatever type of activity you are looking for you will find in Intramural and Recreation sports. From beginners to advanced, all are welcome to participate in these programs.

Club Sports

Sport Clubs are organized and led by Saint Mary's University students motivated by a common interest to participate in a specific sport or physical activity.

Different Sports Clubs have different focuses, such as league or tournament play, socialization, or instruction and skill development.

Joining a club is a great way to meet new people, learn new skills, and enjoy a sport or activity that interests you! They are also a great way for student-organizers to gain valuable leadership, management and organizational skills.

Clubs are responsible for their own internal organization and conduct, following policies and procedures established by the Department of Athletics & Recreation.

Sport Hall of Fame and Heritage Centre

Established in 1995, the Saint Mary's University Sport Hall of Fame & Heritage Centre is located on the 2nd Floor of The Tower Fitness Centre and was designed to celebrate the rich tradition and heritage of sport and recreation at Saint Mary's University. The Induction Ceremony is normally a part of Homecoming Weekend. Inductions are held annually with anywhere from one to four individuals or teams being honored.

Since its inception, the Sport Hall of Fame has been generously supported, especially financially, by the Presidents of the University and the Directors of Athletics.

A Sport Heritage Centre is also an integral part of the operation of the Sport Hall of Fame and Heritage Centre. This provides a space to house memorabilia depicting the rich tradition and success of athletes and builders at Saint Mary's University.

The three categories of inductees are – individual varsity athletes; varsity teams; builders – all of whom have contributed immensely to the solid reputation of Saint Mary's University in the field of athletics and recreation.

Inductees

1995	Reverend John J. Hennessey, S.J. Robert G. Hayes
1996	1973 Men's Basketball Team Bob Lahey Reverend Michael O'Donnell, S.J.
1997	Frank Baldwin
1998	Bob Boucher Jim Pineo 1973 Football Team
1999	Jamie Bone Elizabeth A. Chard Bob Warner 1964 Football Team
2000	Roy Clements Mickey Fox Kathleen Mullane
2001	Chris Flynn Elmer MacGillivray Angelo Santucci 1973 Hockey Team
2002	Frank Archambault Harold "Babe" Beazley Dianne Chiasson Michael Hornby
2003	Al Keith Dr. Greg McClare Larry Uteck 1978 Men's Basketball Team
2004	Leslie K. Goodwin Ross Webb Susan Beazley Bill Robinson
2005	Frank Arment Brian Heaney Bill Mullane
2006	Mike Curry

Reginald Joseph MacDougall
Dr. Robert (Bob) Ruotolo

2007 Fr. George Leach, S.J.
John Gallinaugh
Lee A. Thomas, Jr.

2008 Paul Puma
Andrew Conrad
1956 Football Saints

Bookstore

Situated on the second floor of the O'Donnell-Hennessey Student Centre, the Bookstore is owned and operated by Saint Mary's University. Our textbook specialists work year-round to provide course-related materials in this convenient location.

The Bookstore also carries supplies, crested clothing and giftware. Our website bookstore.smu.ca has more detailed information about how to find your course-material, operating hours, refund deadlines, as well as our web-catalogue for crested items.

Used Book Program - Choose our used copies to save at least 30%. Current titles re-adopted by instructors are purchased from students for half price during our Used Book Buy-Backs in December, April and August. They are then made available on our shelves at 25% off the new price, and are tax-free. Watch for our advertisements in *The Journal* and on campus posters.

Special Orders - Personal copies of any book in print can be ordered through the Bookstore.

Graduation Rings - Saint Mary's rings may be ordered at the Bookstore at the following times: Tuesdays 4:00 pm – 5:00 pm in January, February, March, April, October, November and December. Watch for campus posters for other special Ring Days during each semester.

Parchment/Diploma Framing - Customized frames are available year-round in two styles, each with crested mattes. Following Spring and Fall Convocations, an on-site framing service is provided jointly with the Alumni Office.

Operating Hours -

Sept. to May: Monday to Friday 9:00-5:00
June to August: Monday to Friday 9:00-4:00

Extended Hours: At the beginning of each semester see our web-site, flyer and bookmarks.

Christmas to New Year's - closed
Contact - Telephone 902-420-5562
(customer service, recorded information also available)
E-mail: bookstore@smu.ca

Center for Academic & Instructional Development (CAID)

In October, 1998, Saint Mary's University established the Office of Instructional Development to support teaching and learning, both on and off campus. Through workshops, newsletters, mentoring, grants and linkages to programs and expertise locally, regionally, and nationally, the Office has provided opportunities for professional development in teaching to full and part-time faculty. The Office also expanded its services in recent years by establishing the Center for Academic Technologies (CAT) to help faculty obtain or upgrade their skills in the use of technology in teaching. In 2007, the Office of Instructional Development became the Center for Academic and Instructional Development (CAID) to reflect a decade of growth, and to recognize the expanded role of the Center in areas of academic planning, program reviews, strategic initiatives and faculty relations. The Center is located in McNally Main (MM202), Phone: (902) 420-5088; Fax (902) 420-5015 or visit: www.smu.ca/administration/caid

Information Technology Systems and Support

Information Technology Systems and Support (ITSS) is pleased to provide Saint Mary's with a technologically advanced environment, lending its support to a variety of services spanning the campus. ITSS is responsible for the campus network serving student residences and over 1,500 computer workstations in computer labs, classrooms, and faculty and administrative offices on campus. ITSS manages SMUport, the university's web portal, from which students can access SMU email, get connected with the campus community, and obtain on-line course information through course tools and WebCT. The department also oversees classroom media technology, equipping lecture rooms with the latest multimedia presentation tools. Telephone and voice mail services are provided to students living in residence, allowing them to benefit from a competitive long distance calling rate. Students may take advantage of centralized support offered by the ITSS Help Desk in person, by telephone or email, or through the department-provided documentation.

Eight general access computer labs and several departmental labs across campus hold over 350 workstations. Some general access labs are open 24 hours per day, 7 days a week. Lab security provided by Campus Security through a closed circuit TV security system and a staffed 24 hour security desk. In the labs, students and faculty can find a wide range of software for their purposes including statistics, graphics, charting and map drawing, CAD, financial and mathematical applications, and business productivity suites. Labs are also equipped with several types of printers for draft and final printing, and access to colour printers is available. Lab assistants are on hand through the day and evening during the academic year to aid students. The University's Evergreen program allows computer systems to be replaced on a scheduled basis to keep technology current. As a result, all computer lab, classroom and office systems are less than 3 years old.

Technology is easily accessible to students in many common areas with wired network access. Wireless internet access is also available in many locations on campus, including all student common areas.

The primary desktop technology supported is Microsoft Windows based but Apple Macintosh is also supported. Desktop systems connect to a variety of file, web, email, and other servers using a mix of Windows, Linux, Sun Solaris, OpenVMS and AS400 operating systems.

For further information, please phone ITSS at (902) 420-5480, or email at FrontDesk@smu.ca.

International Activities Office

The internationalization of the Saint Mary's campus, which will help prepare our students and our community to meet the challenges of globalization, is the primary focus of the International Activities Office. The IAO provides support to the University community to move this process forward.

This support takes a variety of forms, including identification, procurement and management of international development and training programs, both on and off campus; the promotion and facilitation of student mobility; and liaison with Canadian and international government bodies, non-government organizations, and international agencies. The International Activities Office works with faculty, staff and students to help them explore a range of opportunities to expand their international learning.

The International Activities Office is located in The Oaks, 5920 Gorsebrook Avenue, and can be reached at 902-420-5177, fax: 902-420-5530, and e-mail: international.activities@smu.ca

Observatory

The Rev. Michael W. Burke-Gaffney Observatory at Saint Mary's University was opened in 1972. It is named for the late Professor Emeritus, Rev. Michael W. Burke-Gaffney, S.J., astronomer, engineer, and educator, who was at Saint Mary's University from 1940 until his death in 1979.

The revolving aluminium dome measures five metres in diameter and rests upon an elevated pad atop the 23-storey academic-residence building. The Observatory's 0.4-metre reflecting telescope, among the most powerful in Eastern Canada, is used primarily for student instruction. The telescope is controlled by a computer located in the adjoining observer's office. A second computer operates an electronic camera capable of recording stellar spectra, or images of star clusters and galaxies. You can learn more about the Observatory by contacting its Web site at <http://apwww.smu.ca>.

The Observatory is open to the general public for viewing sessions on the first and third Saturday evening of every month, weather permitting. Further information is available from the Department of Astronomy and Physics, or by telephoning 902-496-8257.

Office of Conflict Resolution

To ensure and facilitate the pursuit of knowledge, Saint Mary's University is committed to the provision of an equitable environment for work and study for all University Community members. Sexual harassment/sexual assault can seriously undermine the fulfillment of this primary goal by destroying the trust that is necessary for personal and educational freedom. In 1986, the Senate established procedures to discourage the presence of sexual harassment through education, and to investigate and resolve complaints of sexual harassment expeditiously and with fairness to all concerned. In 1995, Senate revamped this policy to include Sexual Assault.

Saint Mary's provides an advisory service to all members of the University Community. The Office of the Conflict Resolution Advisor is located on the fourth floor of the Students Centre. The Advisor is available by appointment by calling 420-5113.

The Advisor is available to answer all inquiries concerning sexual harassment and to provide educational programs for all campus groups. The Advisor is also available to consult with concerned individuals on a confidential basis, to suggest and explore a number of informal problem solving methods. She is also able to mediate formal disputes, and will advise complainants and respondents of correct procedures if involved in an investigation of sexual harassment. All inquiries are welcome.

Patrick Power Library

The Patrick Power Library is the main research centre at Saint Mary's, dedicated to meeting the needs of the University's students, faculty and staff. It houses approximately 400,000 books, journals, microforms, rare books and special collections. In addition, we can now offer Saint Mary's researchers 24/7 access to more than 16,000 scholarly journals in the arts, business and science disciplines, either on-campus or remotely, via our web site. To facilitate this access, the library makes 60 computers available for student use and it is also part of the university's wireless environment for those with a laptop. It is also possible to borrow laptops for use in the library.

Because of its membership in the Novanet Library Consortium, Saint Mary's students can borrow from the collections (over two million items) of other universities in the Halifax region and throughout Nova Scotia. As well as in-person borrowing, students can also avail themselves of a specialized service which will deliver books or photocopies of journal articles free of charge from any of these libraries within a few days. The library is also home to the Ferguson Library for print-handicapped students and the University Archives, the official repository of historical documents related to the University and its areas of research.

In the library you will find knowledgeable staff who are eager to help you get the most out of its resources. Reference service is available more than 90 hours per week during each semester. An extensive information literacy program offers classroom or individual instruction for

students to help them learn how to use both traditional and electronic information sources. Food and drinks are permitted in the library and there are quiet study areas as well as separate rooms for group work, helping to create an informal and welcoming space where you can do your research in a variety of environments. During semester the library is open seven days a week, most evenings until 11pm.

For more information, phone (902) 420-5544 or visit www.smu.ca/library.

Saint Mary's University Students Association, Inc.

Incorporated in 1966, the Saint Mary's Students' Association (SMUSA) is the official representative organization of the students of Saint Mary's University. All registered full and part-time students, paying student fees, are members of this organization.

The goal of the Association is to promote and represent the interests of its membership. Through its services, representation, and advocacy, SMUSA works with the University on academic issues, lobbies government through its affiliation with provincial and federal organizations, and ensures the coordination of artistic, literacy, educational, social and recreational activities intending to promote the highest quality of life for Saint Mary's students.

The Mission

The Association strives to maximize the positive university experience for its students and provide assistance in overcoming any challenges they may face. As "Students working for Students", the Association makes an ongoing commitment to maintain open communication with its members while providing valued services, dedicated representation, and effective advocacy.

The Vision

Saint Mary's University Students' Association shall ensure the highest quality of life for each and every student at Saint Mary's University.

The Association is governed by an 18 member Students' Representative Council, which includes 5 Executive members (President, VP Internal Affairs, VP Academic, VP External Affairs and VP Finance & Operations) and 13 Councilors elected by the student body. Through its various service departments, SMUSA also employs over 100 student staff. All students are encouraged to get involved by running for Council, seeking employment, or volunteering in the many other capacities of SMUSA.

Although SMUSA is the official representative body of the students of Saint Mary's University, there are also many clubs and societies and other organizations students can get involved with that are governed and funded by the Association.

In addition to involvement opportunities, SMUSA also offers many services that students can take advantage of. We operate the Gorsebrook Lounge and Liquor Services; the Information Desk; our Husky Patrol Safe Drive program; the

Marketing and Advertising Department; the Events and Promotions Department and we have a Volunteer Coordinator for anyone seeking volunteer opportunities as well. We produce the Yearbook, coordinate Orientation Week and Winter Carnival activities along with other programmed events throughout the year. One of SMUSA's most significant events is the annual Charter Day Awards Night which honours and recognizes those students, student groups and faculty who have made outstanding contributions to student life and teaching throughout the year. SMUSA, Inc. also offers a U-Pass for the transit system of the area as well as a student Health Plan. Contact SMUSA Inc. for further information at www.smusu.ca or call 496-8700.

SMUSA places a strong emphasis on ensuring the academic success of its members. In mid-November, a day of advising known as the **Academic Fair** brings together as many as possible of the University's services which seek to aid students in making wise and prudent decisions relating to their educational and career ambitions. This event is free and open to all students who would prefer to talk to a real person rather than read their departmental "FAQ's".

For more information, please visit SMUSA's offices located on the 5th floor of the Student Centre; contact SMUSA by phone at (902) 496-8700; or visit our website at www.smusu.ca.

Medical Insurance (Student Health Plan)

The Saint Mary's University Students' Association coordinates and provides a Health Plan for all full time Canadian students and all International students each year. The policy year begins September 1st and ends August 31st. The Students' Association, in consultation with the Health Plan Committee, administers the plan through the Student Health Plan Office (Room 524 – 5th floor Student Centre). This program is compulsory for all full time Canadian students and all International students and students are assessed the medical fee upon registration, however students with comparable and alternative coverage may opt out of the plan. Students can opt out on-line at <http://smuport.smu.ca> or by visiting the Health Plan Office and signing a medical waiver form and providing proof of their own coverage. The deadline to complete a waiver form is always one week after the deadline to add/drop courses in the fall and winter terms. The opt out deadline for academic year 2008/2009 will be September 20, 2008 for first semester enrolments and January 24, 2009 for second semester enrolments. Canadian students who were part time in the fall semester but register as full time in the winter semester are automatically enrolled into the Health Plan beginning in January. Inquiries about the opt out process can be made by calling 496-8754.

1. Full-Time Canadian Students and Non-Canadian Students

An Extended Health Care Plan arranged by the Students' Association, in consultation with the Health Plan Committee, is compulsory for all full-time Canadian students (3 or more courses), and all full and part time registered Non-Canadian students. Extended Health Care can be defined as medical coverage supplementary to any provincial or provincial equivalent medical coverage and

include benefits such as prescription drugs, physiotherapy, massage therapy and eye exams.

a.) Full-Time Canadian Students

Full-time Canadian students should have coverage by, or have access to, provincial hospital and medical care. It is the responsibility of the student to ensure that he or she is in good standing with his/her provincial health care system. For premium amounts, see Section 6 of this *Calendar*.

b.) Non-Canadian Students

The Student Health Plan coverage for Non-Canadian students consists of two parts:

The first part being the Basic Health or Provincial Health Care coverage equivalent (e.g. hospital care and surgical care) and the second part being the Supplemental Health coverage (e.g. prescription drugs and physiotherapy).

Students not covered by Provincial Health Care will be insured under the Student Health Plan's comprehensive health and hospital coverage. If Non-Canadian students have provincial health insurance (such as MSI) they may waive that portion of the Health Plan by October 31st by visiting the Health Plan Office (Room 524 Student Centre) and completing a waiver form. Non-Canadian students who waive the provincial health care portion will still be covered under the supplemental portion of the Health Plan unless they have waived that portion as well.

For premium amounts, see Section 6 of this *Calendar*. For information on how to be eligible for Nova Scotia Provincial Health Care (MSI) please call MSI at 902-468-9700.

c.) Family Coverage (Canadian and Non-Canadian students)

Students covered by the Students' Association Health Plan may add their spouse and eligible dependents to the Health Plan by completing an "Application for Family Coverage" form. These forms are available on the website <http://www.studentwise.ca/downloads.aspx> or at the Student Health Plan Office (Room 524 Student Centre) and must be completed by the September 20, 2008 for fall semester enrollment or by January 24, 2009 for eligible winter semester enrolments.

For premium amounts see Section 6 (Financial Information) of this calendar.

2. Part-Time Canadian Students

Part-time Canadian students are not eligible for the Students' Association Health Plan coverage.

For additional information on medical premiums, benefits, waivers, claims processing, family coverage and general inquiries please contact the SMUSA (Students' Association) Student Health Plan Office (Room 524 Student Centre); Tel: (902) 496 8754 - Email: healthplan.smusa@smu.ca

U-Pass

The U-Pass is a special transit pass that provides full-time students with unlimited access to Metro Transit's buses and ferries for the academic year, from September through April.

This is a mandatory program for all full-time students. Part-time students are not eligible. There is no opt-in or opt-out for this program.

Student Services

At Saint Mary's University the Department of Student Services includes the Office of the Director, Chaplaincy, Counselling Services, Career Services, Atlantic Centre of Support for Students with Disabilities, Financial Aid & Awards, Health Services, First Year Advising, Black Student and Aboriginal Student Advising, Student Employment Centre, University Residences and Food Services, International Student Advising, and Child Care Services. Student Services provides a wide range of services and programs that support student development. A full description of all services can be viewed on our web site: www.smu.ca/students

Chaplaincy

Because of its traditional commitment to Christian education, Saint Mary's University continues to emphasize personal and social values derived from the experience of Christian civilization. Its students and educators represent a diversity of cultural and religious backgrounds and the University encourages participation in activities related to all faiths.

The Roman Catholic chaplaincy is found in Room 145 of the Loyola Residence; weekday Mass is provided in the Loyola Chapel. In addition, a special University Mass is held every Sunday in Canadian Martyrs' Church located on the edge of campus. Other faith services are available in nearby churches, synagogues, and mosques.

Pastoral guidance is available from the University Chaplain and from clergymen of all major denominations.

Counselling Services

Saint Mary's University Counselling Services staff provide free, professional counselling services to full and part-time Saint Mary's University students using a short term therapy modelo (up to 8, 50 minute sessions). To make an appointment, students may drop by the Office (4th Floor, Student Centre) between 9:00 a.m. and 5:00 p.m., Monday to Friday, or call 420-5615. Students may come to Counselling Services on their own, or they may be referred by a member of the University or outside community. Counselling is not an emergency walk in clinic and all emergencies will be referred to the local emergency department.

A variety of services are offered through Counselling Services. While some students request counselling to deal with personal problems, others to improve their study skills, or define their career goals. The following describe the various services available through Counselling.

Personal Counselling

Students are seen individually for assistance with a range of personal problems including anxiety, depression, difficulties in relationships, family conflicts, sexual orientation, poor concentration, drug and alcohol abuse, eating disorders, and other issues. Both male and female Counsellors work with

students to help them feel better about themselves and develop healthy ways of achieving their goals.

Educational Counselling

Educational counselling is useful for students on academic probation or those who need advanced study skills education.

Career Services

Career Services provides access to services and resources that will assist students in making decisions throughout their academic career. Career Services will work with students individually or via the Career Development Centre to discuss identified areas of concern. Various career assessment instruments are used to help students better understand themselves and determine their future, with respect to academic and career related goals. All full and part time students of Saint Mary's University can access Career Services.

Career Services is located on the 4th floor of the Student Centre and we are open from 9 a.m. to 4:30 p.m. (Monday – Friday). The Career Development Centre is located on the 3rd floor of the Student Centre. To schedule an appointment please contact us at 420-5615.

The Student Employment Centre

The Student Employment Office serves both student and employer needs. It sources, builds, and maintains important relationships with employers throughout the region, across the country and around the globe so that students can access a myriad of job/career opportunities from casual and part time, summer and internships through career opportunities. Students learn where the opportunities are and how to access Labour Market Information (LMI). The Student Employment centre facilitates a major career fair each year, in early fall, aimed at graduating students and for any student who wants to learn as early as possible how to network, and who wants to learn more from career professionals about the opportunities they may access upon graduation.

The Centre also offers an annual summer job fair, and other important networking opportunities including diversity networking events, where students can expand their knowledge and confidence of how to prepare for a career, and where they can meet potential employers.

The staff is adept in addressing students' preparation needs and offer guidance about how to best prepare for entry into the workforce. Staff is also skilled in assisting students who face employment challenges.

The Student Employment Centre is located on the 4th floor of the Student centre and is open year round, Monday to Friday. Winter hours: 9am – 4:30 pm. Summer hours: 9am – 4 pm. Services are open to all students and to alumni. Inquiries via, sec@smu.ca or at 902 420-5499.

Student Success Coordinator

The goal of the **Student Success Coordinator** is to provide for students assistance and direction related to achieving personal and academic success at University. This includes organizing programs and events to meet the needs of

students, whether it involves managing the transition into University or addressing academic challenges.

The Coordinator oversees **F.Y.I.** (First Year Initiative), which is structured to help new students become familiar with the services and resources available to them and to develop University-level academic skills. This program provides an opportunity for new students to become comfortable on campus, confident in their academic abilities, learn a variety of success strategies, and meet other students and members of the campus community.

S.T.E.P.S. (Strategies Toward Establishing Personal Success) is a comprehensive program which is offered in partnership between Student Services and the Deans of the Academic Faculties. The Student Success Coordinator organizes regular weekly workshops for students in the program that focus on building skills related to personal development, academic excellence, and future career planning. Workshops are student-centered and involve presentations, active learning, and group work.

The Student Success Coordinator's office is located in Room 418 of the Student Centre.

Black Student Advisor/Aboriginal Student Advisor

Separate Advisors are available during the academic year to Black and Aboriginal Students studying at Saint Mary's University. Fellow students provide support, education and resources to students seeking information and referrals.. Both Advisors work to educate the University community on cultural issues, promote understanding among groups and create awareness in all students.

Atlantic Centre of Support for Students with Disabilities

The Atlantic Centre, located on the third floor of the O'Donnell-Hennessey Building, assists in transforming the campus into an environment that is accessible to all students. Services through the Atlantic Centre consist of a variety of supports and facilities designed to enhance the educational experience for students with disabilities attending Saint Mary's.

The Atlantic Centre staff are qualified to provide counseling services to students with disabilities ranging from personal to academically related issues. They are also available to faculty members for advice and intervention on behalf of faculty or students.

A variety of reading enhancement and other technologies along with a knowledgeable staff enable students with motor impairments, Learning Disabilities and Sensory deficits to gain access to academically related materials that most students take for granted.

Visual Language Interpreting and the use of augmentative technologies offer a Total Communications approach for those students who are Deaf or Hard-of-Hearing.

The **LIBERATED LEARNING PROJECT** is a revolutionary approach in the use of Speech Recognition. This world first initiative uses Speech Recognition in the classroom for real-time display of text and follow-up production of detailed and

accurate class notes for those students who, for physical or sensory reasons, cannot take notes for themselves. Further information on the LIBERATED LEARNING PROJECT is available on the web at: www.liberatedlearning.com.

Traditional Note Taking with No Carbon Required paper is also provided by a dedicated group of student volunteers who are administered through the Atlantic Centre.

The Atlantic Centre, the Fitness and Recreation Centre, the Ferguson Tape Library for Print-handicapped Students, and other features such as accessible buildings, demonstrate the commitment of Saint Mary's to a totally accessible educational experience.

Please visit us on the web at: www.stmarys.ca/administration/student_services/atlcentr/atlantic.html. Alternatively, you may call us at (902) 420-5452 (Voice)/(902) 425-1257 (TTY).

Financial Aid and Awards Office

Please refer to Section 5 of this *Academic Calendar* for further details on the following services offered through the Financial Aid & Awards Office.

- **Scholarships and Bursaries**
- **Provincial Government Student Aid Programs**
- **Budget Assistance**
- **International Students** (cost of education letters)

Student Health Services

Student Health Services is located on the 4th floor of the Student Centre and is a scent-free clinic. Students are provided with the same services they would receive from their family doctor. Blood work is done by the nurse by appointment. Confidentiality is guaranteed.

The staff consists of one RN/ Manager, five doctors, and two secretaries. Appointments are required and are available from 9am – 12 noon and 1:30 to 4:30p.m., Monday to Friday. Please call 420-5611 to book an appointment. After hours, the nurse can be reached for medical advice or information at 471-8129. For a medical emergency only, please go directly to the Halifax Emergency Department at the QEII (new Halifax Infirmary), 1796 Summer Street. International students should call Jane at 471-8129 before they go to the Emergency Room if they are unsure that their condition requires emergency care.

International Centre

The International Student Centre provides information and referral services in response to questions or problems international students may encounter during their adjustment to a new country and university. The Centre organizes orientations and social programs for international students. International students with questions, financial concerns, or immigration problems are encouraged to meet with the Centre staff. The International Centre, located on the 3rd floor of the Student Centre, houses the office of the Manager of International Student Services, the International Student Advisor and provides a comfortable meeting space.

Manager of International Students Services : Alana Robb
Tel: 902-420-5436
International Student Advisor: Ysaac Rodriguez

Tel: 902-491-8692

Email: international.centre@smu.ca

Web site: www.smu.ca/administration/international

University Residences

The University does not require students to live in residence; however, it highly recommends residence life and encourages all first year students to reside on campus. Living in residence puts you at the centre of University life. Friends, activities, advice and support are right there on your doorstep. Advantages include no damage deposits, no hook up fees; nor monthly power, phone cable or internet charges. Residence students sign an eight month lease so there is no need to sublet during summer months. Saint Mary's University is committed to providing a living environment that is comfortable, secure and conducive to the academic and personal growth of students. The residences are much more than a place to eat, sleep and study; they are a great place to develop lasting friendships and share social and educational activities with people of different backgrounds.

There are three residences. The Edmund Rice Building is coed and has 17 floors of apartments, each with two double bedrooms, kitchen, bathroom and living room. Students in Rice can either opt for a meal plan or cook for themselves. The Loyola Residence houses men and women and has 19 floors with single and double rooms in suites for six with shared bathrooms. Students must purchase a meal plan. Vanier House is a co-ed residence which provides accommodation in suites containing two double and two single rooms with shared washrooms. There is a common lounge on each floor. Residents must purchase a meal plan. All residence rooms have basic furniture and drapes; students need only bring the personal items that will turn a room into a home. All rooms are wired for high speed internet, cable, and telephones (included in fees)

Family/Graduate Housing (Ignatius Loyola Residence)

One and two bedroom unfurnished apartments are available for student families on a 12-month lease basis. These are available to married students, single parents, graduate and mature students.

There are also Senior Suites which are designed for graduates and students in their senior year who want the convenience of living on campus with more privacy. These suites feature private, lockable single bedrooms in an apartment-like unit with a self-contained bathroom and kitchenette. They include the latest technological upgrades. Further information is available from the Director, Residence Department.

Application for Residence Accommodation

Further information and applications for residence are available from the office of the Director, Residence Department, or the Residence Life Office, or on the Residence website at <http://www.smu.ca/administration/resoffic/welcome.html>.

Fees for accommodation in each of these residences and for various food plans are specified in the Financial Information section of this Calendar.

Off-Campus Housing

Saint Mary's University Off-Campus Housing Office is a resource office that assists students who do not want to live on campus or who have been unable to find a place in residence. The office is designed to help students find privately-owned accommodations.

The Off-Campus Housing Office provides centralized information on a searchable database with available housing in the Halifax metro area, which includes apartments, shared accommodations, rooms, condos, and houses. Information regarding the Nova Scotia Tenancies Board, a walk-through of the standard NS lease, frequently asked questions regarding roommates, landlords, setting-up utilities, a list of streets within 15 minutes walking distance of Saint Mary's University and more.

Off-Campus Housing website: <http://www.smu.ca/och>. You can search for accommodations as well as list your own place.

The Off-Campus Housing Office is a resource centre only, and cannot arrange, inspect or guarantee accommodations. Students are responsible for arranging their own housing; however, we can assist you in your search for suitable housing.

Food Service

The University provides a complete food service program during the academic year. Food Service outlets include the Residence Cafeteria, Student Centre Cafeteria, To Go Store, Just Us coffee, and two Tim Horton outlets.

Meal Plans

Residents of Vanier House and Loyola Residence are required to purchase a meal plan.

All You Care To Eat

Students can choose from four meal plan options. The Freedom Plan offers students unlimited access to the Residence Dining Hall from 7:30am to 7:30pm Monday to Friday and 9:00 am to 7:30pm on weekends and holidays. Students can eat as much and as often as they like. Students may also choose a 14 Meal per week plan, a 400Meal block plan or a 10Meal plan. Flex Dollars are included in all but the 400 Block plan.. These Flex Dollars can be spent at other food service locations on campus. Students can also purchase additional Flex dollars from the Food Service Office

Fees for Meal Plans are specified in the Financial section of the Calendar. Meal Plan features are reviewed annually in consultation with students and hence may vary from year to year.

Information describing the Meal Plans is sent to Residence students during the summer .Inquiries may be directed to the Food Service Office at 420 5599 or 420 5602 or the Food Services web site.

Child Care Services

Childcare services are available from two sites on campus, and one site located a short distance away. The newest campus site provides care for twenty -three children, six

months to two years of age. This facility is located in the hallway between Loyola and Rice. The Rice Residence facility is located at the base of this residence and caters to children two to four years of age. There are thirty-six spaces at this site. The off-campus site, located on Ogilvie Street, provides care for forty-five children , eighteen months to five years of age.

All programs are licensed and inspected regularly by fire, health and Early Childhood Development Services officials. Programs are developmentally appropriate, child centred and delivered by qualified Early Childhood staff. The Centre employs a Special Needs Resource Coordinator to provide support to children and families with special needs.

A limited number of subsidized seats are available to families who qualify. Priority is given at all locations to Saint Mary's University students, staff and faculty.

Child care services are provided by Point Pleasant Child Care Centre, a non profit organization. Information may be obtained by contacting the Executive Director at 422-2293 or by visiting the childcare centre's web site at www.ppccc.ca.

Teaching English as a Second Language (TESL) Centre

English as a Second Language Programs

Many students who speak English as a second (or additional) language begin their studies at Saint Mary's in the TESL Centre's Intensive English Program (IEP). The IEP is accredited by the prestigious Languages Canada association and offers a range of full-time study options to meet individual needs such English for Academic Purposes (EAP), English for Personal and Professional/Practical Communication (EPPC), a One-month Immersion program (IMM) and the University Bridging Program (UBP). Students may also select from a variety of part-time evening ESL programs.

English Language Support Services for Undergraduate and Graduate Students

Through the office of the Coordinator of ESL Support Services (902-491-6266, email: eslsupport@smu.ca), the TESL Centre offers a variety of EAP and study skills workshops, on-line resources, drop-in clinics and e-mail support services to Saint Mary's students who speak English as an additional language.

Corporate and Group Training

In addition to regularly-scheduled programs, the TESL Centre provides custom-designed general language and culture or discipline specific language programs for individuals, companies and educational institutions. In addition to the language component, programs may include academic, social, and cultural components and provision for either on-campus residence or homestay accommodation. Interaction with the surrounding English-speaking community is emphasized in all programs so that students feel at home in their new environment.

Teaching English as Second Language Programs

The TESL Centre also offers a certificate course and diploma program in Teaching English as a Second or Foreign Language for those who wish to gain knowledge and skills in the field of teaching ESL or EFL. Students in these programs gain practical experience working with students learning English in the TESL Centre. The diploma program is recognized by TESL Canada.

English Language Testing

The TESL Centre is an official test site for the Canadian Test of English for Scholars and Trainees (CanTEST) which is offered four times yearly.

Conversation Partner/Language Exchange Program

Saint Mary's students who wish to learn more about and practice cross-cultural communication skills are welcome to join this program which matches them with students learning English in the TESL Centre. Students learning a foreign language on campus also find this a wonderful way to exchange conversation and fluency practice.

The TESL Centre is located at 980 Tower Road and can be reached at 902-420-5691; fax: 902-420-5122; and email: tesl@smu.ca. More information on TESL Centre programs can be found at www.smu.ca/academic/tesl.

University Security

The maintenance of order, conduct, and safety on campus is the responsibility of University Security. Under the supervision of the Manager, University Security, this department includes full-time security officers, a contracted force of Canadian Corps of Commissionaires and Campus Security (student component) composed of full-time Saint Mary's University students. As well, in partnership with Saint Mary's University's Students Association, a drive home service, the Husky Patrol, is provided to the University Community. Interested students may apply for a position with University Security by forwarding a resume to the office of the Manager, University Security.

The student component of University Security provides students with an opportunity to obtain valuable experience in the field of security and people management skills, as well as providing funds to defray their education costs.

The Manager, University Security, can be contacted at 902-420-5578; Fax: 902-491-8641; Email: bill.promaine@smu.ca

Writing Centre

The Writing Centre promotes and supports the development of academic literary skills by all Saint Mary's students. Students can receive one-on-one help for writing assignments at any stage of the writing process or attend workshops on specific elements of writing. The Writing Centre also provides consultation and support to faculty, including regular workshops on pedagogical methods and writing curricula.

The Centre is staffed by a Director, an Office Coordinator, and trained Writing Assistants. Free, scheduled appointments and workshops to develop writing and critical thinking skills are available to all students. In addition, the Centre collaborates with other Saint Mary's departments and works with the community through outreach programs designed to promote literacy and communication skills.

The Centre is located in the Burke Building, Room 115. Current hours and services are listed at www.smu.ca/academic/writingcentre. Staff can be reached by emailing writing@smu.ca or calling 902-491-6202.

Women's Centre

The aim of this Centre is to educate the University community about women's issues and feminism and to celebrate women through ongoing initiatives and special events. The Centre aims to provide material resources and service referrals to students, staff and guests of the University, a safe space for women and a space for women to organize on behalf of a variety of political and social causes. Further, the Saint Mary's Women's Centre aims to advocate with and on behalf of women on campus pertaining to a diversity of contemporary issues and challenges.

The Centre is located in room 526 of the Student Centre.



Stephen Kelly, President of the Saint Mary's University Alumni Association presents the Reverend William A. Stewart, S.J., Medal for Excellence in Teaching to Dr. Shelagh Crooks, Associate Professor of Philosophy, at the Fall 2008 Convocation ceremony.

Academic Officers and Faculty
Officers and Faculty
Emeriti/Emerita
Administrative Officers
Awards to Faculty and Staff

Section
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Academic Officers and Faculty

Academic Officers

Vice-President, Academic and Research

Murphy, Terrence, B.A. (Saint Mary's), M.A. (Fordham), Ph.D. (Newcastle-Upon-Tyne), Professor of Religious Studies

Faculty of Arts

Enns, Esther E., B.S.L. (with high distinction) (Laurentian), M.A. (McMaster), M. Ed., Ph.D. (Toronto), Dean and Professor of German and Linguistics

Naulls, Donald J., B.A. (Hons.), M.A. (Wilfrid Laurier), Ph.D. (York), Associate Dean and Associate Professor of Political Science

Sobey School of Business

Wicks, David, B.Comm. (Carleton), M.B.A., Ph.D. (York), B.A. (Dalhousie), Dean and Associate Professor of Management

Gregory, Janet, B.A.Sc. (Waterloo), B.Ed., M.Sc., Ph.D. (Dalhousie), Associate Professor of Information Systems and Acting Associate Dean, Sobey School of Business.

Fullerton, Gordon L., B.Comm. (Mount Allison), M.B.A. (Dalhousie), Ph.D. (Queen's), Associate Professor of Marketing and Acting Associate Dean-Masters Programs

Faculty of Science

Butler, Malcolm N., B.Sc. (Hons.) (McMaster), Ph.D. (California Institute of Technology), External Director of Engineering, Professor of Astronomy and Physics and Dean

Smith, Steven, B.A. (Hons.) (Bishops), M.A., Ph.D. (Queens), Associate Professor of Psychology and Associate Dean

Faculty of Education

Enns, Esther E., B.S.L. (with high distinction) (Laurentian), M.A. (McMaster), M. Ed., Ph.D. (Toronto), Acting Dean and Professor of German and Linguistics

Faculty of Graduate Studies and Research

Vessey, J. Kevin, B.Sc. (Hons.), M.Sc. (Dalhousie), Ph.D. (Queens), Dean and Professor of Biology

Faculty

Abdul-Masih, Marguerite, B.A. (Bryn Mawr College), M.A., Ph.D. (Johns Hopkins University), M.Div. (Saint Michael's College, Toronto), S.T.L. (Regis College, Toronto), Ph.D. (Saint Michael's College/Regis College, Toronto), Associate Professor of Religious Studies

Agbeti, Michael, B.Sc. (Hons.) (Ghana), M.Sc. (Brock), Ph.D. (Queens), Adjunct Professor of Biology

Ahooja-Patel, Krishna, Ph.D., Adjunct Professor in International Development Studies

Akbari, Ather H., B.Sc., M.B.A. (Karachi), M.A., Ph.D. (Simon Fraser), Professor of Economics

Alfoldy, Sandra, B.F.A. (Victoria), M.A., Ph.D. (Concordia), Adjunct Professor of Women and Gender Studies

Al Zaman, Ashraf, B.S., B.A., M.A. (Ohio University), M.Sc. in Eco, Ph.D. (KGSM, Purdue), Assistant Professor of Finance

AmirKhalkhali, Saleh S., B.A. (Shiraz), M.A., Ph.D. (Dalhousie), Professor of Economics

Amirkhalkhali, S. Samad, B.Sc. (National University of Iran), M.A., Ph.D. (Dalhousie), Associate Professor of Management Science

Anderson, Bruce, B.Sc. (Hons.) (Dalhousie), B.A. (Distinction) (Mount Saint Vincent), M.T.S. (Harvard), LL.B. (Dalhousie), Ph.D. (Edinburgh), Associate Professor of Commercial Law

Avdulov, Alexandre, B.A., M.A. (Moscow State U), Ph.D. (Russian Academy of Sciences), Assistant Professor of Japanese and Asian Studies.

Ansell, Robert N., B.A. (Cambridge), Ph.D. (Glasgow), Assistant Professor of Philosophy

Ansong, Granville, B.A. (Hons.) (Ghana), M.A. (Queen's), M.Acc. (Waterloo), Ph.D. (Queen's), Assistant Professor of Accounting

Arya, Pyare L., B.A., M.A., Ph.D. (Delhi), Professor of Economics

Asp, Elissa, B.A., M.A., Ph.D. (York), Associate Professor of English and Coordinator of Linguistics Program

Attig, Najah, B.A. (I.H.E.C.), M.B.A., Ph.D. (Laval), Associate Professor of Finance

Austin, Roby A., B.Sc., M.Sc., Ph.D. (McMaster), Assistant Professor of Astronomy and Physics

Aydede, Yigit, BS (Istanbul U), MBA, Ph.D. (U of Delaware), Assistant Professor of Economics

Bain, Keith, Adjunct Professor in Finance, Information Systems, and Management Science.

Bannerjee, Rohini, B.Sc., MA (Dal), Ph.D. (Western), Assistant Professor of French

Balaji, Katlai, Ph.D., Adjunct Professor of Astronomy and Physics

Barber, Colleen A., B.Sc. (Nons.) (Guelph), M.Sc. (Manitoba), Ph.D. (Queen's), Associate Professor of Biology and Coordinator of Forensic Sciences

Barbosa, Rosana, B.A. (Universidade Santa Ursula), M.A., Ph.D. (Toronto), Associate Professor of History

Barclay, Alison E., B.A. (Alberta), M.A., Ph.D. (Toronto), Assistant Professor of Classics

Barr, Mark, BA, LLB (U of Victoria), M.Phil (Oxford), Ph.D. (Vanderbilt U), Assistant Professor of English

Barrett, L. Gene, B.A. (King's College), M.A. (Dalhousie), D.Phil. (Sussex), Professor of Sociology and Criminology

Bartlett, Brian, B.A. (New Brunswick), M.A. (Concordia), Ph.D. (Montreal), Professor of English

Bateman, David H., B.B.A. (New Brunswick), M.B.A. (Dalhousie), C.A., Associate Professor of Accounting

Beaubien, Louis, BSc, BA (Dalhousie), M.B.A. (Saint Mary's), Ph.D. (Western Ontario), CMA, Assistant Professor in Accounting

Beaudoin-Lietz, Christa, B.A., M.A., Ph.D.(Memorial), Assistant Professor of Anthropology and Linguistics

Beaulé, Sophie, B.A., M.A., Ph.D. (McGill), Associate Professor of French

Beaupré, Charles P., B.A., M.A., Ph.D. (McGill), Assistant Professor of Japanese, Chinese and Asian Studies

Beckford, Sharon M., B. Admin. Studies, B.A. (Hons.), M.A., Ph.D. (York), Assistant Professor of English

Bell, Sandra J., B.A., M.A. (Western Ontario), Ph.D. (Toronto), Associate Professor of Sociology and Criminology

Bello, Walden, B.A., (Ateneo de Manila), M.A., Ph.D. (Princeton), Adjunct Professor in International Development Studies

Bennett, Philip, B.Sc. (Simon Fraser), M.Sc., Ph.D. (British Columbia), Adjunct Professor of Astronomy and Physics

Bernard, Paul R., B.A. (Providence College), M.A.T. (Assumption College), Ph.D. (Pennsylvania State), Associate Professor of French

Bjornson, Susan, B.Sc. (Hons.) (Guelph), Ph.D. (Alberta), Associate Professor of Biology

Black, David, B.A. (Hons.) (Trent), M.A., Ph.D. (Dalhousie), Adjunct Professor in International Development Studies

Boabang, Francis, B.A., M.Sc. (Ghana), M.A. (Saskatchewan), Ph.D. (Simon Fraser), Professor of Finance; Coordinator of Master of Finance Program

Bonnycastle, Kevin D., B.A. (Simon Fraser), M.A. (Toronto), Ph.D. (Simon Fraser), Assistant Professor of Sociology and Criminology

Borras, Saturnino M., B.A. (Santo Tomas. Manila), M.A., Ph.D. (ISS, The Hague). Associate Professor and Canada Research Chair in International Development Studies.

Bowlby, Paul W. R., B.A., M.A., Ph.D. (McMaster), Professor and Chairperson of the Department of Religious Studies

Boyle, W. Peter, B.Sc., Ph.D. (Queen's, Belfast), Professor of Engineering

Brodgers, Hugh, B.Sc. (Hons.) (Acadia), M.Sc. (Memorial University of Newfoundland), Ph.D. (New Brunswick), Chairperson and Associate Professor of Biology

Brown, Blake, BA (Acadia), MA (Toronto), LLB (Toronto), M.A. (York), Ph.D. (Dalhousie), Assistant Professor of History

Butler, Malcolm N., B.Sc. (Hons.) (McMaster), Ph.D. (California Institute of Technology), Professor of Astronomy and Physics and Dean, Faculty of Science

Byers, Michele, B.F.A. (Concordia), B.S.W., M.S.W. (McGill), Ph.D. (Toronto) Associate Professor of Sociology and Coordinator of Women and Gender Studies Graduate Program

Cameron, James E., B.A. (Queens), M.A., Ph.D. (York), Associate Professor of Psychology

Catano, Victor M., B.S. (Drexel), M.S., Ph.D. (Lehigh), Professor and Chairperson of the Department of Psychology

Cauville, Joelle, M.A. (Paris), M.A., Ph.D. (British Columbia), Professor of French

Chamard, John C., B.A. (Saskatchewan), M.B.A. (Harvard), Ph.D. (New England, New South Wales), Professor of Management and Coordinator of Master of Management of Co-operatives and Credit Unions Program, Professor of International Development Studies

Charles, Tony, B.Sc. (Hons.) (Carleton), Ph.D. (British Columbia), Professor Management Science, Environmental Studies and International Development Studies

Cheng, Thomas T., B.Comm. (Sir George Williams), M.B.A. (Concordia), Ph.D. (Missouri), C.A., C.I.A., Professor of Accounting

Christiansen-Ruffman, Linda, B.A. (Hons.) (Smith College), Ph.D. (Columbia), Professor of Sociology

Clarke, David, B.Sc., M.Sc. (Queen's), Ph.D. (New Mexico), Professor of Astronomy and Physics

Clyburne, Jason A. C., B.Sc. (Hons) (Acadia), Ph.D. (Dalhousie), Associate Professor in Environmental Studies, and Chemistry, Canada Research Chair in Environmental Studies

Codignola, Luca, Laurea (Modern History), Lettere e Filosofia (Università di Roma), Ph.D., Adjunct Professor of History

Cone, David, B.Sc., M.Sc. (Guelph), Ph.D. (New Brunswick), Professor of Biology

Conrad, Catherine T., B.A. (Hons.) (Saint Mary's), M.E.S., Ph.D. (Laurier), Associate Professor and Chairperson of Department of Geography

Conrad, Nicole, B.A. (NONS.) (Saint Mary's), M.A., Ph.D. (McMaster), Assistant Professor of Psychology and Linguistics

Cottrell, Barbara, B.A. (Hons) (MSVU), B.Ed, M.A. (Dalhousie), Adjunct Professor in Sociology and Criminology

Creelman, Valerie, B.A. (Hons.) (Mount Saint Vincent University), M.A. (Dalhousie), Ph.D. (Waterloo), Assistant Professor of Marketing and Communications

Crocker, Diane, B.A. (Memorial), M.A., Ph.D. (York), Associate Professor of Sociology and Criminology and Coordinator of Criminology Program

Crooks, Shelagh, B.A. (Saint Mary's), M.A. (Dalhousie), Ph.D. (Edinburgh), Associate Professor of Philosophy

Dai, Jie, B.Sc., M.A. (Nankai), MBA, Ph.D. (Laval), Assistant Professor of Finance

Dalton, Anne M., B.S., B.Ed. (Conjoint) (Memorial), M.A. (Fordham), Ph.D. (Catholic University of America), Associate Professor of Religious Studies

Dang, Vinh, B.Comm. (Saint Mary's), M.A., Ph.D. (McMaster), Assistant Professor in Economics

Dansereau, Suzanne, B.A., M.A. (McGill), Ph.D. (Québec), Associate Professor of International Development Studies

Dar, Atul A., B.A. (Hons.), M.A. (Delhi), M.A., Ph.D. (McMaster), Professor of Economics

Das, Hari, B.Comm. (Madras), M.B.A (Indian Institute of Management), M.Sc., Ph.D. (British Columbia), A.I.C.W.A., Professor of Management

Daveluy, Michelle, B.Sc., M.Sc., Ph.D. (Montreal), Adjunct Professor of Anthropology

Dawson, Robert J. M., B.Sc. (Hons.) (Kings College, Dalhousie), Cert. of Advanced Study in Mathematics, Ph.D. (Cambridge), Professor of Mathematics and Computing Science

Day, Arla L., B.A. (Manitoba), M.A.Sc., Ph.D. (Waterloo), Associate Professor of Psychology and Coordinator of the Graduate Program in Psychology

Dayle, Jutta, B.A. (Hons.) (Saint Mary's), M.A., Ph.D. (New Mexico), Adjunct Professor of Anthropology

Delgado, R., Ph.D. (Pennsylvania) Adjunct Professor International Development Studies

Deupree, Robert, B.A. (Wisconsin), M.S. (Colorado), Ph.D. (Toronto), Professor of Astronomy and Physics; Canada Research Chair in Astrophysics; and Director of Saint Mary's University Institute of Computational Astrophysics

Devlin, John F., B.A. (Dalhousie), M.A. (Calgary), M.A. (Carleton), Ph.D. (Guelph), Adjunct Professor of International Development Studies

Dixon, Paul S., B.A. (New Brunswick), M.Math., Ph.D. (Waterloo), Associate Vice President (Enrolment Management) & Registrar and Professor of Management Science

Dobrowolsky, Alexandra Z., B.A. (Hons.) (Toronto), M.A. (Dalhousie), Ph.D. (Carleton), Professor of Political Science

Dodds, J. Colin, B.A. (Open University), B.Sc. (Hull), M.A., Ph.D. (Sheffield), President and Professor of Finance

Dong, Zhongmin, B.Sc. (Shaanxi), M.Sc. (Peking), Ph.D. (Ottawa), Associate Professor of Biology

Doucet, Marc, B.A. (Moncton), M.A., Ph.D. (Ottawa), Associate Professor of Political Science and International Development Studies

Driscoll, Catherine, B.A. (Hons.) (Toronto), M.B.A. (Dalhousie), Ph.D. (Queen's), Associate Professor of Management

Enns, Esther E., B.S.L. (with high distinction) (Laurentian), M.A. (McMaster), M. Ed., Ph.D. (Toronto), Dean of Arts, Acting Dean of Education and Professor German and Linguistics

Erhard, Nancie, B.A. (Saint Mary's), M.T.S. (Atlantic School of Theology), M.Phil., Ph.D. (Union Theological Seminary), Assistant Professor of Religious Studies

Erickson, Paul A., B.A. (Michigan), M.A. (Indiana), M.A. (Wayne State), Ph.D. (Connecticut), Professor of Anthropology

Farrell, Ellen, B.P.R. (Mount Saint Vincent), M.B.A. (Saint Mary's), Ph.D. (Nottingham), Associate Professor of Management

Faseruk, Alex, B.A. (Queen's), B.Comm., M.B.A. (Dalhousie), D.B.A. (Kentucky), Adjunct Professor, Executive Master of Business Administration Program

Field, Richard, B.A. (Eastern), M.A. (Toronto), Ph.D. (Dalhousie), Adjunct Professor of Atlantic Canada Studies

Finbow, Arthur S., B.Sc., M.A. (Dalhousie), Ph.D. (Washington), FTICA, Professor of Mathematics and Computing Science

Finbow-Singh, Wendy, B.Sc. (Hons) (Saint Mary's), M.Sc. (Dalhousie), Ph.D. (Calgary), Assistant Professor of Mathematics and Computing Science

Finden, Walter, B.Sc., M.Sc., Ph.D. (Waterloo), Associate Professor of Mathematics and Computing Science

Fisher, Maryanne, B.A. (Hons.) (York), M.Sc. (McMaster), Ph.D. (York), Assistant Professor of Psychology

Fitzgerald, Patricia A., B.B.A. (St. Francis Xavier), M.A. (North Dakota), Ph.D. (Northern Colorado), Professor of Management

Fleming, Mark, M.A., M.Sc. (Aberdeen), Ph.D. (The Robert-Gordon University, Aberdeen), Associate Professor of Psychology

Fowler, Jonathon, B.A. (Hons.) (Saint Mary's), B.Ed. (Acadia), M.A. (Sheffield), Ph.D. (Oxford), Assistant Professor of Anthropology

Francis, Lori, B.Sc. (St. Francis Xavier), M.Sc. (McMaster), Ph.D. (Guelph), Associate Professor in Psychology

Franz-Odendaal, Tamara, B.Sc. (Hons.), M.Sc., Ph.D. (Cape Town), Adjunct Professor of Biology

Freeman, Kirrily, B.A. (Guelph), M.A. (Edinburgh), Ph.D. (Waterloo), Assistant Professor of History

Fullerton, Gordon L., B.Comm. (Mount Allison), M.B.A. (Dalhousie), Ph.D. (Queen's), Acting Associate Dean (Masters Programs) and Associate Professor of Marketing

Gallo, Luigi, B.Sc., (U of Calgary), M.Sc. (San Diego State U), Ph.D. (Ludwig-Maximilians U), Assistant Professor of Astronomy and Physics

Gamble, Donald S., B.Sc., M.Sc. (Dalhousie), Ph.D. (Buffalo), Adjunct Professor of Chemistry

Gannett, Lisa A., B.Sc., M.A., Ph.D. (Western Ontario), Associate Professor of Philosophy

Gaon, Stella, B.A., M.A. (Concordia), Ph.D. (Toronto), Associate Professor of Political Science

Giles, Philip T., B.Sc. (Hons.), M.Sc. (McMaster), Ph.D. (Calgary), Associate Professor of Geography

Gilin Oore, Debra A., B.A. (Northern Michigan), Ph.D. (Missouri), Assistant Professor of Psychology

Girvan, Norman, Ph.D. (London School of Economics), Adjunct Professor in International Development Studies

Gorman, Barry F., B.Comm. (Saint Mary's), M.B.A. (Dalhousie), Ph.D. (Bath), C.A., T.E.P., Professor of Accounting

Grandy, Karen, B.A. (Dalhousie), M.A., Ph.D. (Western Ontario), Assistant Professor of Marketing and Communications

Gregory, Janet, B.A.Sc. (Waterloo), B.Ed., M.Sc., Ph.D. (Dalhousie), Associate Professor of Information Systems

Grek Martin, Jason, BA (Queens), MA (U of Wisconsin-Madison), Assistant Professor in Geography

Grimes-MacLellan, Dawn, B.A., B.S., Journalism (Boston University), M.A. (Cornell), Ph.D. (University of Illinois), Assistant Professor of Anthropology

Guenther, David, B.Sc., M.Sc. (Simon Fraser), Ph.D. (Yale), Professor of Astronomy and Physics

Haiven, Judy, M.A., Ph.D. (Warwick), Associate Professor of Management

Haiven, Larry, B.Sc. (Toronto), M.P.M. (Alberta), Ph.D. (Warwick), Associate Professor of Management

Hanley, Jacob J., B.Sc. (Hons), M. Sc., Ph.D. (Toronto), Assistant Professor of Geology

Harper, Karen, Ph.D., Adjunct Professor in Biology

Hartnell, Bert L., B.Math., M.Math., Ph.D. (Waterloo), Professor of Mathematics and Computing Science

Haynes, Ronald D., B.Sc. (Memorial), M.Sc., Ph.D. (Simon Fraser), Adjunct Professor of Mathematics and Computing Science

Heckerl, David, B.A. (Pitzer College), M.A. (New Brunswick), Ph.D. (McGill), Associate Professor of English

Heffernan, Teresa, B.A., M.A. (Ottawa), Ph.D. (Toronto), Associate Professor of English

Helms Mills, Jean, B.A. (Hons.) (Saint Mary's), M.A., Ph.D. (Lancaster), Professor of Management

Hill, Kenneth A., B.A. (California State College), M.A., Ph.D. (Alberta), Professor of Psychology

Hlongwane, Gugu, B.A. (Sarah Lawrence College), M.A. (Guelph), Ph.D. (York), Assistant Professor of English

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Ralston, Helen, R.S.C.J., Dip. Soc. Studs. (Sydney), B.A. (Newton College), M.A. (Boston College), Ph.D. (Carleton), Professor Emerita of Sociology

Richardson, David H. S., B.Sc., M.Sc. (Nottingham), M.A., Sc.D. (Trinity College, Dublin), D.Phil. (Oxford), Professor of Biology, Dean Emeritus

Rojo, Alfonso, B.Sc. (Valladolid), M.Sc., D.Sc. (Madrid), Professor Emeritus of Biology

Seaman, Andrew T., B.A. (Mount Allison), M.A. (Dalhousie), Ph.D. (Dublin), Professor Emeritus of English

Schwind, Hermann F., B.B.A., M.B.A. (Washington), Ph.D. (British Columbia), Professor Emeritus of Management

Stewart, William A., S.J., B.A. (Montreal), S.T.L., Ph.L. (Immaculate Conception), Hon.D.D. (Regis), Hon.D.Litt. (Saint Mary's), Professor Emeritus of Philosophy

Stiegman, Emero S., B.A. (Don Bosco College), S.T.L. (Salesion Pontifical), Ph.D. (Fordham), Professor Emeritus of Religious Studies

Tudor, Kathleen R., B.A. (Sir George Williams), M.A. (Montreal), Ph.D. (Toronto), Professor Emeritus of English

Welch, Gary A., B.S. (Harvey Mudd College), M.S., Ph.D. (Washington), Professor Emeritus of Astronomy and Physics

Young, George F. W., B.A. (Harvard), Ph.D. (Chicago), Professor Emeritus of History

Young, John C. O’C., B.Sc., Ph.D. (London), M.B.A. (New York), Professor Emeritus of Chemistry

Administrative Officers

President

Dodds, J. Colin, B.A. (Open University), B.Sc. (Hull), M.A., Ph.D. (Sheffield), President and Professor of Finance

Vice-President (Administration)

Morrison, Gabrielle, B.Sc. (Dalhousie), B.E. (Technical University of Nova Scotia), P.Eng.

Vice President (Finance)

Corrigan, Lawrence T., Dip. P.A., B.Comm. (Dalhousie), M.B.A. (Saint Mary’s), Dip. in App. Bus. (Ryerson), C.G.A., F.C.G.A.

Vice President (Associate) (External Affairs)

TBA

Associate Vice President (Enrolment Management) and Registrar

Dixon, Paul S., B.A. (New Brunswick), M.Math., Ph.D. (Waterloo), Associate Vice President (Enrolment Management) & Registrar and Professor of Management Science

Admissions Office

Ferguson, Greg C., B.Comm. (Saint Mary’s), Director

Alumni Office

Crowley, Patrick, B.A. (Saint Mary’s), Director

Art Gallery

Metcalf, Robin, B.A., (Hons.) (Dalhousie), Director/Curator

Athletics and Recreation

TBA, Director

Business Development Centre

Crowell, Eric, B.A. (Dalhousie), M.B.A. (Toronto), C.A., Director

Continuing Education

MacDonald, Elizabeth (Betty), BComm (Saint Mary’s), MA (Western), Director

Development

Fitzpatrick, Heather M., B.P.R. (Mount Saint Vincent), Director of Development

Facilities Management

Schmeisser, Gary H., B.Sc. (Dalhousie), B.E. (Technical University of Nova Scotia), Director

Financial Services

Cochrane, Ronald L., B.Comm (Saint Mary’s), C.G.A., Director of Financial Services

Dubois, Valerie, B.Comm., M.B.A. (Saint Mary’s), F.I.C.B., C.P.P., Project Analyst

Harper, Donald, B.Sc. (Saint Mary’s), Manager, Bookstore

Hayward, Maureen, B.Comm. (Saint Mary’s), C.A., Manager, Treasury

Levangie, Gail, B.Comm. (Saint Mary’s), C.P.P., Manager, Procurement

Murtha, Cindy, B.A., B.B.A. (Mount Saint Vincent), C.M.A., Manager, Reporting & Audit

Webb, Kevin, B.Comm. (Saint Mary’s), C.M.A., Manager, Financial Planning

Gorsebrook Research Institute

Howell, Colin D., B.A., M.A. (Dalhousie), Ph.D. (Cincinnati), Executive Director

Human Resources

Squires, Kim, B.A., B.Ed., M.B.A. (Saint Mary’s), C.H.R.P., Director

Information Technology Systems and Support

Sisk, Perry, B.Sc. (Dalhousie), Director

Instructional Development

Bennett, Margaret-Anne, B.A. (Saint Mary’s), B.Ed., M.Ed. (Dalhousie), Director

Library

DeYoung, Marie, B.A. (St. Francis Xavier), Dip. L.T. (Ryerson), M.L.S. (Dalhousie), University Librarian

Bentley, Brenda, Coordinator, Library Administration

Clare, Ken, B.A. (King’s), Head of Access Services

Cook, Hansel, B.A. (Dalhousie), M.L.I.S. (British Columbia), Archives, Special Collections and Records Librarian

Cook, Robert, B.A. (Hons.) (Wales), M.A. (Lancaster), M.A. (Saskatchewan), M.L.S. (Dalhousie), Cataloguing Systems Librarian

Harrigan, Cindy, B.A., B.Ed. (Saint Mary's), M.L.S. (Dalhousie), Instructional Development Librarian
Houlihan, Ron, B.A. (Saint Mary's), M.L.I.S. (Dalhousie), Promotional Services Librarian
Sanderson, Heather, B.A. (Hons.) (King's), M.A. (Queen's), Ph.D. (Queen's), M.L.I.S. (Dalhousie), Information Literacy Librarian
Thomson, Joyce, B.A., M.L.S. (Dalhousie), Head of User Education
Vaisey, Douglas, B.A. (Trent), M.L.S. (Dalhousie), Reference and Research Librarian
Webster, Peter, B.A. (Alberta), M.L.S. (Dalhousie), Information Systems Librarian
Winchcombe, Terri, Manager of Acquisition Services
Wood, Sally, B.A. (Saint Mary's), LL.B., M.L.I.S. (Dalhousie), Head of Database Management

Registrar's/Records Office

Peters, David, B.Comm. (Saint Mary's), Director of Registrarial Services
Gaudet, Sarah, B.A. (Saint Mary's), Assistant Registrar – Scheduling
Harroun, Heather, B.A. (Saint Mary's), Assistant Registrar – Graduation and Publications

Sobey School of Business Advisory Council

Keith, John (Jack) R., Hon. D.Comm. (Saint Mary's), C.M., Chairperson

Security

Promaine, William J., B.A. (Carleton), Manager

Senate Office

Bell, Barb, Secretary to Senate

Conflict Resolution Advisor

Brownlow, Bridget, B.A. (Dalhousie), Con. Res-Cert. (JIBC)

Student Services

Hotchkiss, Keith, B.A. (Saint Mary's), Director
Morris, Sarah, B.Sc., M.Ed. (Dalhousie)
Leitch, David, B.A., B.Ed., B.Sc., M.A., Ph.D. (Dalhousie), Director, Atlantic Centre for Support of Students with Disabilities

The Teaching English as a Second Language Centre

TBA, Director

The Writing Centre

Vincent, Julie-Anne, B.A. (Hons.) (McMaster), M.A. (Western Ontario), M.A. (Waterloo), Director

Awards to Faculty and Staff

Annually there are four prestigious awards presented to members of faculty and staff.

a. The Reverend William A. Stewart, S.J., Medal for Excellence in Teaching

In 1983, the Alumni Association, in cooperation with the Faculty Union and the Students' Representative Council, established the Reverend William A. Stewart, S.J., Medal for Excellence in Teaching. This award is open to faculty members who have made an extraordinary contribution to the education of Saint Mary's students through teaching in the University's tradition of quality undergraduate education. Nominations are invited from alumni, students, and faculty members. This medal is presented at Spring Convocation together with a cheque for \$1,500. Previous winners of this prestigious award are:

1983	Professor David Hope (Accounting)
1984	Professor Dermot Mulrooney (Engineering)
1985	Dr. David Perrier (Sociology)
1986	Dr. John Young (Chemistry)
1987	Professor Edward McBride (Political Science)
1988	Dr. Jack Ginsburg (Chemistry)
1989	Dr. Peter March (Philosophy)
1990	Dr. Andrew Seaman (English)
1991	Dr. Phil Street (Psychology)
1992	Dr. Francis Phillips (Education)
1993	Dr. Janet Baker (English)
1994	Dr. Cyril Byrne (English)
1995	Professor Nicola Young (Accounting)
1996	Dr. Ronald Landes (Political Science)
1997	Dr. Paul Muir (Mathematics and Computing Science)
1998	Dr. David Cone (Biology)
1999	Dr. Robert Singer (Chemistry)
2000	Dr. Eric Lee (Finance and Management Science)
2001	Dr. Janet Gregory (Finance and Management Science)
2002	Dr. Gillian Thomas (English)
2003	Dr. Janet Hill (English)
2004	Dr. Porter Scobey (Mathematics and Computing Science)
2005	Dr. Adam Sarty (Astronomy and Physics)
2006	Dr. Edna Keeble (Political Science)
2007	Dr. Stephen Davis (Anthropology)
2008	Dr. Shelagh Crooks (Philosophy)

b. The Dr. Geraldine Thomas Educational Leadership Award

In 2007, the Quality of Teaching Committee established an Educational Leadership Award to recognize the long-term commitment of faculty who develop, enhance and promote the quality of teaching and learning at Saint Mary's, and beyond. The Committee gratefully acknowledges the support of the Saint Mary's University Faculty Union for this Award.

The Award is named for Dr. Geraldine Thomas, national teaching award winner, and founding member of the Quality of Teaching Committee. Dr. Thomas has spent the past twenty years of her academic career supporting efforts which improve teaching and learning within the University, the Atlantic region, and nationally.

2007	Dr. Shelagh Crooks (Philosophy)
2008	Dr. Adam Sarty (Astronomy and Physics)

c. President's Award for Excellence in Research

Established in 1989, this annual award honours outstanding research conducted by a full-time faculty member who has been employed at the University for at least three years. Presentation of the award takes place at Convocation. A rigorous nomination procedure has been delineated whereby each Dean of a Faculty may select one member of his/her Faculty who has been nominated by a faculty research, and whose candidacy he is prepared to support. Other sponsors must be researchers, at least two of whom must be from outside Saint Mary's University. The award is adjudicated by the Research Committee of the Faculty of Graduate Studies and Research, which has the authority to decide which nominee, if any, is deserving of the award. The selection criteria consists of two component parts, namely productivity, whereby the nominee must have a record of continued exceptional contribution to research/scholarship; and secondly, recognition. The nominee must have attained national or international recognition as an authority in a major field of knowledge. The President's Award for Excellence in Research consists of a framed certificate presented at Fall Convocation together with a cheque for \$1,500. Previous winners of this significant award are:

1989	Dr. George Mitchell (Astronomy)
1990	Dr. John Chadwick-Jones (Psychology)
1991	Dr. John Reid (History/Atlantic Canada Studies)
1992	Dr. Jaroslav Dostal (Geology)
1993	Dr. Arthur Monahan (Philosophy)
1994	Dr. Michael Zaworotko (Chemistry)
1995	Dr. John Young (Chemistry)
1996	Dr. Terry Wagar (Management)
1997	Dr. David Turner (Astronomy)
1998	Dr. Colin Howell (History/Atlantic Canada Studies)
1999	Dr. Georgia Pe-Piper (Geology)
2000	Dr. Henry Veltmeyer (Sociology)
2001	Dr. Bert Hartnell (Mathematics and Computing Science)
2002	Dr. Andrew Harvey (Economics)
2003	Dr. Stephen Davis (Anthropology)
2004	Dr. J. Victor Owen (Geology)
2005	Dr. David Guenter (Astronomy and Physics)
2006	Dr. Kevin Kelloway (management and Psychology)
2007	Dr. Hugh Millward (Geography)
2008	D. Albert Mills (Management)

d. The President's Awards for Exemplary Service

Created in 2004, the President's Awards for Exemplary Service at Saint Mary's University are presented each year to recognize employees who have demonstrated outstanding service and/or who have made significant contributions to the University community beyond that normally expected for their positions.

The awards are open to full-time employees of Saint Mary's University who have served a minimum of five (5) years of continuous service prior to nomination and who have not previously received the award. A person may be nominated multiple years providing he/she hasn't received an award.

The awards will be based on outstanding service to the University in any one or more of the following areas:

1. Providing continued excellent service to the Saint Mary's community.
2. Enhancing the quality of life for students, employees, and/or visitors to the University.
3. Having a demonstrated record of innovation within the University in new programs/services or making significant improvements to existing programs or service, and
4. Advancing the reputation of Saint Mary's University regionally, nationally and/or internationally.

One award of \$1,500 may be presented annually to a faculty member and two awards of \$1,500 each may be presented annually to support and administrative employees.

2004

Elizabeth Chard (Registrar)
Joan Whitney (Office of the Dean of Arts)
Richard Chesley (Accounting)
Diane Gorman (Facilities Management) Honorable Mention

2005

Susan Doré (Office of the Dean of Science)
Ann MacDonald (Conference Services)
Malcolm Butler (Astronomy and Physics)
Kathy Mullane (Athletics) Honorable Mention

2006

Judy Grandy (Bookstore)
Bill Promaine (University Security)
Vic Catano (Psychology)

2007

Pat Bishara (External Affairs)
Carl Grandy (Facilities Management)
James Morrison (History)
Randolph Corney (Geology) Honorable Mention

2008

Margaret Anne Bennett (Centre for Academic and Instructional Development)
Margaret Harry (English)
David Lane (Astronomy and Physics)



Dr. Albert J. Mill, Professor of Management, receives the President's Award for Excellence in Research from Dr. J. Colin Dodds, President of Saint Mary's University, at the Fall 2008 Convocation ceremony.

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