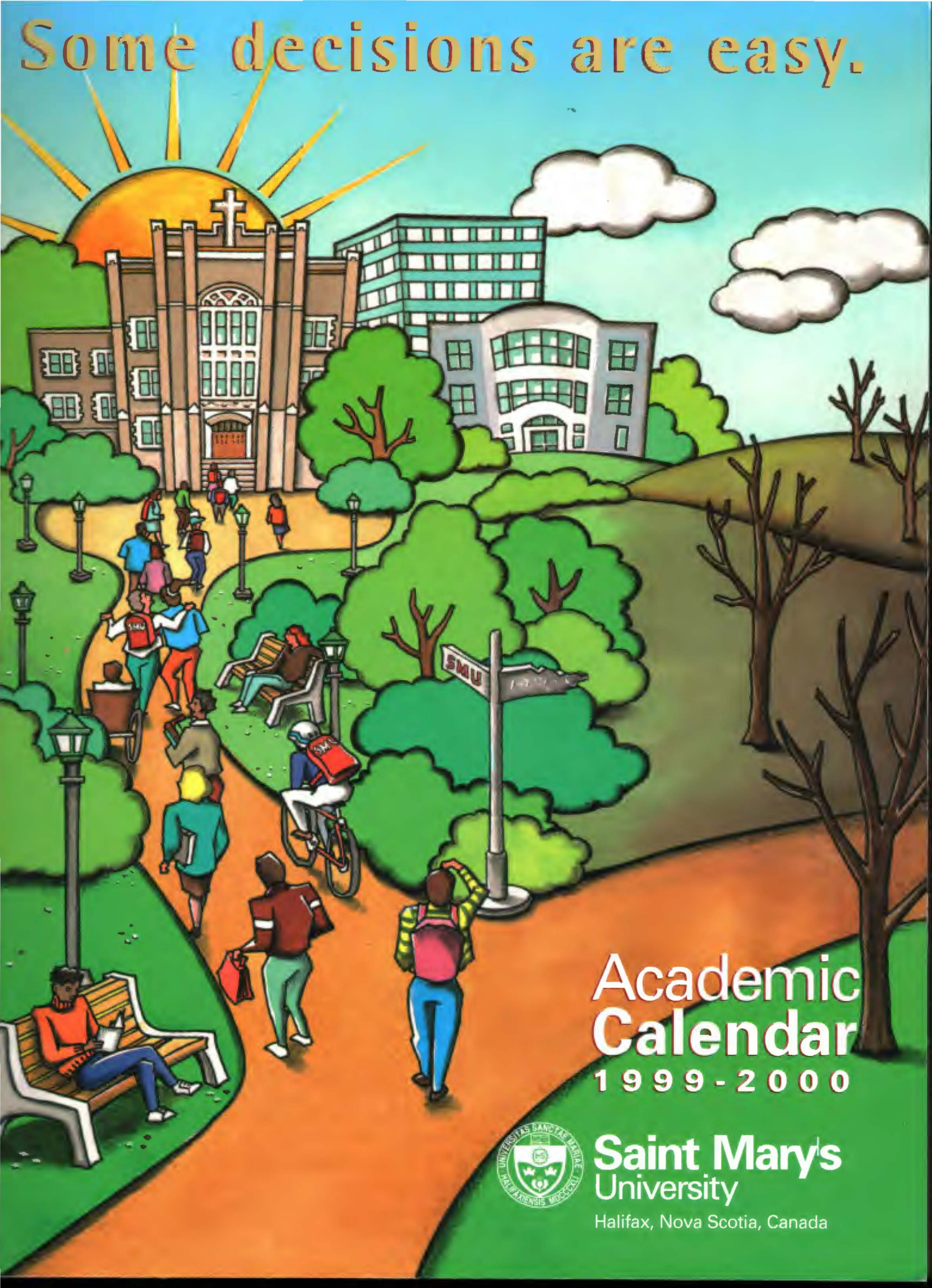
Some decisions are easy.



Academic Calendar

1999-2000

Saint Mary's University

Halifax, Nova Scotia, Canada

The academic year to which this Academic Calendar refers begins on 1 September 1999. The University hereby gives notice that while the information contained in this Calendar is considered to be accurate at the time of preparation, there may be changes made subsequent to publication without prior notice. Publication date: 31 December 1998.

Students and other readers will appreciate that the matters dealt with in this Academic Calendar are subject to continuing review. Saint Mary's University reserves the right to alter what appears in this Academic Calendar and, without limiting the generality of the foregoing, to revise or cancel particular courses or programs, and to change the rate of fees and charges in order to serve the best interests of the University. The University cannot accept responsibility or liability for any person or persons who may suffer loss or damage, or who may be otherwise affected by changes as a result of suspension or termination of services, courses or classes caused by reason of strikes, lockouts, riots, weather, damage to University property or for any other cause beyond the reasonable control of Saint Mary's University.

While the University will make every reasonable effort to offer classes as required within degree, diploma and certificate programs, students should note that acceptance to an academic program does not guarantee admission in a particular year to a given class or a particular section of a class.

Calendar Production

Editor:
Elizabeth A. Chard, Registrar

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Academic Calendar of Saint Mary's University

1999-2000

Saint Mary's University
Halifax, Nova Scotia
Canada
B3H 3C3
Tel: (902) 420-5400
(902) 420-5452 (TTD)
Fax: (902) 420-5561 (General)
(902) 420-5102 (President)
(902) 420-5104 (Vice President Academic and Research)
(902) 420-5566 (Vice President Administration)
(902) 420-5151 (Registrar's/Records)
(902) 496-8100 (Admissions)
(902) 420-5103 (Continuing Education)
(902) 496-8184 (Financial Services)

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.stmarys.ca; the Registrar's Home Page at http://www.stmarys.ca/registrar.

Using This Calendar

Some of the courses described in this Calendar will not be offered in 1999-2000. Students are therefore advised to consult the academic timetable for those courses which will be taught in the 1999-2000 academic year and the time(s) when they will be offered.

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 a university 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 several degree, diploma, and certificate programs offered at Saint Mary's University.

These programs include:

Bachelor of Arts
Bachelor of Commerce
Bachelor of Education
Bachelor of Education (Vocational)
Bachelor of Science
Diploma in Engineering
Master of Arts (in Atlantic Canada Studies, Criminology, Education, History,
International Development Studies, Philosophy, Women's Studies)
Master of Business Administration
Executive Master of Business Administration
Master of Education
Master of Science (in Astronomy, Applied Psychology)
Certificate of Honors Equivalency
Certificate of Chinese Studies
Certificate in German Language and Culture
Certificate in Criminology
Certificate of Japanese Studies
Certificate in Spanish Language and Hispanic Culture
Graduate Diploma in Criminology
Graduate Diploma in International Development Studies
Doctor of Philosophy in Business Administration (Management)

After deciding on the academic program in which they are interested and studying the requirements of the program, students should consult Section 5 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 instructor. 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 6, 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:

Academic Policies and Records
Registrar: 902-420-5582
Fax: 902-420-5151
Web Address: www.stmarys.ca/registrar

Admission of Students
Director of Admissions: 902-420-5415
Local Fax: 902-496-8100
International Fax: 902-496-8160
Web Address:
www.stmarys.ca/administration/admiss/admiss.html

Continuing Education: 902-420-5492
Fax: 902-420-5103
Web Address: www.stmarys.ca/conted

Alumni Affairs
Director of Alumni: 902-420-5420
Fax: 902-420-5140
Web Address: www.stmarys.ca/administration/alumni

Fee Information
Director of Financial Services: 902-420-5464
Fax: 902-496-8184
Web Address: www.stmarys.ca/administration/businessoffice/

Residence Accommodations
Director of University Residence:
902-420-5598 (single housing)
902-420-5589 (family housing, graduate housing)
Fax: 902-496-8107
Web Address:
www.stmarys.ca/administration/students/Residence/welcome.html

Scholarships and Student Loans
Financial Aid Counselor 902-420-5609
Fax: 902-420-5125
Web Address:
www.stmarys.ca/administration/StudentServices/finaid/aid.html

Student Affairs
Director of Student Services 902-420-5615
Fax: 902-420-5125
Web Address:
www.stmarys.ca/administraio/StudentServices/

Student Employment and Job Placement
Manager/Student Employment Office: 902-420-5499
Fax: 902-420-5125
Web Address:
www.stmarys.ca/administration/StudentServices/employme.html

Summer Sessions
Director of Continuing Education 902-420-5492
Fax: 902-420-5103
Web Address: www.stmarys.ca/conted

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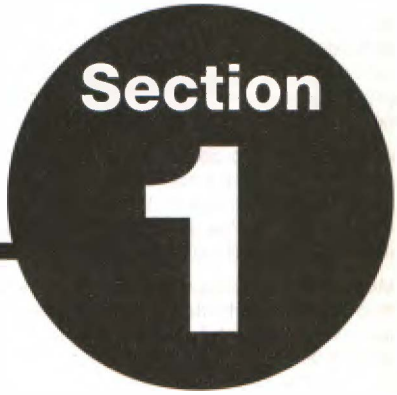
Section 8 - Resources and Services

Section 9 - Academic Officers and Faculty; Chancellor, Deans, and Professors Emeritus/Emerita; Awards to Faculty; Administrative Officers

General Information



History
Calendar of Events
Board of Governors and Senate

General Information

History

Since its founding in 1802, Saint Mary's University has developed into a modern, urban university with more than 8,000 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. 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.

From the Jesuits and their predecessors, Saint Mary's has inherited a strong commitment to meeting community needs and an equally strong tradition of emphasising excellence in teaching and excellence in research. During the past two decades Saint Mary's has evolved into a more complex urban university, with a full range of undergraduate programs in arts, commerce, education, and science. 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, architecture, as well as selected graduate studies. 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 programs all of which have been rapidly expanding both in numbers and geographic locations.

Over the last two decades this commitment to academic and research excellence has seen the number of full-time faculty with doctoral degrees rise to over 85 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 from $250,000 to more than $4,500,000. This marked increase reflects the University's firm belief that excellence in both teaching and research are 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 has assisted faculty members by offering workshops on instructional techniques and innovations in teaching methodology including the use of computers. Awards for Teaching and Research Excellence are presented annually to members of faculty.

More than eleven thousand students are enrolled during the academic year and in the two summer sessions at Saint Mary's University. They 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 and Convention Centre in downtown Halifax and in Dartmouth, as well as 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 several other Halifax-Dartmouth universities, a multi-million dollar Computer Centre, and "The Tower" which is Atlantic Canada's most modern recreation and fitness complex. The newest structure on campus is The Sobey Building, officially opened in November 1998. It provides much needed additional classrooms with the very latest in technology and is the home of the Frank H. Sobey Faculty of Business. Over the last number of years, Saint Mary's University has become a teaching and research institution where tradition meets the future.

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 Regional Geochemical 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 Gambia. The Atlantic Centre of Support for the Disabled 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 fifty-seven percent of its students from this area. Nova Scotia is the home province of 87 percent of Saint Mary's students. 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 centred around continued academic excellence in teaching and research, accessibility for all Nova Scotians, strong community outreach, and facilities and instruction for the physically challenged. With its strong sense of where it has been, Saint Mary's University has focused clearly on the mission ahead — being "where tradition meets the future."

Metro Halifax Universities Consortium

Recognizing that Nova Scotia and Atlantic Canada are at a crossroads, global forces including trade liberalization, economic restructuring, the information revolution, and the changing role of governments presents both threats and opportunities. In recognition of this and the fact that Nova Scotia's universities will play a key role in the province's transition to this new global economy and society, in 1995 the Metro Halifax post secondary institutions (Atlantic School of Theology; Dalhousie University; University of King's College; Mount Saint Vincent University; Nova Scotia College of Art and Design; Saint Mary's University; and Technical University of Nova Scotia) began serious discussions in response to the dual challenges of maintaining service to students and society while coping with anticipated unprecedented reductions in public funding. This Consortium blueprint was formally accepted by the Government of Nova Scotia in early 1996.

The result was the Metro Halifax Universities Consortium which exists in order to sustain universities - the source and site of intellectual development and academic enterprise - through a fiscal crisis. The impact of this crisis will not be limited to the particular institutions, programs and people involved, but will reverberate throughout the society, culture, and economy of the province at a time when the University's capability for research, development, problem-solving, and education of the citizenry will be even more greatly needed. The Mission of the Metro Halifax Universities Consortium is to secure cost savings and new sources of revenues for the metro universities and to promote the enhancement of teaching, research, and graduate studies through co-operative initiatives between or among partner institutions. The Vision is of a consortium that is academically strong, vibrant, fiscally responsible, intellectually dynamic, and most importantly, student-focused. Saint Mary's University has in the past and will continue in the future to play a significant role in the development of this consortium concept.

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.

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 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. Formal association also exists between the University and Ignatius College in Guelph. The affiliation between Saint Mary's University and Regis College, Toronto, is presently in suspension in light of the association between the Toronto School of Theology and Regis College.

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 Latin 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, which stands for Nova Scotia's Scottish heritage.

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 to get there 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.

CALENDAR OF EVENTS
1999-2000

1999

July

2 (Friday)	Deadline for filing an application for graduation for Fall Convocation, 1999.

Registration

Details on registration for the 1999-2000 academic year will be published at a later date and will be advertised in the Registration Book, 1999-2000.

September

8 (Wednesday)	**CLASSES BEGIN.**
24 (Friday)	Last day for filing applications for degrees, diplomas and certificates to be awarded at Spring Convocations, 2000.
30 (Thursday)	Last day for final payment of first semester tuition fees.

October

11 (Monday)	Thanksgiving Day. No classes.
24 (Sunday)	Fall Convocation, 1999.

November

10 (Wednesday)	Last day for withdrawing, without academic penalty, from a first semester course (.1) or a full course (.0) taught only in the first semester (Reference: Academic Regulation 16).
11 (Thursday)	Remembrance Day. No classes.
17 (Wednesday)	Special advising for non-majors. Details available from the Dean of Science and the Associate Deans of Arts and Commerce.

December

2 (Thursday)	Last day of classes in first semester.
3 (Friday)	Study Day
4 (Sat.) - 18 (Sat.)	Formal final examinations in first semester courses (.1) and formal mid-year examinations in full year courses (.0). Note: Subject to change should it not be possible to schedule all formal examinations in this period.
8 (Wednesday)	Patronal Feast of the University. Traditionally, formal examinations are not held on this date.
10 (Friday)	Last day in first semester to register for .2 courses.
18 (Saturday)	First semester ends. Note: Subject to change should it not be possible to schedule all formal examinations in this period.

2000

January

5 (Wednesday)	University reopens.
10 (Monday)	CLASSES RESUME.
10 (Mon.) - 14 (Fri.)	(a) Registration for students not previously registered for the 1999-2000 academic year. (b) Change of Registration.
15 (Saturday)	Last day for final payment of second semester tuition fees.
21 (Friday)	Last day for withdrawing, without academic penalty, from a full course (.0) taught over both semesters (Reference: Academic Regulation 16).

February

28 - March 4	Winter Break.

March

8 (Wednesday)	Special advising for non-majors. Details available from the Dean of Science and the Associate Deans of Arts and Commerce.
17 (Friday)	Last day for withdrawing, without academic penalty, from a second semester course (.2) or a full course (.0) taught only in the second semester (Reference: Academic Regulation 16).

April

6 (Thursday)	Last day of classes in second semester.
7 (Friday)	Study Day
8 (Sat.) - 26 (Wed.)	Formal final examinations in second semester courses (.2) and in full courses (.0). Note: Subject to change should it not be possible to schedule all formal examinations in this period.
21 (Friday)	Good Friday. No examinations.
26 (Thursday)	Second semester ends. Note: Subject to change should it not be possible to schedule all formal examinations in this period.
28 (Friday)	Last day for potential graduates to notify the Registrar of being "in absentia" at Spring Convocations, 2000.

May

12 (Friday) Spring Convocations, 2000. (T.B.C)

July

7 (Friday) Last day for filing applications for degrees, diplomas, and certificates to be awarded at Fall Convocation, 2000.

Each year, Saint Mary's University offers two summer sessions. For 1999, the dates are 10 May to 25 June (First Summer Session); 5 July to 20 August (Second Summer Session). Details are available in the Summer Sessions brochure published annually Division of Continuing Education.

1999

JULY

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AUGUST

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SEPTEMBER

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OCTOBER

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31						

NOVEMBER

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2000

JANUARY

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MAY

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JUNE

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11	12	13	14	15	16	17
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Board of Governors and Senate

Board of Governors

Chairperson
Mr. Robert Belliveau, Q.C.

Vice-Chairperson
Mr. Paul Dyer

Members Ex-Officio
Chancellor
Archbishop Terrence Prendergast, S.J.

Vice-Chancellor
Reverend Martin Currie, V.G.

President
Dr. Kenneth L. Ozmon, O.C.

Vice-President (Academic and Research)
Dr. J. Colin Dodds

Vice-President (Administration)
Ms. Gabrielle Morrison

Chief Financial Officer
Mr. Lawrence Corrigan

Members Appointed by the Roman Catholic Episcopal Corporation

Mr. Robert Belliveau, Q.C.	to July 31, 1999
Ms. Karen Oldfield	to July 31, 2000
Judge Helen Gillis	to July 31, 2001

Members Elected by the Alumni Association

Mr. Patrick Forbes	to July 31, 2000
Mr. Peter Halpin	to July 31, 2001
Mr. Lawrence Hood	to July 31, 2001
Mr. Donald MacKinnon	to July 31, 1999
Mr. Brian Rogers	to July 31, 1999
Ms. Grace Southwell	to July 31, 2000

Members Elected by the Academic Staff

Dr. Thomas Cheng	to July 31, 1999
Dr. Kenneth Hill	to July 31, 2000
Dr. Georgia Pe-Piper	to July 31, 2001
Dr. Qadeer Siddiqui	to July 31, 2000
Dr. Keith Vaughan	to July 31, 2001
Prof. Nicola Young	to July 31, 1999

Members Elected by the Students

Mr. Liam Arbuckle	to July 31, 1999
Mr. Norm Biason	to July 31, 1999
Mr. John Francis	to July 31, 1999
Mr. Trevor O'Brien	to July 31, 1999

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

Reverend L. F. Murphy, S.J.	to August 31, 2000

Members Elected by the Board of Governors

Hon. Alan R. Abraham	to July 31, 2001
Mr. Paul Dyer	to August 31, 2000
Mr. David Grace	to July 31, 2001
Senator Wilfred Moore, Q.C.	to July 31, 2000
Mr. Fred Smithers	to July 31, 1999
Mr. David F. Sobey, O.C.	to July 31, 2000
TBA	
TBA	

Members Appointed by the Lieutenant-Governor in Council

Mr. John Fitzpatrick	to November 30, 199
Mr. Fred MacGillivray	to November 15, 199

Observer Elected by Support Staff

Mr. Greg Hilliard	to July 31, 2000

Academic Senate

Chairperson
Dr. Donald J. Naulls

Vice-Chairperson
Dr. Geraldine Thomas

Secretary
Mr. Kevin J. Cleary

Members Ex-Officio
Dr. Kenneth L. Ozmon, O.C. President
Dr. J. Colin Dodds, Vice-President (Academic and Research)
Dr. David H. Richardson, Dean of Science
Dr. Paul Dixon, Dean of Commerce
Dr. Michael J. Larsen, Dean of Arts and Acting Dean of Education
Mr. Rashid Tayyeb, Acting Librarian
Dr. Elizabeth A. Chard, Registrar
Mr. Keith Hotchkiss, Director of Student Services

Members Elected

To August 2001	To August 2000
Dr. M. Abdul-Masih	Dr. G. Corey
Dr. S. Crooks	Dr. G. Chauvin
Dr. W. Katz	Dr. T. Cheng
Dr. H. Nemiroff	Dr. J. Dostal
Prof. S. Walters	Dr. D. Naulls

To August 1999	Student Senators
Dr. K. Hill	Mr. Liam Arbuckle
Dr. E. Lee	Mr. Mike Gibbs
Dr. J. Reid	Mr. Trevor O'Brien
Dr. Geraldine Thomas	TBA
Prof. N. Young	TBA

Admission

Academic Regulations and Information

Registration

Admission

Students seeking admission to any academic program (except as noted below in 4), undergraduate or graduate, at Saint Mary's University should address all inquiries, requests for application forms, and correspondence to:

Director of Admissions
Saint Mary's University
Halifax, Nova Scotia
B3H 3C3
Telephone: (902) 420-5415
Fax: (902) 496-8100
e-mail: admissions@stmarys.ca;
international: admit.international@stmarys.ca

Helpful Numbers

(i) To arrange a personal interview

(ii) To arrange a presentation by a representative of the Admissions Office
Telephone: (902) 420-5415
Fax: (902) 496-8100

(iii) To inquire about the status of your Application for Admission
Telephone: (902) 420-5111

(iv) To arrange a tour of the campus
Telephone: (902) 496-8182

This subsection is indexed for easy reference:

1. Procedures for Admission to Undergraduate Programs

a. Applications from Canadian students (except those transferring from other post-secondary institutions) must reach the Admissions Office by 1 July for September admission; 1 November for January admission. For non-Canadian applicants, the deadlines are 1 April for September admission; 1 August for January admission. The deadline for receipt of applications from students who wish to transfer from another post-secondary institution to Saint Mary's University beginning in September is 1 June; beginning in January, the deadline is 1 October. Applications received after these deadlines will be considered on an individual basis. If an application cannot be processed due to time constraints, it will be considered for the next available session. Enclose provincial certificates or other accredited school certificates giving final grades or marks, and a processing fee of $35.00 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 Registrar in writing of their intent to return to the University before registering for any course, and must fill in a Data Sheet available from the Registrar's Office. The deadlines for filing this Data Sheet are the same as those found in 1a.

(ii) Students seeking to enrol in a different academic program, or who have not been registered during at least the preceding four years, or who have been required to withdraw, must apply for re-admission to the Director of Admissions (see Academic Regulations). The deadlines found in 1a apply.

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 a S.A.T.U.R.N. (Secure Access to University Restricted Network) 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:

(i) to revise this information and its own regulations and guidelines; and

(ii) to withdraw students' right to access their account for due cause.

2. Requirements for Admission to Undergraduate Programs

a. General Considerations

(i) 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. An acceptance is valid only for the two summer sessions preceding an academic year (i.e., May to August) and the academic year (i.e., September to May). It cannot be deferred. An applicant who does not register in this twelve month time frame must reapply for admission. Admission is not guaranteed.

(ii) 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.

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) Faculty of Arts: English 441 plus 4 additional academic courses, one of which may be coded 341;

(ii) Faculty of Science: English 441, Mathematics 441, 2 sciences at the 441 level, plus one subject at the 341 or 441 level;

(iii) Division of Engineering: English 441, Mathematics 441, Physics 441, Chemistry 441, plus one subject at either the 341 or 441 level;

(iv) Faculty of Commerce: English 441, Mathematics 441 or 442, and three other academic subjects, one of which may be coded 341.

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 Grade 13/OAC and satisfy the specific subject requirements as noted above in 2b.

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. United States
(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, CEEB and SAT score results.

g. Bermuda
In order to be considered for admission, students must complete Grade 12 with good standing or the British or Caribbean General Certificate of Education (GCE) with passes in at least five subjects, two of which must be at the advanced level, and satisfy the specific subject requirements as noted above in 2b.

h. United Kingdom, West Indies, West Africa, Hong Kong and Other Countries
In order to be considered for admission, students must complete the British or Caribbean General Certificate of Education (GCE) with passes in at least five subjects, two of which must be at the advanced level, and satisfy the specific subject requirements as noted above in 2b.

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); 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).

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 centres:

(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:

(a) TESL Centre
Saint Mary's University
Halifax, Nova Scotia B3H 3C3
Canada
Phone: 902-420-5691
Fax: 902-420-5122
e-mail: tesl@stmarys.ca

(b) Canada Chinese Language Centre
Beijing Normal University
Beijing 100088
People's Republic of China

(v) For the IELTS:

IELTS Scheme Officer
University of Cambridge Local Examinations Syndicate
1 Hills Road
Cambridge
CB1 2EU
UK

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

Note: Non-Canadian students on visas, student authorization, 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.

j. International Baccalaureate Diploma
Students may be considered for admission providing they have successfully completed the requirements for this diploma program and satisfy the specific subject requirements as noted above in 2b.

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 420-5492.

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

(i) Application forms may be obtained by writing, telephoning, faxing or visiting:
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@stmarys.ca

(ii) Send the completed application form with an application fee of $35.00; 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 to Non-Degree Status (NDS)

(i) Individuals interested in taking one or more courses at the University without being registered in an academic program can seek admission as a non-degree status student. Such students must meet the stated prerequisites for the course(s) for which they register. Students may take no more than five (5.0) credits as non-degree students. If non-degree students wish to continue to study at Saint Mary's beyond five (5.0) credits, they must formally be admitted to an academic program. Students who are subsequently admitted to aca-

demic programs from a non-degree status may count the university credits that they have earned as non-degree 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 enrol as non-degree students in Saint Mary's courses for which they have the necessary prerequisites.

(iii) Non-degree students must apply through the Office of the Director of Continuing Education. 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 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 in conformity with the principles and procedures stated in Academic Regulation 20. Failure to report all institutions previously attended may result in dismissal from the University.

c. Admission as an Upgrading Student
Students who already hold a degree or professional certificate may enrol in a course(s) to upgrade their qualifications. Special 'Application for Admission' forms are available in the Registrar's 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. Except in Education, the maximum number of courses in which a student is permitted to register under this admission category is five (5.0). The Dean of the Faculty in which a course(s) is offered may authorize an additional course(s) over this limit. In Education, the maximum number of courses permitted is two (2.0). Further information is found in Section 3 of this Calendar, specifically in "General Information and Requirements", Faculty of Education - Graduate Programs.

d. Admission as a Student Auditor
Students who are interested in auditing a course (see Academic Regulation 2 below) are required to complete a special 'Application for Admission' form available in the Registrar's Office which must be filed by the deadlines found above in 1a. Students are required to follow normal registration procedures. These students must meet any stated prerequisites for the course(s) for which they register and pay regular tuition fees.

e. Admission as a Special 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 to their home institution, must complete a special 'Application for Admission' form available in the Registrar's Office which, wherever possible, 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 Registrar at Saint Mary's. In all cases, grades for all courses for which students register will be forwarded to the students' home universities. Saint Mary's shall not be held responsible for meeting the deadlines for submission of grades of other universities.

Note: All deadlines as promulgated in this publication, including the Calendar of Events, apply to all students regardless of their admission category.

5. Graduate Admission
Admission to a graduate program at the University is covered in Section 3 of this Calendar.

Note: At the time of initial application to a degree, diploma, or certificate program involving credit courses, each student is issued with a Saint Mary's University I.D. number. This number must be shown on all transactions with the University. If after being accepted, a student opts not to register for the upcoming summer sessions or the academic year, the I.D. number is cancelled.

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 the Masters' programs are in Section 3 of this Calendar, while regulations pertaining to majors, honors, 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 (AA)	A computerized checking of courses completed by a student against the requirements for that student's academic program. An important aid for advising students. Sometimes referred to as a degree audit or academic progress report. This audit is an unofficial document.
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	Senior: one who has 13.0 or more credits Junior: one who has 8.0 to 12.5 credits Sophomore: one who has 3.0 to 7.5 credits Freshman: one who has 0.0 to 2.5 credits
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.
Admission	Acceptance of an applicant as a student.
Advanced Standing	Credit 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 Faculty of Science undergraduate program and for the Master of Business Administration Program].
Attendance Status	A student officially registered for at least 3 courses in a semester is considered to be "full-time", whereas a part-time student is registered for less than 3 courses in a semester. See Academic Regulation 1.
Audit	Formal registration for a course(s) for which academic credit is 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.

Bursary A monetary grant based on financial need. See Section 6 of this Academic Calendar.

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.

Corequisite A course which must be taken concurrently with another course which lists it as a corequisite.

Course A unit of study in a particular subject identified by a course title and a unique course number. The last digit of the course number designates the following:

.0 - full year course (6 semester hours)

.1 - first semester half-course (3 semester hours)

.2 - second semester half-course (3 semester hours)

Credit A unit of academic value earned within a particular program. One credit (1.0) is granted for each successfully completed full year course (designated .0 - i.e., EGL 306.0); a half-credit (0.5) is granted for a successfully completed one-semester course (designated either .1 or .2 - i.e., EGL 201.1 or EGL 201.2). In this Calendar, the term "credit" normally refers to a full credit, i.e., 1.0.

Credit 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.

Cross-Listed Courses Courses which are listed under two different numbers in two different departments/academic units. Cross-listed courses may be taken through either department/academic unit, but credit may be earned for only one of the courses.

Dean Also called Dean of the Faculty; the chief academic administrator of a Faculty.

Elective A course not specifically required by a student's program of studies. Various types of electives exist, such as "free" and "non-Commerce".

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.

Full-time See "Attendance Status" above.

Grade The letter indicating an instructor's evaluation of a student. See Academic Regulation 5 (undergraduate) and Graduate Regulation 6 (graduate).

Honors The main subject area of study in a degree program, chosen in addition to or in lieu of a major(s).

Instructor A member of faculty.

Letter of Permission An official document issued by Saint Mary's to enable its own student to register for a course(s) at another post-secondary institution and to guarantee transfer of the credit for that course(s) to the student's academic program. See Academic Regulation 21.

Major A formal, specific subject area of study within an academic unit as defined by its degree program.

Non Degree Status (NDS) 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.

Part-time See "Attendance Status" above.

Preparatory Course Nova Scotia Grade 12 equivalent course designed to prepare students for entry level course work. No academic credit is awarded toward any degree, diploma, or certificate. A preparatory course's number begins with zero (0).

Prerequisite A course for which credit must have been earned prior to registration in another course, lab, or recitation which lists it as a prerequisite. ["Permission of Instructor or Chairperson" may be listed as an alternative to, or in addition to a given course prerequisite(s).]

Probation A conditional status assigned to a student who has shown evidence of academic weakness. See Academic Regulation 7.

Program An approved combination of courses in a subject area(s) which fulfills the requirements for a degree, diploma, or certificate.

Qualifying Year Students may be required to complete one or more courses to qualify for a graduate program.

Registration The process of officially selecting courses, labs, and recitations AND making the appropriate arrangements with the Business Office for payment of all required fees. See the "Registration" component of Section 2 of this Academic Calendar.

Satisfactory academic standing (standard) Maintaining a quality point average of at least 1.70 if an undergraduate; at least 3.00 if in a graduate program.

Scholarship A monetary award based on academic achievement

Semester A term or period of instruction corresponding to one-half of the academic year; each semester lasts approximately fourteen weeks. The fall or first semester extends from September to December; the winter or second semester, from January to April.

First Summer Session (mid May to late June) is also a session or semester as is the Second Summer Session (July to mid-August).

Session A formal, fixed period of time in a calendar year when classes are offered. There are three sessions each year, namely, the academic year (September to April); the first summer session (early May to late June); and the second summer session (early July to mid August).

Special 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.

Subject Also called a discipline; a specific field of study, e.g., Accounting, Chemistry, History.

Summer Sessions Periods of instruction normally lasting six to seven weeks during the months of May

	through August. Two summer sessions are offered each year - the First Summer Session from mid May to late June; the Second Summer Session from early July to mid August.
Term	Same as "semester".
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.
Transfer Credit	Credit granted for work completed at another post-secondary academic institution after admission and initial registration at Saint Mary's.
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.
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.
Year of Study	Attaining a degree, diploma, or certificate depends mainly upon earning credits 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 in the number of courses normally specified on an annual basis for their academic program. The following are the credit totals required for each year of study.
	Year 1: 0.0 - 5.0 credits
	Year 2: 5.5 - 10.0 credits
	Year 3: 10.5 - 15.0 credits
	Year 4: 15.5 - 20.0 credits
	Year 5: 20.5 - 25.0 credits

Explanation of Abbreviations

Accounting	ACC
Advanced Management Accounting Program (formerly Diploma in Management Accounting)	DMA
Aegrotat Standing	AE
Anthropology	ANT
Asian Studies	ASN
Astronomy	AST
Astrophysics	ASP
Atlantic Canada Studies	ACS
Academic Audit	AA
Audit	AU
Biology	BIO
Business Administration	BUS
Certificate of Chinese Studies	CHS
Certificate of German Language and Culture	GLC
Certificate of Human Resource Management * Management Option	HRM
* Psychology Option	HRP
Certificate of Japanese Studies	JPS
Certificate of Spanish Language and Hispanic Culture	SHC
Certified Management Accountant Program	CMA
Chemistry	CHE
Chinese	CHI
Classics	CLA
Commercial Law	CML
Communication	COM
Computer Information Systems (formerly Data Processing Management - DPM)	CIS
Computing Science and Business Administration	CSC
Computing Science	CPS
Co-operative	COP
Co-operative Education Program in Accounting	COEA
Co-operative Education Program in Biology	COEB
Co-operative Education Program in Chemistry	COEC
Co-operative Education Program in Computing Science	COES
Co-operative Education Program in Geology	COEG
Creative Writing	CRW
Credit	CR
Criminology Certificate Program (formerly CCP)	CRM
Data Processing Management (now Computer Information Systems - CIS)	DPM
Diploma in Management Accounting (now Advanced Management Accounting Program)	DMA
Directed Independent Study	DIS
Economics	ECO
Education	EDU
Egyptian	EGP
Engineering	EGN
English	EGL
English for Academic Purposes	EAP
English as a Foreign Language	EFL
English for Personal and Professional Communication	EPPC
English as a Second Language	ESL
English for Specific Purposes	ESP
Environmental Planning	ENP
Environmental Studies	ENV
Executive Master of Business Administration	EMB
Finance	FIN
French	FRE
General Business Studies	GBS
Geography	GPY
Geology	GEO
German	GER
Global Business Management	GBM
Graduate Diploma in Criminology	G.Dip.(CRM)
Graduate Diploma in International Development Studies	G.Dip.(IDS)
Greek	GRE
Hebrew	HEB
History	HIS
Human Resource Management (formerly Personnel and Industrial Relations)	PIR
Image Studies	IST
Incomplete	IC

ependent Study Program	ISP
ormation Technology	IT
Progress	IP
rnational Development Management	IDM
rnational Development Studies	IDS
sh Studies	IRS
lian	ITA
panese	JPN
in	LAT
guistics	LIN
nagement	MGT
nagement Consulting Project	MCP
nagement Science	MSC
nagement Studies	MST
rketing	MKT
ster of Business Administration	MBA
BA Consulting Project	MCP
thematics	MAT
losophy	PHI
ysics	PHY
itical Science	POL
ior Learning Assessment and Recognition	PLAR
ychology	PSY
ligious Studies	REL
cure Access to University Restricted Network	S.A.T.U.R.N.
-operative Education Program in Small Business/Entrepreneurship	SBE
ciology	SOC
anish	SPA
st of Written English	TWE
thdrawal	W
men's Studies (undergraduate)	WMS
men's Studies (graduate)	GWS

is subsection is indexed for easy reference:

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.

2

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

a. 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 five courses per semester; while in the Division of Engineering, six courses per semester constitute a normal full-time load. Undergraduate students registered for at least three courses in a semester are considered to be full-time, while students registered for fewer than three courses 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. In the case of graduate students, the normal academic and fiscal definitions of full-time and part-time apply as delineated above in this regulation and in Section 6 of this Calendar, except in the instance where official verification has been received by the Registrar from a student co-signed by the Department Chairperson/Director indicating that the individual is working on a full-time basis on a dissertation, thesis, major research paper/project, or is employed on an official Co-operative Education work term for which the student has officially registered. The verification is valid only for a single academic term but can be extended on the authorization of the Department Chairperson/Director. A special form for this purpose is available from the academic unit in which the student is enrolled.

b. Students who have earned at least five (5.0) credits at Saint Mary's may elect to take up to an additional (1.0) course in the regular academic year. Permission is not required for such an overload.

c. Students may take up to three (3.0) courses during any one summer, i.e., May to August.

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 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, honors, or minor will be advised by the Chairperson of the appropriate departments or their appointees. All other students should seek advice from the Dean of their Faculty (Associate Dean in Arts and Commerce) who will, if necessary, assign special academic advisors.

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

(i) all students who are on academic probation as defined in Regulation 7d;

(ii) all students who have previously incurred probationary status and who, upon the completion of any subsequent course(s), have not yet achieved a minimum cumulative quality point average of 1.70;

(iii) all students who do not attain a quality point average of at least 1.70 in any given semester;

(iv) all students who are resuming their studies after having been required to withdraw from the University because of academic weakness [see Regulation 7i(iii)].

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.

5. Undergraduate Rating, Grades and Quality Points

The undergraduate grading system was revised prior to 1 September 1997 and these revisions were made applicable to all students registered for undergraduate credit courses from 1 September 1997 onward. A number of the University's academic regulations had to be revised in conjunction with these revisions to this grading system.

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

Grades	Quality Points (Full Courses)	Quality Points (Half Courses)	Percentage Equivalents	Ratings
A+	4.300*	2.150*	80-100	Excellent
A	4.000	2.000		
A-	3.700	1.850		
B+	3.300	1.650	70-79	Good
B	3.000	1.500		
B-	2.700	1.350		
C+	2.300	1.150	60-69	Satisfactory
C	2.000	1.000		
C-	1.700	0.850		
D	1.000	0.500	50-59	Marginal Pass
F	.000	.000	0-49	Failure or withdrawal after deadline (see 16 below)

***In November 1997, the Senate of Saint Mary's University voted to have the A+ grade carry 4.30 quality 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 quality 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. To receive a passing grade in a course, students normally mu complete all course requirements, including all tests and examina tions. Students' attention is directed to the fact that those course carrying double numbers, i.e., HIS 517.0 (617.0) will require additi work and a higher level of academic performance from students r istering for the higher number. If students are unsure about the requirements, they should check with the faculty member offering course.

e. Students who have not completed the work of the course ma special circumstances and with the prior written authorization of t Dean of the Faculty, be given the grade IC (incomplete) by the instructor. The IC (incomplete) grade will be considered permanent those instances where students do not complete the work of the course and do not take any steps to have themselves deregistered from the course. The IC grade will be regarded as a failing grade a so calculated into any quality point averages.

f. A grade of IP (in progress) may be assigned in that instance where students do not complete the work in honors courses and o theses on time. Furthermore, in those instances where students n finish the work, the IP will be considered a permanent grade. The i grade will not attract any quality points and therefore will not be ca culated into any quality point averages.

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

h. In cases where through no fault of the student, grades have no been received and processed by the deadline stipulated by Senat temporary grade of AI ("administrative incomplete") will be assigne but will not be included in the calculations of quality point and cum lative quality point averages. This temporary grade of AI is assigne by the Registrar.

I. Once a final grade has been determined, supplementary exami tions or any additional assignments for the purpose of changing th grade are not permitted.

6. Quality Point Average

a. A quality point average (abbreviation: qpa) is used to determin the standard of a student's performance for the academic year.

b. Each letter grade is given a quality point equivalent as descrip in 5a above.

c. The quality point average is computed at the end of each acad mic year by dividing the total number of quality points obtained th year by the total number of credits taken.

d. The cumulative quality point average (abbreviation: cqpa) is based upon all courses taken for credit in any Faculty at Saint Mar after 1 September 1974 other than those for which grades AE, W, WP have been given. Courses for which grades of F or WF have been given are included in the calculation of the quality point avera even if such courses are subsequently retaken and passed.

e. Grades for courses taken at other institutions for which advan standing or transfer credit is given are not included in calculations a quality point average, a cumulative quality point average, or in ca culations for determining awards and distinctions.

7. Standing Required

a. The regulations governing continuance in a program are those effect at the time students first register in that program, except as provided under (b) below.

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

c. Satisfactory Standing

(i) To qualify for a Bachelor's degree in Arts, Science, or Commerce; also a Diploma in Engineering, and a Certificate (unless higher cumulative quality point average has already been formally stipulated); a student must achieve a minimum cumulative quality point average of 1.60 for graduation in the spring and fall of 1999; and 1.70 for all graduations from the spring of 2000 onward.

(i) To qualify for a Bachelor's degree in Education, students required to maintain a quality point average of at least 2.00. For dual courses the pass mark is D, with the exception of Practice ching I, II, and III for which the pass mark is C. No supplementary inations are provided.

(ii) To earn a Master's degree, a student must achieve a cumuve quality point average of at least 3.00. For this reason, performnce in any individual course below the grade of B or a quality nt average below 3.00 in any given semester is considered unsatctory (see paragraph 6 in Section 3 of this Academic Calendar).

Probationary Status
Probationary status is incurred:

(i) if, at the end of any academic year (i.e., on or about 1), full-time students have attained a quality point average ween 1.00 and 1.69 for that year;

(ii) if, at the end of any academic year (i.e., on or about 1), part-time students have attempted at least 5.0 credits and ined a quality point average between 1.00 and 1.69 (all credits empted between 1 May of a preceding year and the current year be included such that at least 5.0 credits have been attempted).

(iii) on readmission after being required to withdraw because of demic weakness [see (i) below];

(iv) if students are required to confer with their academic advi- and fail to do so or fail to make appropriate efforts to resolve blems which are affecting their academic performance.

Removal of Probationary Status
Probationary status is removed:

(i) if, at the end of any academic year (i.e., on or about 1 May) -time students on academic probation have attained a minimum lity point average of 1.70 on all courses attempted since being ced on probation.

(ii) if, at the end of any academic year (i.e., on or about 1 May) -time students on academic probation have earned at least five credits since being placed on probation and attained a minimum lity point average of at least 1.70.

tes:
Transfer to a different Faculty does not remove probationary sta-

Unless the permission of the Dean of the Faculty has been ained in advance, courses taken at another educational institution not be used to remove probationary status. This is normally not nted.

Probationary notations are retained permanently on students' demic records.

Required Academic Counselling
dents whose academic performance at the University is unsatisctory may be required to confer with their academic advisor.

Required Withdrawal
the end of each academic year (i.e., on or about 1 May) withdrawal m the University for a minimum of one calendar year is required:

(i) for all students (both full-time and part-time) on academic bation who have attempted and earned real grades (i.e., all grades t W's) in at least five (5.0) courses since being placed on academic bation and fail to attain a minimum quality point average of 1.70 all courses attempted since being placed on academic probation;

(ii) if students on academic probation fail to comply with any cific formal conditions governing their probation;

(iii) if, at the end of any academic year (i.e., on or about 1 May) -time students have attained a quality point average less than 1.00 that year; or

(iv) if, at the end of any academic year (i.e., on or about 1 May) t-time students have attempted at least five (5.0) courses and ined a quality point average less than 1.00. [All courses attempt- between 1 May of a preceding year and the current year will be luded such that at least five (5.0) courses have been attempted.]

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

te: No credit will be given for any course(s) taken at another insti- on during the period of required withdrawal.

h. Ad Hoc Tribunal
To ensure as smooth and as equitable a transition to academic regulations concerning the quality points affixed to individual grades as revised in 1996-97 and which became operative for all students on 1 September 1997, Senate established an Ad Hoc Tribunal to resolve any student appeals arising out of the changes in grade weightings, and the new QPA requirements of 1.70 for probation, removal of probation, and graduation. The composition of the Tribunal shall be (i) three faculty members, appointed by the Deans of the Faculties; (ii) a student who has completed at least 50% of his/her undergraduate program and is not on academic probation, appointed by SMUSA and chosen from among the SMUSA student representatives in Arts, Commerce and Science; (iii) the Registrar (or designate); and (iv) a non-voting Chairperson appointed by Senate. The decisions of this Academic Tribunal are final. A $25.00 prepaid processing fee, refundable in the case of a successful appeal to the Tribunal, is required with any application. Students are to file their appeal letters and the requisite appeal fee with the Registrar.

i. 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, and who wish subsequently to be readmitted, must apply to the Admissions Office by the deadlines stipulated above in Admissions Regulation 1a.

(iii) If readmitted, students will be placed on academic probation and must fulfill the terms outlined in their letter of readmission. 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 probationary status and dismissal are sent to the permanent address on file in the Registrar's Office, unless an alternate summer address has been received by the promulgated deadline. Therefore students are urged to ensure that this address is both accurate and complete.

8. Examinations
a. At the end of a semester, at the discretion of the Department concerned, a formal examination may be held during the special periods set aside for this purpose in December and in April.

b. All formal examinations held during the above periods are to be scheduled by the Registrar. The maximum time allowed for each examination is three hours.

c. (i) In a two-semester 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 one-semester course, no single test given in a regularly scheduled class period (50 minutes or 75 minutes) shall contribute more than 35% of the overall evaluation for that course.

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.

To facilitate this, students can access and print off the S.A.T.U.R.N. project a copy of their own personal formal examination 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.

Students are required to present their valid Saint Mary's University student identification cards at all tests and examinations for possible verification of their 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 (in the case of Science and Education) or the Associate Dean (in the case of Arts and Commerce) 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. Supplementary examinations are not offered.

9. Evaluations

a. At the end of each semester, instructors will 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:

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; and 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.

b. First semester Grade Report forms are no longer produced and are hence not available for students to pick-up at the beginning of the second semester. Students can view their grades in the S.A.T.U.R.N. project approximately twenty-four hours after these have been received and processed.

c. As soon as possible after the conclusion of the academic year and each summer session, Grade Report forms showing the final grades for all courses in which students were registered are mailed to the students' permanent addresses, unless an alternate address card has been duly filed with the Registrar by the advertised deadline.

d. In the case of courses taught over the first three weeks of a summer session, final grades will be posted outside the Registrar's Office as soon as they have been received and processed. They are also available on S.A.T.U.R.N. Grade Report forms will be processed and mailed as soon as possible after the completion of that summer session. Transcript requests for such courses cannot be honored until a particular summer session has been completed in its entirety.

e. 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.

f. Grades given at the end of a semester shall not be made known to students except by the Registrar.

g. 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. A special examination may be arranged:

(i) if students present a legitimate reason, acceptable to the Dean of the Faculty, for not having taken a final examination on the scheduled date; or

(ii) if students have failed a course in exceptional circumstances which the instructor and Dean of the Faculty are satisfied justify a special examination being given; or

(iii) if the Committee on Academic Appeals has made a judgement that a special examination be given.

b. The standard grading system (see Academic Regulation 4) will be followed.

c. Special examinations will be scheduled by the Registrar. Except in the case of a(iii) above, a pre-paid processing fee of $10.00 for one examination and $20.00 for two or more examinations will be charged. This fee is to be paid the Registrar prior to the examination being written.

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 their 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.

(ii) It is the responsibility of students and instructors to provide the Committee with all relevant available material on which the grade was based, such as examinations, tests, exercises, papers, reports and other graded material.

(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 students, they shall submit their 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.

c. Decision

Within one month, if possible, 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 $25.00 fee. Further appeal under (d) above requires an additional payment of $25.00. In the event of a decision favorable 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 without Final Examination

Students who, for medical or compassionate reasons, have been unable to write the final examination in a course but who have satisfactorily completed the other requirements, may apply to the Dean of the Faculty for a credit 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 for the course but are unable to determine a precise

ity point grade, then they will assign the grade of AE (aegrotat). grade will not be included in computing the quality point aver-. Students may apply for aegrotat standing for a maximum of five rses during their undergraduate program. This grade of AE is ilable only as a final grade and therefore cannot be awarded at year for full credit courses, i.e., those designated .0.

Course Changes

At the beginning of each academic session, a period of time is vided for students to alter their registration without the change ng noted on their permanent records. During these periods, and ject to availability, a course (or section of a course), lab, or recita- may be added, dropped or exchanged for another.

For all these changes the period of time required from the first cial day of classes is:

(i) five working days during the academic year; and

(ii) three days during a summer session.

Changes can be effected only by filing with the Registrar a nge of Registration form indicating the desired change(s). Consult Calendar of Events for specific dates.

Only in extraordinary cases will a Dean or Associate Dean autho- any course changes after the time deadlines. Special forms for purpose are available only from those with this signing authority.

rning: Students are responsible for all required work in the course rdless of the date of their entry into the course. Tuition fees are ged from the first day of classes, even when a student registers e.

Students cannot be registered in a course, lab, or recitation ich has reached its maximum enrolment and hence regarded as . In exceptional circumstances, heads of academic units (i.e., irperson, subject area representatives, directors of divisions, or a coordinators) may authorize a student officially pursuing a Saint ry's degree, diploma, or certificate program to register in a closed rse, lab, or recitation. Special permission forms required for this horization are distributed only to those with signing authority.

Only in extraordinary cases will a Dean or Associate Dean autho- any change(s) to registration after the stipulated deadline. Special horization forms must be used.

With respect to second semester courses (i.e., those designated .2), once the regular designated change of registration period is r, students can undertake registration at the Registrar's/Records ice until the second Friday of December. A monitor mounted ove the door adjacent to Room MM134 shows which courses and tions of courses, labs, and recitations are closed and hence available for students' registrations. From that date in December til the reopening of the University in January, no registrations or nges of registration can be undertaken.

Declaration or Change of Major, Area of Concentration, nors, or Minor

In order to declare or change a major, area of concentration, hon- or minor, students must file a Declaration of Major form with the gistrar. This form must have been signed by the Chairperson of the partment in which the student has been authorized to pursue a jor, area of concentration, honors, or minor. Students are strongly ed to declare their major, area of concentration, honors, or minor ore registering for their final ten (10.0) credits and before 1 June. clarations filed from 1 June to 15 September will not affect the stu- nt's category and priority for registration purposes in that particular ar.

The regulations governing the major, area of concentration, hon-, or minor program will be those in effect at the time of declaration change.

Students are advised that general regulations governing majors, as of concentration, honors, or minors are found below in subsec- n (d) of this regulation, and also in Academic Regulations 20 and ; specific Faculty regulations are found in Section 3 of this lendar; and specific departmental and subject area regulations are nd in the relevant parts of Section 5.

Commencing on 1 September 1997, the following regulations vern a student's minor:

(i) Ordinarily a student can declare only one minor but that be extended to two with the permission of the Dean (or desig- te) of the Faculty.

(ii) A minimum cumulative quality point average of 2.00 is required for courses designated for a minor program.

(iii) Consistent with individual faculty requirements, a range of courses between four (4.0) and five (5.0) shall be instituted for each academic unit which offers a minor program.

(iv) Within each minor program, a minimum of 50% of the courses must be earned at Saint Mary's University. Students should consult the Academic Calendar references for the faculties (Section 3) and the academic units (Section 5) for any additional and specific requirements for minor programs.

e. Students must file a Change of Registration form indicating the dropping of their major, area of concentration, honors, 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.

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. Upon receipt of such a Change of Registration form, the Registrar, on the advice of the Dean of the Faculty, will inform the students of the number of credits being transferred to their chosen academic program. Students should be aware that a change of Faculty is not automatic and will not be processed during registration periods; therefore students are strongly encouraged to file for a change of faculty by 15 June. Changes made from 15 June to 15 September will not affect the student's category and priority for registration purposes.

Students on probation at the time of authorized transfer of Faculty or academic program automatically remain on probation.

16. Withdrawing from a Course

a. In the case of half-credit courses, after the time limits indicated in 13b above have expired, and provided the half-course still has one-quarter of the instruction time remaining, students may withdraw from the course. In the case of full credit 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.

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 to be the same as individual courses. Hence academic regulations, procedures, and deadlines apply to all types of changes.

Notes:

(a) All withdrawals must be made officially on Change of Registration forms available from the Registrar. Should it not be possible for students to obtain such a form, 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.

(b) 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. Although all grades, including failing grades, count in computing quality points for the year and for the degree, each course counts only once as a credit in the academic program.

b. In the cases where courses have been renumbered, changed in

level, or where a full credit course has been split into two half-credit courses or vice versa, a student who received credit recognition for the original course is not entitled to repeat the course in its new format or on its new level for additional credit recognition.

c. Students will not ordinarily be given credit 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 Responsibility

a. 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 every effort 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. One 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.

b. Plagiarism

Plagiarism is the presentation of words, ideas or techniques of another as one's own. Reference to or appropriation of another's work whether by direct quotation or paraphrase must be acknowledged by proper citation. When in doubt, one should seek the advice of the instructor before submitting the work. The above definition of 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).

Submission of the same piece of work for credit in more than one course is usually not permitted. The approval of the instructors of the courses involved must be obtained in advance.

c. Examinations

Cheating is the attempt to secure a grade by unethical means. Knowingly assisting someone to cheat is itself cheating. Cheating would include such practices as

(i) arranging for someone to impersonate oneself at an examination or the impersonation of another at an examination;

(ii) requesting, providing or accepting unauthorized assistance on a test;

(iii) possession of unauthorized materials at a test;

(iv) unauthorized procurement of a copy of an exam.

Anyone observed committing one of the above offences is presumed guilty of cheating unless the student can establish his/her innocence.

d. Other

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

Notice is hereby provided that documents in a student's official file may be examined and routinely verified. Evidence of falsified or misleading documents will result in an investigation which in turn, may lead to disciplinary action including the possibility of dismissal from the University. The University reserves the right to share this information with the members of the Association of Universities and Colleges of Canada (A.U.C.C.).

It is an offence to tamper with University library materials or computer system resources in any way which would deprive others of their use. The unauthorized copying, reading or use of programs or files are not permitted.

e. Sanctions

Usually, on the first offence of cheating or plagiarism a mark of zero will be assigned to the work in question. The student will not be permitted to withdraw from the course. The instructor will inform the student, Deans of the Faculty in which the student is registered and/or the Faculty in which the course is taught, and Registrar, in writing, of the offence.

In the event of a second offence, or serious first offence, the University may impose one or more of the following sanctions:

(i) a grade of F in the course;

(ii) a record of the offence on the student's transcript;

(iii) suspension from the University;

(iv) dismissal from the University;

(v) revocation of degrees, diplomas or certificates.

Withdrawal from a course prior to the discovery of the offence does not restrict the University's right to take action. Further information found below in the Student Discipline sub-section of Section 8.

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, if appropriate, in consultation with the Dean of the Faculty. To obtain a first baccalaureate degree or a diploma, they must fulfill all requirements for that degree or diploma and successfully complete a minimum of 50% of the credits required for their academic program at Saint Mary's, of which a minimum of four (4.0) credits must be in the students' major or area of concentration. In the case of students in an honors program, the minimum number of credits required to be taken at Saint Mary's is 50% of the course stipulated for their program, of which a minimum of ten (10.0) credits must be in the subject(s) of honors.

For students admitted to the Faculty of Commerce, there is a special agreement for Transfer of Credit from The Nova Scotia Community College. For further details, consult Section 3 of this Calendar - Undergraduate Programs, Faculty of Commerce, or the Dean or Associate Dean of Commerce.

Notes:

(i) 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.

(ii) Advanced standing will be given only for courses with satisfactory grades as required by the relevant Saint Mary's program. In May 1995, Saint Mary's University signed the Pan-Canadian Protocol on Transfer Credits. As a result, students are able to transfer all first and second year courses which they have passed (even with a 50 or a D grade) to their academic program at Saint Mary's. In doing so, however, the clearly delineated regulations for graduation and entry into specific courses and programs remain as stated in this Academic Calendar and will not be adjusted to accommodate these transfer credits from other post-secondary institutions. In short, therefore, students who have courses transferred in accordance with this Protocol may not always be able to apply them to their particular academic program(s). Except for first and second year courses from other Canadian post-secondary institutions governed by the Protocol, grades of D or lower are not acceptable for undergraduate programs, grades of B- or lower for graduate programs.

(iii) 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 assessment of the number of credits that students must complete to satisfy their academic program is final.

(iv) Students receiving advanced/transfer credits are advised to consult carefully Academic Regulation 29 concerning the minimum number of credits at Saint Mary's University for qualification for a distinction.

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. For further information contact the Office of Continuing Education.

For further information on credit granted for work done prior to admission to Saint Mary's, see Admission Requirements.

Transfer Credit

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 to an academic program at Saint Mary's. Students applying for such permission must provide the Registrar with a full description of the course(s) involved. The description from the academic calendar will suffice. The Registrar will notify the students of the Dean's decision and, if permission has been granted, will forward a Letter of Permission directly to the institution which students are permitted to study. Students are responsible for completing the proper application and registration procedures at the designated institution. These same procedures apply to summer session courses.

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 are a few formal exchange programs, details of which are available from the Business Office. These include, but are not limited to, the New England-Nova Scotia Student Exchange Program, exchange program with the University of Glasgow (Scotland), and the Canadian Universities Student Exchange Consortium (CUSEC).

In cases where the University has entered into a special arrangement with another educational institution for shared instruction in a particular program, the normal application and registration procedures will be followed.

In the case of distance education courses (including those by correspondence), the normal procedures for transfer credits are to be followed. In addition, proof must be presented that the institution offering the correspondence course also recognizes it for credit purposes toward an academic program.

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

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, honors, or minor program. For graduate programs, no transfer credit will be given for courses with grades below B (or the equivalent).

Note: Students should note that at least 50% of all courses for any academic program (degree, diploma, or certificate) must be taken at Saint Mary's.

Except under the above provisions, students may not register concurrently at Saint Mary's and at another academic institution. Should a student's concurrent registration be discovered, the University, on the advice of the Dean of the Faculty concerned, reserves the right to deny the student any credit(s) for the course(s) taken at another institution and to cancel that student's acceptance for registration at Saint Mary's University.

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

Advanced Standing Credit by Examination for Undergraduate Degree Programs

Such credits are no longer available.

Students Whose First Language Is Not English

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.

Requirements of Two Academic Programs (Dual Program)

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 credits 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 honors in another; and degree and certificate programs such as the Criminology Certificate program. 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. Also see Registration Regulation 6 below.

b. It is possible to satisfy simultaneously the requirements for two baccalaureate degrees in the Faculties of Arts, Commerce 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) and also achieve a minimum cumulative quality point average of 3.00 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 credits required will be 50% of the number stipulated for a first undergraduate degree. Specifically, therefore, for a Bachelor of Arts degree and a Bachelor of Science degree with a concentration, a minimum of 7.5 credits will be required; for a Bachelor of Science degree with either a major or honors, as well as a Bachelor of Commerce degree, the minimum number of credits will be 10.0. 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 their credits at Saint Mary's. Any credits that have been used to satisfy the requirements for any previous academic credentials will not be permitted to count again for this second baccalaureate degree.

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 at least three months prior to the academic session in which they expect to officially register for that second degree program.

26. Certificate of Honors Equivalency

a. The Certificate of Honors 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 honors 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 Honors Equivalency, students must complete all the requirements for the appropriate honors program.

b. Students who have earned a first undergraduate degree from another post-secondary institution are not eligible for the Certificate of Honors Equivalency but may enrol as upgrading students if they wish to take additional courses to qualify for admission to a Master's degree program.

27. Convocation Dates, Degrees, Diplomas, and Certificates

a. Students MUST file an Application for Graduation from a specific academic program with the Registrar by the dates stipulated in the University Calendar of Events and pay the graduation fee. This fee does not have to be paid when the application is filed. If, at the discretion of the Registrar, there are circumstances which warrant waiving the stipulated deadline for filing the graduation application, the student will be assessed twice the normal graduation fee or permitted to wait until the next Convocation in order to graduate. If during the course of the students' 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 honors to major), it will be necessary for the student to reapply for graduation, and the above-noted deadlines will apply as will the Registrar's discretionary authority.

b. Normally there are two Convocations annually, in May and in October. Once all requirements are completed, students must gradu-

ate 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 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 in the academic regalia appropriate to their 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 honors is shown on the parchment.

e. The University grants the following degrees:

Bachelor of Arts	B.A.
Bachelor of Commerce	B.Comm.
Bachelor of Education	B.Ed.
Bachelor of Education (Vocational Education)	B.Ed.(Voc.)
Bachelor of Education (In Association with The Nova Scotia Teachers College)	B.Ed. (N.S.T.C.)
Bachelor of Science	B.Sc.
Master of Arts	M.A.
Master of Business Administration	M.B.A.
Master of Education	M.Ed.
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 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 of Chinese Studies	CHS
Certificate of German Language and Culture	GLC
Certificate of Human Resource Management	CHR
Certificate of Honors Equivalency	-
Certificate of Japanese Studies	JPS
Certificate of Spanish Language and Hispanic Culture	SHC
Co-operative Education Certificate	Coop
Diploma in Engineering	D.Egn.
Graduate Diploma in Criminology	G.Dip.(CRM)
Graduate Diploma in International Development Studies	G.Dip.(IDS)

f. Details of the University's policies on the reissuing of parchments are available from the Registrar. If re-issued, the cost is $50.00 plus applicable taxes.

g. Students whose accounts 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. Failure to give such notification will result in a $10.00 penalty, which must be paid in addition to the graduation fee before the parchment or any other proof of graduation will be prepared and released.

29. Distinctions
a. (i) In the undergraduate degree and diploma program, distinctions are awarded to successful candidates on the basis of the following quality point averages in respect of the courses specified in (b) below.

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

(ii) Bachelor's degree with honors: A Bachelor's degree with honors will be awarded with the distinction "First Class" when the cumulative quality point average for all courses taken at Saint Mary's is at least 4.00. Otherwise the honors degree will be awarded with special distinction.

b. The above-noted quality point averages will be calculated on the basis of all courses taken at Saint Mary's. Students must have taken 75% (80% in Engineering) of their courses at Saint Mary's to qualify for a distinction. In the case of the honors degree, students must have taken a minimum of 85% of their courses at Saint Mary's to qualify for a distinction. In terms of specific academic programs, the details are as follows:

B.A.	Major:	12.0 courses	Honors: 17.0 courses
B.Comm.	Major:	15.0 courses	Honors: 17.0 courses
B.Sc.	Concentration:	12.0 courses	Major: 15.0 courses
			Honors: 17.0 courses
B.Sc./Dip.Eng.		12.0 courses	
Dip.Eng.		10.0 courses	

The only exception to this is when the student has earned the equivalent of five (5.0) credits at Centre international d'etudes franÁaises (C.I.D.E.F.) de l'UniversitÈ catholique de l'ouest, Angers, France; and from exchange programs with which Saint Mary's University has entered into formal agreements.

c. No distinctions are awarded in graduate, education, and certificate programs.

30. University Medals
At each Spring Convocation the following are presented:

a. Governor General's Gold and Silver Academic Medals
These medals are awarded annually to the graduate (gold) and the undergraduate (silver) deemed to be the top candidates at their respective levels of study.

b. Faculty and Division Medals
In the Faculties of Arts, Science, and Commerce; and in the Division of Engineering, medals are awarded to the undergraduate students with the highest cumulative quality point average. Medals are also presented to the students with the highest cumulative quality point averages in the M.A.(IDS); M.Sc.(Applied Psychology); M.B.A., and E.M.B.A. graduate programs.

Notes:
(i) In the case of undergraduate degrees and diplomas, the cumulative quality 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.

(ii) Students who graduate at Fall 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 routes 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 quality 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 five (5.0) courses during that academic year, have achieved a minimum quality point average of 3.67, and received no "F" grades. In instances where Saint Mary's has authorized a student to enrol 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 five (5.0) and which gives the required minimum quality 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.

(i) For students registered in less than five (5.0) courses in an academic year to qualify for placement on the Dean's List, they must have taken and completed overall at least five (5.0) courses. They must have achieved a minimum quality 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 five (5.0) additional courses 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.

2. Students' Academic Records and Transcripts

Students' academic records, including their official University records, 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 and the country. 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.

Students' transcripts of records are privileged information and to that end will not be released by the Registrar to those 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.

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 busy periods.

Commencing In the February 1998, a "Same Day/Next Day Transcript Service" was launched to provide students/alumni with an express service for ordering and receiving their transcripts. Details on these express services follows.

Same Day Transcript Service

Requests must be received at the Registrar's Office by 10:00 a.m. for pick-up, mailing or faxing by 4:00 p.m. the same day.

Next Day Transcript Service

This is offered within a 24 hour period during regular business hours. For example, if the request is received by 2:00 p.m. the transcript(s) will be ready for pick-up, mailing, or faxing by 2:00 p.m. the following day.

Fees

There is an additional service charge:

SAME DAY $12.00
NEXT DAY $10.00

This fee is over and above all other charges, i.e. the $5 per transcript fee, faxing, and if applicable, courier charges. It is recommended that transcripts be picked-up when ready. Students who wish to have a transcript mailed should be aware that outgoing mail does not leave the University after 1:30 p.m. daily.

Blackout Periods

These express transcript services will not be operational for the first three working days of January or May. Next Day and Same Day Transcript Service will NOT be applicable to those individuals who graduated Saint Mary's University prior to the 1973-74 academic year.

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 honors;

(ii) advanced standing and/or transfer credits;

(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.

e. The cost is $5.00 for each copy which must be received before the transcript is issued. Official transcripts are those forwarded directly from the Registrar's Office to an official third party. If detailed course descriptions are also required, there will be an additional fee of $1.00 per description. Students whose accounts are in arrears will be denied transcripts until the debt is cleared.

f. Upon prepayment, the University is prepared to fax a transcript which has been ordered in the official manner. Students are advised to check beforehand with the receiving institution to ensure that a transcript received by fax will be acceptable. The prepaid fees for faxing a transcript are: $7.00 - Halifax Metropolitan Area; $10.00 - elsewhere in Canada; and $20.00 - outside of Canada. Transcripts can also be forwarded by courier if the requisite fee has been prepaid and complete instructions have been provided. Transcripts will be faxed or couriered only after the requisite fees have been received and processed at the University.

g. 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.

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.

Students undertaking sanctioned international activities are required to follow the short series of procedures which the University has identified as being compulsory prior to a student being involved in that international activity. These procedures include a pre-departure briefing(s); the signing of a liability waiver form; and registration as appropriate to the activity. Students are advised that adequate notice (6-12 weeks) is frequently needed, particularly in those instances where visas will be required for the international travel. Additional information can be obtained from the International Activities Office, located in The Oaks, 5920 Gorsebrook Avenue, adjacent to the University campus.

Registration

This subsection is indexed for easy reference:

1. Procedures

Registration procedures are the responsibility of the Registrar and will be made known to students, instructors and administrators in the official Registration Book published annually, approximately mid to late July.

2. Automated Registration in August

The procedures by which students register will be announced in the 1999-2000 Registration Book. Basically it will consist of regular registration exclusively by mail (or fax) in late July to early August. This will be followed in late August by a change of registration period conducted exclusively in person on campus. Students are expected to have completed their registration prior to the beginning of classes which, for 1999, is Wednesday, 8 September.

3. Late Registration

The University strongly discourages students from registering late. In very exceptional circumstances and providing the Dean of the student's Faculty concurs, a student may register late in whatever courses, sections of courses, labs, and recitations still having seats remaining in them upon payment of a late registration fee. Special forms, available only from the Deans and Associate Deans and valid only for twenty-four hours from the time of authorization, must be obtained before a student can proceed with Late Registration.

4. Change of Registration: Courses, Labs, and Recitations

The 1999-2000 Registration Book contains detailed information on the timetable and procedures for this process.

5. 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, telephone numbers, name, and application for graduation. Only students can initiate these changes; only the Registrar can officially process these changes. Changes made in any other way, formally or informally, are not honored.

6. Registration in Dual Degree Programs

Students are advised that if they are registered in a dual degree program, or registered for a degree and a certificate and/or diploma, and 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 the number of credits specified for that specific program.

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

In order for students to 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 1999-2000 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 Associate Registrar. 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.

8. Alterations in Timetable

The University reserves the right to change the times and the instructor(s) of a course from those advertised in the official Timetable.

9. Cancellation of Courses

If the number of students registered for a course is insufficient to warrant 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.

10. 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 by the advertised deadlines. Further details are available in the pamphlet entitled "Your Address and the Registrar's/Records Office". Copies can be obtained at the Registrar's Office (MM134).

11. Identification Cards

At the time of first registration, students are required to purchase an I.D. card at a cost of $5.00. This card is issued upon presentation of the Registration Receipt. These I.D. cards provide students with an official University identification which can be required for the writing of examinations and tests. (See above Academic Regulation 8e.) These cards also serve as Library cards, permit computer terminal use, allow access to The Tower (Fitness and Recreation Centre), and enable students to qualify for discounts at some local businesses.

Each subsequent year I.D. cards are validated during registration. There is no charge for validation. A replacement card costing $10.00 for lost or damaged cards will be issued with proof of valid registration.

Students who have not received their I.D. card during registration can obtain one at the Library.

12. Special Hours for Registrar's/Records Office

Students are advised that during the processes of registration, the Registrar's Office itself is not always open, as all key personnel will be assigned to work the registration system in other physical locations. At other times, this Office may have to close for short periods of time in order to accommodate the processing of forms and/or in compliance with the terms of employment for unionized personnel working in this administrative unit. Throughout the year when classes are on, this office is open on Monday and Tuesday nights until 6:00 p.m. The Office normally does not close at lunch hour. Special hours of operation also apply on Convocation Days.

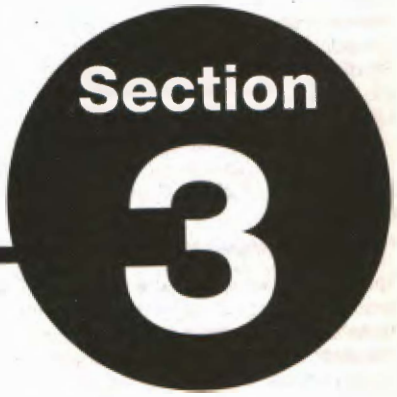
13. The World Wide Web: www.stmarys.ca/registrar

The Registrar's Office is continuing its World Wide Web development. A Registration Home Page came on line in the summer of 1996, containing information on Registration - the How, When, and Why. You can also access the 1998-99 and 1999-2000 Academic Calendar, course descriptions, program requirements, and the latest tuition information along with Orientation 1999 functions, dates, and times, once this has been organized. The academic timetable is also available from this source. Students are strongly encouraged to use this to obtain up-to-date information.

In the fall of 1997, the Secure Access to University Restricted Network (S.A.T.U.R.N.) was launched. With a PIN, students can access such data items as their own courses, examination schedules, and grades (for the current academic session).

Further options are being developed continuously.

Faculties and Programs



This section is indexed for easy reference:

Undergraduate Programs

Graduate Programs

Faculty of Arts

Dr. Michael J. Larsen, Dean

Dr. Donald J. Naulls, Associate Dean

General Information

The Faculty of Arts offers programs of study leading to the degrees of Bachelor of Arts, Bachelor of Arts (Advanced Major), Bachelor of Arts (Honors), and Master of Arts. The last of these is available in Atlantic Canada Studies, Criminology*, History, International Development Studies, Philosophy, and Women's Studies. In addition, undergraduate certificate programs are offered in Chinese Studies; in German Language and Culture; Japanese Studies; in Spanish Language and Hispanic Culture. At the graduate level programs are offered leading to Graduate Diplomas in Criminology*; also in International Development Studies. Graduate level courses in Geography are also offered.

* Pending Maritime Provinces Higher Education approval.

The primary purpose of the Bachelor of Arts program is to provide a sound basic education in the liberal arts, combined with a study in some depth in at least one subject or other area of concentration. The Bachelor of Arts (Advanced Major) offers both depth and diversity, and students should seriously consider this option. The honors program is designed for students of above-average ability, especially for those who intend to proceed to graduate work or who seek a professional career in the area of the honors subject(s). It requires greater specialization, and a higher level of performance, than the ordinary Bachelor of Arts program, and includes courses specially designed for honors students.

Proficiency in English

For the Bachelor's degree, students are expected to be able to express themselves clearly and cogently in the English language. To this end, instructors in all subjects attach great importance to clarity of expression and to the capacity to sustain a coherent argument (as well, of course, as to substance and relevance) in assessing written work. Students who are deficient in this area are therefore strongly advised to take immediate steps to remedy that deficiency, and in particular to use the compulsory courses in English to maximum advantage. Otherwise, however industrious they may be, and however extensive their knowledge, they may have difficulty in accumulating sufficiently high grades to qualify for graduation.

In a nation that is officially bilingual it should be unnecessary to point out the added advantage of acquiring a working knowledge of the French language.

Although the time required for study and review will vary from course to course, students should expect to devote a total of nine hours per course per week (including class periods and private study). Normally this will mean spending about two hours of private study time for each hour of class time. Term papers and lab exercises may require additional time. Students should note that some professors may include class attendance in their course grading scheme.

Faculty of Arts - Undergraduate Programs

Requirements for the Degree of Bachelor of Arts with a Major or Advanced Major

Summary of Requirements for a Bachelor of Arts Degree with a Major or Advanced Major

(1) Total number of credits required: 15.0 for a major (see below - Arts regulation 1); 20.0 for an advanced major (see below - Arts regulation 1)

(2) 300-level or higher Arts credits required: 8.0 for a major; 11.0 for an advanced major

(3) General Arts credits requirements: 5.0 (see below - Arts regulation 3)

(4) Credits required for major: 6.0 - 8.0 (see below - Arts regulations 4 and 5; also departmental/subject area requirements, found in Section 5)

(5) Cumulative quality point average for major: a minimum of 2.00 (see below - Arts regulation 7; also departmental/subject area requirements, found in Section 5)

(6) Cumulative quality point average for graduation: a minimum of 1.60 in 1999 and 1.70 in the year 2000 and beyond [see academic regulation 7c(ii)]

Subject to the regulations set forth in this Calendar, for the Bachelor of Arts degree students must complete the equivalent of fifteen (15.0) credits for a major; twenty (20.0) for an advanced major, with a minimum of eight (8.0) credits in recognized Arts subjects at the 300 level or higher for a major; eleven (11.0) for an advanced major. Courses which begin with zero (0) are designed to prepare students for entry level course work and will not be credited toward any degree, diploma, or certificate.

During the regular academic year, a full-time student will normally take five (5.0) credits but may opt for an additional credit (1.0). Permission is not required for such an overload.

Students must complete:

English 201.1(.2) and 202.1(.2) or, at the discretion of the Chairperson of the English Department, an alternative credit in English;

the equivalent of one (1.0) credit from the following:

Philosophy 200 (Basic Logic) (No other Philosophy course satisfies this requirement.)
or Mathematics
or a language other than English
or a natural science (except Psychology);

the equivalent of one (1.0) credit from among the remaining humanities (Classics, History, Philosophy other than PHI 200.0, and Religious Studies); and

the equivalent of one (1.0) credit in at least two of the following social sciences: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.

Full-time students must attempt to fulfil these requirements in their first year. It is hoped that they will thereby be introduced to the basic skills required for university study, and be exposed at the introductory level to a variety of disciplines. Students with special interests can, with the Dean's permission, fulfil some of these in their second year.

Majors

Not later than the beginning of Year 2, students must declare the particular subject(s) in which they wish to major, or alternative areas of concentration. The following are recognized as Arts subjects in which it is possible to major: Anthropology, Asian Studies, Atlantic Canada Studies, Classics, Criminology, Economics, English, French, Geography, German, History, International Development Studies, Irish Studies, Linguistics, Mathematics, Philosophy, Political Science, Psychology, Religious Studies, Sociology, Spanish, and Women's Studies. Details are available from the individual program coordinators. Alternative areas, tailored to the needs and interests of particular students, may be devised and approved by the Dean of the Faculty. Once major subjects or areas of concentration have been declared, students' programs must be approved annually and supervised by the departments/subject areas in which they are majoring or by the persons responsible for their areas of concentration. While a subsequent change of major subjects or areas of concentration is possible, students are advised that such a change may necessitate additional courses in order to meet graduation requirements. The regulations governing the major program will be those in effect at the time of declaration of the major. Students are strongly encouraged to declare their major prior to 1 May.

In addition to satisfying requirement 3, students must complete the equivalent of not fewer than six (6.0) credits in the subject of the major or in the chosen area of concentration; but may count among these six any relevant course(s) taken in fulfilment of requirement 3. Not fewer than four (4.0) of the six (6.0) credits must be at the 300 level or above. No department may require more than eight (8.0) credits in the major subject.

Non-Arts Credits

Within the limits imposed by these regulations, students may count towards a Bachelor of Arts degree, the equivalent of up to three (3.0) credits from outside the range of recognized Arts subjects as specified in requirement 4. The Dean of the Faculty may authorize an extension of this upper limit to meet special program requirements or where there are sound academic reasons for doing so.

Students registered in the Faculty of Arts should note that certain course offerings in the Faculty of Commerce are acceptable as Arts credits. These are MSC 205.1(.2); MSC 206.1(.2); MSC 207.1(.2); and MSC 225.1(.2). Other Commerce (also Science and Education) courses to a maximum of 3.0 may be taken in a Bachelor of Arts program but they cannot be counted as Arts credits.

7. In order to have major subjects or areas of concentration formally entered upon their records, students must have maintained a minimum cumulative quality point average of 2.00 (or an average grade of C) in the courses specified in requirement 5, and must have fulfilled any additional requirements specified by their departments or areas of concentration. Students who fail to achieve this average may, provided that they fulfil all other requirements, graduate as non-majors.

8. (a) Minors

Students have the option of declaring minor fields in addition to major ones. Minors can be declared in most of the subject areas listed previously in Arts regulation 4, except for Classics and Criminology. A minor is also available in Film Studies. In addition, the University, in cooperation with the Nova Scotia College of Art and Design, Kings College, and Mount Saint Vincent University offers a minor in Film Studies. To satisfy the requirements for a minor they must complete at least four (4.0) credits [at least five (5.0) credits in Mathematics and Psychology] in that particular subject or area of concentration. At least two (2.0) of these credits must be at the 300 level or above. For more specific departmental requirements, consult the departmental statements in Section 5 of the Calendar.

(b) Minor in Non-Arts Subjects

Commencing with the 1997-98 academic year, students in the Faculty of Arts will be permitted to declare a minor in a subject taught in the Faculty of Commerce (except Economics) or Faculty of Science 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 fulfil the requirements of the degree in which they are registered, including officially declaring and fulfilling the requirements for a major or honors (or in the case of Science, a concentration). Students are advised that majors, honors, and minors in non-Arts subjects may result in more courses being required than the normal minimum stipulated for a Bachelor of Arts degree.

(c) Minor in Business

A new minor in the Faculty of Commerce is available for students pursuing a Bachelor of Arts or Bachelor of Science degree. This consists of the equivalent of five (5.0) credits, namely:
ACC 241.1(.2) Introductory Accounting - Part I
ACC 242.1(.2) Introductory Accounting - Part II
CML 201.1(.2) Legal Aspects of Business - Part I
COM 293.1(.2) Managerial Communications
MGT 281.1(.2) Introduction to Business Management
MGT 383.1(.2) Organizational Behavior I
MKT 270.1(.2) Introduction to Marketing
MSC 225.1(.2) Introduction to Computers
One 1.0 elective credit in Commerce subjects

(d) Minor in Film Studies

Commencing with the 1998-99 academic year, a new minor, in Film Studies, was introduced and made available to undergraduate students in all three faculties. Details are found in Section 5 of this Calendar.

The regular "Declaration of Major/Minor/Concentration" form is to be used to declare a minor. Students must fulfil 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).

9. it is also possible to declare a double major, in which case the students must fulfil both faculty and departmental requirements in respect of each of the subjects declared. In some cases this may not be possible without exceeding the total number of credits normally required for graduation; but the Dean, with the approval of the appropriate departmental Chairpersons, may reduce these requirements in the light of a student's overall record.

10. In conformity with academic regulation 7c(i) students must achieve a minimum cumulative quality point average of 1.60 (in 1999; then 1.70 in the year 2000 and thereafter) in order to qualify for graduation.

11. Requirements for the Degree of Bachelor of Arts - Honors

a. The Faculty of Arts offers honors programs in Anthropology, Atlantic Canada Studies, Asian Studies, Criminology, Economics, English, Geography, History, International Development Studies,

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Mathematics, French, Philosophy, Political Science, Psychology, Religious Studies, and Sociology. There is no Honors program in Women's Studies. It is also possible to take double honors in any two of these subjects.

b. The following represent the minimum requirements for admission to, continuance in, and graduation from an honors program in Arts. For information about specific program requirements (which in some cases exceed these minimum requirements) consult the appropriate departmental and subject area statements.

12. Admission Requirements for Honors Program
a. Normally, after having taken at least three (3.0) credits in the discipline, or in certain cases at the conclusion of their second university year, students should make application for admission to the honors program on the special form obtainable from the Registrar.

b. The normal prerequisite for honors is a minimum cumulative quality point average of 3.00. Students, however, will be assessed on the basis of their overall academic record.

13. Requirements for Continuance in and for Graduation with Honors
a. Students must earn twenty (20.0) credits.

b. To continue in the program, students must achieve a minimum cumulative quality point average of 3.00.

c. To graduate, students must achieve a minimum cumulative quality point average of 3.00.

d. Students must complete not fewer than ten (10.0) credits in the honors subject, of which eight (8.0) must be at the 300 level or above. Each year the students' programs must have the approval of the Chairperson of the department who may permit the substitution of up to two (2.0) credits from a related subject area as part of the ten (10.0) credits required.

e. In the courses presented to satisfy 13d, students must have a minimum quality point average of 3.00 with grades of B or higher in at least eight (8.0) credits and no grade lower than C (2.00).

14. Requirements for Graduation with Double Honors
a. For a double honors degree, students must complete not fewer than seven (7.0) credits in each of two honors subjects. At least ten (10.0) of these credits must be at the 300 level or above, including a minimum of four (4.0) in each subject. Each year, the students' programs must have the approval of the Chairpersons of both departments involved.

b. To continue in the program, students must achieve a minimum cumulative quality point average of 3.00.

c. To graduate, students must achieve a minimum cumulative quality point average of 3.00.

d. In the courses presented to satisfy 14a, students must have a minimum quality point average of 3.00 with grades of B or higher in at least eleven (11.0) credits, and no grade lower than C (2.00).

15. Additional Requirements for Graduation with Honors and Double Honors
For honors, students must complete the requirements for the Bachelor of Arts degree as outlined in the Calendar (see no. 3), and any additional requirements of the relevant department(s)/subject area(s).

16. Students who fail to meet the requirements for an honors degree but who otherwise meet the requirements for the general degree, on formal application, should be awarded the general degree.

17. In addition to the overall quality point average noted in 13 above, every student in honors must attain a minimum quality point average of 3.00 in the honors subject(s), with grades of C in no more than two (2.0) credits, and no grade lower than C, in the same subject(s).

18. Co-operative Education Programs
At the present time, the Department of Geography and Sociology have temporarily suspended offering their Co-operative Education programs

Certificate of Chinese Studies (CHS)

Canada is an integral part of the Pacific Rim, an area of rapid economic and political change. 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 four (4.0) credits. 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 three (3.0) credits at Saint Mary's University. Relevant academic courses, work experience and linguistic capability may be considered for credit. Applicants should submit a resume of relevant work experience, official university transcripts and any other relevant documentation.

Program Courses
This program consists of two (2.0) required credits and a number of optional credits. All students are required to take Chinese 100.0 (Introductory Modern Chinese) and Chinese 200.0 (Intermediate Modern Chinese). Students must also select two (2.0) optional credits in at least two different disciplines from the following courses:

ANT 326.1(.2); ASN 300.1(.2); ASN 310.1(.2); ASN 450.0; HIS 323.0; HIS 342.0; HIS 396.1(.2); REL 327.1(.2); REL 345.1(.2).

At least two (2.0) credits must be at the 300 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 quality 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.

Criminology Certificate Program (CRM)

Note: Effective 1 September 1997, no new students are being accepted into the Criminology Certificate Program. Students interested in pursuing criminology as an area of study should consult the Department of Sociology entry in this Calendar. Effective 1 September 1998, the following course substitutions are in effect: CRM 310.1(.2) for SOC 203.1(.2); CRM 300.1(.2) and CRM 301.1(.2) for SOC 303.0; CRM 303.1(.2) and CRM 304.1(.2) for SOC 307.0.

Certificate in German Language and Culture (GLC)

Germany plays an important role in the evolving political and economic reality of western Europe. 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 four (4.0) credits and is intended for undergraduate students and persons already holding degrees in any discipline.

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. Three (3.0) of the four (4.0) credits must be completed at Saint Mary's.

Program Courses
The program consists of two (2.0) required credits in language-GER 100.0 and/or 200.0 and/or 302.0-and a number of optional credits. These optional credits must be at the 300-level or above, and will be chosen from the following courses:

GER 330.1(.2)	Introduction to Business German I
GER 331.1(.2)	Introduction to Business German II
GER 304.0	German Culture and Civilization
GER 310.0	Modern German Literature

GER 400.0 German Contemporary Literature
HIS 304.0 Europe 1848-1989
HIS 343.0 To The Great War

Other course choices are possible, subject to the approval of the Coordinator for German Studies.

Requirements
A minimum cumulative quality 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 accredit-

Certificate of Japanese Studies (JPS)

Canada is an integral part of the Pacific Rim, an area of rapid economic and political change. 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 four (4.0) credits. 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 three (3.0) credits at Saint Mary's University. Relevant academic courses, work experience and linguistic capability may be considered for credit. Applicants should submit a resume of relevant work experience, official universi- transcripts and any other relevant documentation.

Program Courses
The program consists of two (2.0) required credits and a number of optional credits. All students are required to take Japanese 100.0 (Introductory Japanese) and Japanese 200.0 (Intermediate Japanese). Students must also select two (2.0) optional credits in at least two different disciplines from the following courses:

ANT 327.1(.2); ASN 300.1(.2); ASN 302.1(.2); ASN 400.1(.2); ASN 410.1(.2); GPY 360.1(.2); HIS 324.0; HIS 392.0; HIS 396.1(.2); REL 327.1(.2); REL 340.1(.2).

At least two (2.0) credits must be at the 300 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 quality 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.

Certificate in Spanish Language and Hispanic Culture (SLH)

In the wake of Spain's transition from dictatorship to democracy, the country has assumed an important role in the political, economic, and cultural life of Western Europe. Within our own hemisphere, Spanish-speaking Latin America continues to be an important trading partner for Canada. More than 225 million people in the world today have Spanish as their first language.

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 four (4.0) credits 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. Three (3.0) of the four (4.0) credits must be completed at Saint Mary's.

Requirements
A minimum cumulative quality 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.

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. In essence, students have to fulfil 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 fulfilment 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 Faculty of Arts programs at the graduate level is found later in this Calendar.

The Frank H. Sobey Faculty of Commerce

Dr. Paul Dixon, Dean
Dr. Lloyd Rieber, Associate Dean

General Information
In August 1992, the University paid tribute to one of Canada's premier business leaders by naming its Faculty of Commerce in honor of the late Frank H. Sobey, who founded Empire Company Limited, Stellarton, Nova Scotia. Its holdings include Sobeys Stores, Atlantic Shopping Centres, Empire Theatres, Lawton's Drug Stores, as well as extensive investments both nationally and internationally.

The Faculty of Commerce offers programs of study leading to the degrees of Bachelor of Commerce, Bachelor of Commerce (Honors) in Economics, and Master of Business Administration (including Executive Master of Business Administration). The purpose of these programs is to prepare students for meaningful careers in business and government.

Selected undergraduate and graduate programs have a Co-operative Education option. All programs, except the Executive Master of Business Administration, can be completed on a part-time basis involving evening and summer study. A certificate program is offered in Human Resources, with a Management option (HRM) or a Psychology option (HRP). See Section 4 of this Calendar for further information.

The bachelor degree programs couple a broad educational foundation in English, Mathematics and other Arts and Science subjects with the study of a common body of business and economic knowledge. Students have the opportunity to attain an appropriate degree of specialized expertise in Accounting; Economics, Finance, Management, Marketing, Computing and Information Systems, Global Business Management, Human Resource Management and Industrial Relations, Small Business and Entrepreneurship, and Computing Science and Business Administration. The last two pro-

grams may include a Co-operative Education component. Additional Co-operative Education programs are in development.

The Master of Business Administration program encompasses a common body of business and economic knowledge and advanced study in Accounting, Economics, Finance, Management, Management Science and Marketing. In addition to the generalist program, students may pursue a concentration in any of eight areas. See Section 5 of this Academic Calendar for details. An Executive Master of Business Administration program is available to qualified middle and senior managers.

Faculty of Commerce - Undergraduate Programs

Bachelor of Commerce
The following requirements apply to all entering Commerce students.

1. a. The Bachelor of Commerce program consists of twenty (20.0) credits 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 Community College (NSCC) students who have completed the Business Information and Technology (BIT) certificate and selected diploma programs and have been granted admission to the Faculty of Commerce may be granted advanced standing credits. Contact the Office of the Dean of Commerce for details.

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. In conformity with academic regulation 7c(i) students must achieve a minimum cumulative quality point average of 1.70 in order to qualify for graduation. Co-operative Education students must attain a minimum cumulative quality point average of 2.50 and Honors students require an minimum average of 3.00.

3. During the regular academic year a full time student will normally take the equivalent of five (5.0) credits. (See academic regulation 1.)

4. For the degree of Bachelor of Commerce, each student is required to complete successfully the courses listed in regulation 6 below in Year 1 and Year 2. Students are expected to select a major at the end of Year 2. Requirements for Year 3 and Year 4 depend upon the major selected. Courses for each major are given in regulation 7. Credit value of each course is indicated in parenthesis after the course number. They are arranged by year as a guide to students in preparing their individual programs of study.

5. a. EGL 201.1(.2) and 202.1(.2) are required of all students.

b. Nova Scotia Grade 12 Mathematics (or equivalent) is a prerequisite for MSC 205.1(.2) and 206.1(.2). In the event that students did not have Nova Scotia Grade 12 Mathematics on admission, they are required to take MAT 050.1(.2) and 051.1(.2) (or equivalent) prior to taking MSC 205.1(.2) and 206.1(.2). These are both preparatory courses and will not be credited toward any degree, diploma or certificate.

c. All undergraduate Commerce students are required to complete successfully at least three (3.0) elective credits offered outside of the Faculty of Commerce. Non-Commerce courses taken in lieu of Commerce courses cannot be counted as non-Commerce electives.

d. Each major has at least one and one-half (1.5) credits of free electives. A free elective may be chosen from any Faculty.

6. Requirements for Year 1 and Year 2
Students required to complete additional courses due to background deficiencies should consult the Associate Dean of Commerce for program advice. Students in the Computing Science and Business Administration major should refer to Section 5 of this Calendar for the recommended course sequence and all the program requirements for this major.

Year 1
MSC 205.1(.2) Introduction to Quantitative Methods for Commerce I
MSC 206.1(.2) Introduction to Quantitative Methods for Commerce II
MGT 281.1(.2) Introduction to Business Management
MSC 225.1(.2) Introduction to Computers
ECO 201.1(.2) Principles of Economics: Micro
ECO 202.1(.2) Principles of Economics: Macro
EGL 201.1(.2) English Composition
EGL 202.1(.2) An Introduction to Literature
One (1.0) non-Commerce elective credit

Year 2
MSC 207.1(.2) Introductory Statistics for Commerce
ACC 241.1(.2) Introductory Accounting I
ACC 242.1(.2) Introductory Accounting II
MKT 270.1(.2) Introduction to Marketing
MGT 383.1(.2) Organizational Behavior I
MGT 384.1(.2) Organizational Behavior II
CML 201.1(.2) Legal Aspects of Business - Part I
COM 293.1(.2) Managerial Communications
One (1.0) Economics elective credit- see note below

Note: It is recommended that students wishing to major in Econo take ECO 300.1(.2) and ECO 301.1(.2). Other Commerce students may take one or both of these courses or another credit (1.0) in Economics [except ECO 317.1(.2)] for which they have the necess prerequisites.

7. Requirements for Year 3 and Year 4
Students are also required to complete a major in Accounting, Computing and Information Systems, Economics, Computing Scie and Business Administration, Finance, Global Business Manage Management, Marketing, Human Resource Management and Industrial Relations, General Business Studies, or Small Business a Entrepreneurship. Students wishing to apply for the Computing Science and Business Administration major should apply to the Director of the joint program no later than the end of Year 1. Thos wishing entry to the Small Business and Entrepreneurship major, w the co-op option, must apply to the Dean of Commerce no later th the end of the first semester of Year 2. For other majors (i.e., Accounting, Computing and Information Systems, Economics, Finance, Global Business Management, Management, Human Resource Management, Marketing, and General Studies) students expected to choose a major by the end of Year 2. Further details c the required courses for these majors can be found in Section 5, Description of Courses, in this Calendar.

The Year 3 and Year 4 requirements are listed below by major and programs where applicable.

a. Accounting Major
Year 3
ACC 323.1(.2) Information Systems I
ACC 332.1(.2) Planning and Control
ACC 334.1(.2) Cost Accounting
ACC 341.1(.2) Intermediate Financial Accounting I
ACC 342.1(.2) Intermediate Financial Accounting II
ACC 345.1(.2) Financial Accounting Theory
FIN 360.1(.2) Business Finance I
FIN 361.1(.2) Business Finance II
One (1.0) free elective credit

Year 4
ACC 455.1(.2) Financial Accounting Seminar
or
ACC 470.1(.2) Management Accounting Seminar
One (1.0) Accounting elective - see note (i) below
MGT 489.1(.2) Strategic Management
Two (2.0) non-Commerce elective credits
One (1.0) free elective credit- see note (ii) below

Notes:
(i) MSC 324.1(.2), MSC 326.1(.2), or MSC 335.1(.2) satisfies this requirement.

(ii) CML 202.1(.2) is normally required by professional accounting associations.

b. Economics Major
Year 3
ACC 332.1(.2) Planning and Control
ECO 300.1(.2) Intermediate Microeconomic Theory I - see note bel
ECO 301.1(.2) Intermediate Macroeconomic Theory I - see note below
ECO 400.1(.2) Advanced Microeconomic Theory
or
ECO 401.1(.2) Advanced Macroeconomic Theory
FIN 360.1(.2) Business Finance I
FIN 361.1(.2) Business Finance II

humanities or language elective [Classics, History, ...sophy (except PHI 200.0), Religious Studies, English, or Modern ...guages]
free elective credit

...r 4
... of ECO 306.1(.2), 310.1(.2), 312.1(.2), 315.1(.2), 323.1(.2), ...2), or 412.1(.2)
...-half (0.5) Economics elective at 400 level
...-half (0.5) Economics elective at 300 level or above
...489.1(.2) Strategic Management
... (1.0) social science credit (excluding Economics) elective ...thropology, Geography, Political Science, Sociology, or ...ciology]
... (2.0) free elective credits

...te: It is recommended that students planning to major in ...mics take ECO 300.1(.2) and 301.1(.2) in Year 2 and defer one ...) credit of Economics electives to Year 3.

...puting and Information Systems Major

...r 3
...323.1(.2) Information System I
...332.1(.2) Planning and Control
...360.1(.2) Business Finance I
...361.1(.2) Business Finance II
...320.1(.2) Business Application Programming
...324.1(.2) The Use of COBOL in Data Processing
...326.1(.2) Database Programming
...335.1(.2) Decision Support Applications
... (1.0) non-commerce elective credit

...r 4
...489.1(.2) Strategic Management
...425.1(.2) System Analysis and Design
...426.1(.2) Computer Configurations
...436.1(.2) Data Communications
... (1.0) non-commerce elective credit
... (2.0) free elective credits

...nce Major

...r 3
...332.1(.2) Planning and Control
...360.1(.2) Business Finance I
...361.1(.2) Business Finance II
...-half (0.5) Commerce elective at 300 level or above
... (1.0) non-commerce elective credit
... (2.0) free elective credits

...r 4
...463.1(.2) Financial Management
...466.1(.2) Investments
...467.1(.2) Portfolio Management
...489.1(.2) Strategic Management
... (1.0) Finance elective credit at 400 level except FIN 491.1(.2)
...445.1(.2) and ECO 409.1(.2) may be used to satisfy this require-...]
... (1.0) non-commerce elective credit
... (1.0) free elective credit

...agement Major

...r 3
...332.1(.2) Planning and Control
...360.1(.2) Business Finance I
...361.1(.2) Business Finance II
...316.1(.2) Management of Service Operations
...317.1(.2) Management of Manufacturing Operations
...-half (0.5) Accounting elective
... (1.0) Marketing elective credit
...-half (0.5) Commerce elective credit
... (1.0) free elective credit

...r 4
...385.1(.2) Human Resource Management
...386.1(.2) Industrial Relations
...481.1(.2) Organization Theory: Structure, Process, Analysis and ...
...489.1(.2) Strategic Management
...-half (0.5) Finance elective credit
... (2.0) non-Commerce elective credits
...-half (0.5) free elective credit

f. Marketing Major
Year 3
ACC 332.1(.2) Planning and Control
FIN 360.1(.2) Business Finance I
FIN 361.1(.2) Business Finance II
MKT 376.1(.2) Consumer Behavior
MKT 378.1(.2) Marketing Research
MKT 379.1(.2) Marketing Management
One (1.0) non-commerce elective credit
One (1.0) free elective credit

Year 4
MGT 489.1(.2) Strategic Management
MKT 479.1(.2) Marketing Policy
One (1.0) Marketing elective credit
One (1.0) non-commerce elective credit
Two (2.0) free elective credits

g. Human Resource Management and Industrial Relations Major
Year 3
ACC 332.1(.2) Planning and Control
ECO 340.1(.2) Human Resource Economics
FIN 360.1(.2) Business Finance I
FIN 361.1(.2) Business Finance II
MGT 385.1(.2) Human Resource Management
MGT 386.1(.2) Industrial Relations
One (1.0) free elective credit
One (1.0) free elective credit- see note below

Year 4
MGT 483.1(.2) Interpersonal Behavior I
MGT 485.1(.2) Wage and Salary Administration
MGT 486.1(.2) Personnel Staffing, Training and Development
MGT 489.1(.2) Strategic Management
Two (2.0) non-commerce elective credits
One (1.0) free elective credit

Notes:
(i) If ECO 340.1(.2) was used to satisfy the required Economics electives in Year 2, the number of free electives is increased to one and one-half (1.5).

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

h. General Business Studies Major
Year 3
ACC 332.1(.2) Planning and Control
FIN 360.1(.2) Business Finance I
FIN 361.1(.2) Business Finance II
One and one-half (1.5) Commerce elective credits at 300 level or above
One (1.0) non-commerce elective credit
One (1.0) free elective credit

Year 4
MGT 489.1(.2) Strategic Management
One and one-half (1.5) Commerce electives at 300 level or above
One (1.0) non-commerce elective credit
Two (2.0) free elective credits

i. Computing Science and Business Administration Major
For details on this program, please consult the "Computing Science and Business Administration" entry in Section 5 of this Calendar. A Co-operative Education option is available. Students already enroled in the Commerce program who wish to major in Computing Science and Business Administration must apply to the Director of the joint program for admission into this program. Normally, the minimum cumulative quality point average for transfer is 3.00.

j. Small Business and Entrepreneurship Major (Co-operative Education)
The course-work content of this major may also be taken without co-op work terms (see k below).

For the Co-operative Education option, students must apply for admission to the major in January after completion of the third academic term. Final decision on admission is made at the end of the fourth academic term. Students must have a minimum cumulative quality point average of 2.50. Students will be admitted on the basis of interest, aptitude and assessed ability to combine successfully the academic and work term requirements of the major. Admission decisions will be made on the basis of academic achievement and interviews with the departmental Co-operative Education Advisor. Co-operative Education regulations are explained later in this section.

Summer Following Year 2

COP 100.0 Work Term 1

Year 3
Fall Term
ACC 332.1(.2) Planning and Control
FIN 360.1(.2) Business Finance I
MGT 389.1(.2) Structuring the Start-Up
MGT 494.1(.2) Entrepreneurship: Theories and Concepts
One-half (0.5) free elective

Spring Term
COP 200.0 Work Term 2

Summer Term
FIN 361.1(.2) Business Finance II
One (1.0) non-Commerce elective
One (1.0) free elective

Year 4

Fall Term
COP 300.0 Work Term 3

Spring Term
MGT 380.1(.2) Family Business
MGT 487.1(.2) Small Business Opportunities
MGT 495.1(.2) Small Business Performance Improvement
One (1.0) free elective

Summer Term
MGT 489.1(.2) Strategic Management
One (1.0) non-Commerce elective
One (1.0) free elective

k. Small Business and Entrepreneurship Major

Year 3
ACC 332.1(.2) Planning and Control
FIN 360.1(.2) Business Finance I
FIN 361.1(.2) Business Finance II
MGT 389.1(.2) Structuring the Start-Up
MGT 494.1(.2) Entrepreneurship: Theory and Concepts
One (1.0) non-Commerce elective
One and one-half (1.5) free electives

Year 4
MGT 380.1(.2) Family Business
MGT 487.1(.2) Small Business Opportunities
MGT 489.1(.2) Strategic Management
MGT 495.1(.2) Small Business Performance Improvement
One (1.0) non-Commerce elective
Two (2.0) free electives

l. Global Business Management Major
Complete details on this major are described in the "Global Business Management" entry in Section 5 of this Calendar. This program is administered by the Department of Management.

Year 3
ACC 332.1(.2) Planning and Control
ACC 357.1(.2) International Accounting
FIN 360.1(.2) Business Finance I
FIN 361.1(.2) Business Finance II
MKT 375.1(.2) International Marketing
One (1.0) Modern Language (except English) elective [Chinese, French, German, Italian, Japanese, or Spanish] - see note (i) below
One (1.0) Geographic elective - see note (ii) below
One-half (0.5) free elective

Year 4
FIN 476.1(.2) International Finance
MGT 488.1(.2) International Business
MGT 489.1(.2) Strategic Management
One (1.0) Modern Language (except English) elective [Chinese, French, German, Italian, Japanese, or Spanish] - see note (iii) below
One (1.0) Geographic elective - see note (iv) below
One (1.0) International elective - see note (v) below
One-half (0.5) free elective

Notes:
(i) If the non-Commerce elective in Year 1 was a Modern Language, then this requirement can be replaced with one (1.0) free elective.

(ii) One (1.0) elective must be selected from one and only one of following regions: Africa, Americas, Asia, or Europe. Approved cou es 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 cre

(iv) One (1.0) elective must be selected from one, and only one, the areas (Africa, Americas, Asia, or Europe) different from the are Year 3 Geographic credit.

(v) One (1.0) elective must be selected from the approved list of Geographic credits or general International credits found in the "Global Business Management" entry in Section 5 of this Calenda ECO 310.1(.2), ECO 312.1(.2), ECO 315.1(.2), ECO 413.1(.2), or EC 414.1(.2) were used to satisfy the Economics elective(s) in Year 2, number of free electives at the 200 level or above is increased by one-half (0.5) or one (1.0) as appropriate.

(vi) In cases where a student is fluent in two languages, other co es relevant to the major may be substituted for the language cred with the approval of the Program Coordinator.

(vii) Notwithstanding the course substitutions possible in (i), (v), a (vi) above, all students must complete at least three (3.0) non-Commerce electives.

Bachelor of Commerce Degree (Honors - Economics)
1. Admission Requirements
a. Minimum cumulative quality point average of 3.00 at the end o Year 2.

b. Students must make application for admission to the Honors p gram on the special form obtainable from the Registrar no later th the last day of registration at the beginning of Year 3. They must obtain the approval of the Chairperson of the Economics Departm and of the Dean of Commerce.

2. Requirements for Continuance and Graduation
a. To continue in the program and to graduate, students must ma tain a minimum cumulative quality point average of 3.00.

b. The specific course requirements of the program are:
Year 1
MSC 205.1(.2) Introduction to Quantitative Methods for Commerc
*MSC 206.1(.2) Introduction to Quantitative Methods for Comme
MGT 281.1(.2) Introduction to Business Management
MSC 225.1(.2) Introduction to Computers
*ECO 201.1(.2) Principles of Economics: Micro
*ECO 202.1(.2) Principles of Economics: Macro
EGL 201.1(.2) English Composition
EGL 202.1(.2) An Introduction to Literature
One (1.0) humanities elective [Classics, History, Philosophy (excep PHI 200.0), Religious Studies, English, or Modern Languages]

Year 2
*MSC 207.1(.2) Introductory Statistics for Commerce
ACC 241.1(.2) Introductory Accounting I
ACC 242.1(.2) Introductory Accounting II
MKT 270.1(.2) Introduction to Marketing
MGT 383.1(.2) Organizational Behavior I
MGT 384.1(.2) Organizational Behavior II
CML 201.1(.2) Legal Aspects of Business - Part I
COM 293.1(.2) Managerial Communications
*ECO 300.1(.2) Intermediate Microeconomic Theory I
*ECO 301.1(.2) Intermediate Macroeconomic Theory I

Year 3
ACC 332.1(.2) Planning and Control
FIN 360.1(.2) Business Finance I
FIN 361.1(.2) Business Finance II
*ECO 302.1(.2) Mathematical Economics
*ECO 303.1(.2) Intermediate Economic Statistics
*ECO 400.1(.2) Advanced Microeconomic Theory
*ECO 401.1(.2) Advanced Macroeconomic Theory
*One of ECO 306.1(.2), 310.1(.2), 312.1(.2), 323.1(.2), 315.1(.2), 406.1(.2) or 412.1(.2)
One (1.0) social science (excluding Economics) elective [Anthropolo Geography, Political Science, Sociology, or Psychology]

Year 4
MGT 489.1(.2) Strategic Management
*ECO 403.1(.2) Introduction to Econometrics
*ECO 404.1(.2) Special Topics in Microeconomics
or

...425.1(.2) Special Topics in Macroeconomics
...496.1(.2) Research Seminar in Economics
...499.1(.2) Honors Project in Economics or another 0.5 credit ... and one-half (2.5) Economics electives - advanced economics ... approved by the chairperson

For courses marked with an asterisk (*), no grade below a C is ... and at least eight (8.0) credits must have a grade of B or ...

With the approval of the Chairperson of the Economics ..., a student may be permitted to substitute up to two (2.0) ... from a related subject for Year 3 and Year 4 required ... courses.

With the approval of the Chairperson of the Economics ..., a student may substitute one and a half (1.5) credits ... the Department of Mathematics and Computing Science for ...302.1(.2), 303.1(.2), and 309.1(.2).

... for Students in the Faculty of Commerce or Offered by ... Faculty for Non-Commerce Students

... in the Faculty of Commerce are permitted to declare a ... in a subject taught in the Faculty of Arts or Faculty of Science ... those academic units which currently offer this program option. ... specific requirements for minor programs are those set forth by ... host academic unit. While students may take a minor in another ..., they must fulfil the requirements of the degree in which they ... registered, including officially declaring and fulfilling the require... for a major or honors (or in the case of Science, a concentra...

... in Film Studies was introduced in the Faculty of Arts in 1998- ... and is available to undergraduate students in all three faculties. ... are found in Section 5 of the Calendar.

... in the Faculty of Commerce is available for students pursuing ... of Arts or Bachelor of Science degree. This minor consists ... equivalent of five (5.0) credits, namely:

ACC 241.1(.2) Introductory Accounting - Part I
ACC 242.1(.2) Introductory Accounting - Part II
CML 201.1(.2) Legal Aspects of Business - Part I
COM 293.1(.2) Managerial Communications
MGT 281.1(.2) Introduction to Business Management
MGT 383.1(.2) Organizational Behavior I
MKT 270.1(.2) Introduction to Marketing
MSC 225.1(.2) Introduction to Computers
One (1.0) credit elective credit in Commerce subjects

... This minor is not available to students pursuing a Bachelor of ... degree.

... regular "Declaration of Major/Minor/Concentration" form is to be ... to declare a minor. Students must fulfil all requirements for any ... which they officially declared in order to qualify for gradua... or officially (i.e., in writing) withdraw their declaration of a ...

...chelor of Science degree with a Double Major/Honors in ...merce and Geology

... requirements for this program are found in this section in the ... of Science offerings.

...o-operative Education ...rograms

... Faculty of Commerce offers Co-operative Education options in ... Small Business and Entrepreneurship major and in the Computing ... and Business Administration major. Co-operative education ... dynamic approach to university education which integrates acad...classroom studies with related practical work experiences out... the formal university environment. The principle upon which this ... is based is that learning and individual development are ... enhanced when the concepts studied in the classroom are ... applied, tested and observed by the students in mean... work situations. Through this program, participating businesses ... an excellent opportunity to observe and influence the education ... enthusiastic students. They also benefit from the access ... to university faculty and expertise, while university faculty and ... become aware of the concerns of business and the varied ... which they face. Ms. Mary Ellen MacEachern serves as ... Officer of the Co-operative Education Programs.

A "Co-operative Education" notation is entered on the parchments and academic transcripts of undergraduate students who successfully complete Co-operative Education requirements in addition to their regular degree requirements.

1. Admission Requirements for Undergraduate Co-operative Education Programs

a. Students may be considered for admission to some Co-operative Education programs in the Faculty of Commerce after the completion of the first semester of Year 2 and will be based on the student's grades. Final decisions on admission to the program will be made at the end of the second semester.

b. Students should make application for admission to the Co-operative Education program on a special form obtainable from the Co-operative Education Office. Students will be admitted to a Co-operative Education program on the basis of their formal academic achievement and interviews with the appropriate departmental Co-operative Education Advisor.

c. The normal prerequisite for admission to a Co-operative Education program in a regular Bachelor of Commerce program is a minimum cumulative quality point average of 2.50 and a minimum quality point average of 3.00 in the course(s) of the student's declared major subject(s). Special requirements may apply for some majors.

d. Students will be admitted to a Co-operative 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 Co-operative Education program they wish to enter.

2. Requirements for Continuance in and Graduation from a Co-operative 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). Since individual programs may have specific additional requirements for Co-operative 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 three work terms (four work terms for Computing Science students) as specified by the department of their major program (see regulations below and departmental Co-operative Education regulations).

c. To continue in and graduate from a Co-operative Education program, students must earn a minimum cumulative quality point average of 2.50 with a minimum quality point average of 3.00 in all courses in their major subject(s).

3. Policies and Regulations Governing Co-operative 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 Co-operative Education students, but require the approval of the appropriate departmental Co-operative Education Advisor.

b. The satisfactory fulfilment of Co-operative Education work terms require:

(i) the completion of three (four for Computing Science) 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 Co-operative 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 in accordance with departmental standards and expectations.

(iv) fulfilment of any other requirements specified by the department, such as the participation in seminars or workshops.

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 "Co-operative Education" notation will be printed on their parchments.

e. Students may be required to withdraw from a Co-operative Education program if:

(i) they are dismissed from, quit, or fail to accept an appropriate and approved Co-operative work term position;

(ii) they fail to submit or successfully complete a work term report;

(iii) they do not maintain the required quality point average necessary for continuance in a Co-operative Education program;

(iv) in the judgement of their department, they are no longer suited for the particular requirements of a Co-operative Education program.

f. Students who voluntarily withdraw from or who are required to withdraw from a Co-operative Education program may remain enroled in and continue with the major or honors degree program offered by their department, if such exist.

g. Co-operative Education students will be expected to attend any special seminars or colloquia developed by the Faculty of Commerce, or the Co-operative Education departments, which deal 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 Commerce or appropriate departmental Co-operative Education Advisor. If approval is granted, no more than one (1.0) credit may be taken during a work term.

4. Registration and Fees for Co-operative 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 100.1(.2)
Work Term 2 = COP 200.1(.2)
Work Term 3 = COP 300.1(.2)
Work Term 4 = COP 400.1(.2)

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

c. Students pay a fee equivalent to the tuition for one (1.0) cred plus differential fees, if applicable, for each work term they under

Dual Bachelor Degree Programs

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

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

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

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

Second Undergraduate Degree

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

Information concerning the Faculty of Commerce's programs the graduate level is found later in this Calendar.

Faculty of Science

Dr. David H. S. Richardson, Dean
Dr. William A. Bridgeo, Dean Emeritus
Dr. Douglas H. Williamson, Dean Emeritus

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.

Honors
The honors program demands a minimum grade of C in all courses followed in the honors subject. Particular requirements for the honors in Environmental Studies are found in this Academic Calendar, Section 5, "Environmental Studies". These honors 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 honors subject. Students of above-average ability are urged to contact the Chair of the Department in which they wish to follow an honors program before the end of Year 3 for application details. Formal application for admission to an honors program must be made on a form available in the Registrar's Office.

Major
The regular 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 educat background for life in today's technological world, and an understanding of the importance of the relationship between science an society. The general program is broader in scope than the major o honors programs, and students are encouraged to supplement th science studies with courses in the humanities and social scienc

Faculty of Science - Undergraduate Programs

Bachelor of Science - General

1. Subject to the regulations set forth in this Calendar, students must complete fifteen (15.0) credits. Courses beginning with zero are designed to prepare students for entry level course work and not be credited towards any academic program.

2. Students will normally take five (5.0) credits during the regula academic year.

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

a. one (1.0) credit in English, normally EGL 201.1(.2) and 202.1(.2

b. one (1.0) credit in Mathematics: either MAT 210.1(.2) and one o 211.1(.2) or 212.1(.2) or 315.1(.2); or CSC 226.1(.2)/227.1(.2);

c. two (2.0) credits in Arts subjects and/or Economics [except EC 205.1(.2), ECO 206.1(.2), ECO 207.1(.2)] in addition to requiremen above;

d. not less than five (5.0) or more than seven (7.0) science credit their area of concentration (Biology, Chemistry, Computing Scienc Geology, Mathematics, Physics or Psychology);

four (4.0) science credits not in the subject of concentration and addition to the required Mathematics or Computing Science courses (see note below); and

sufficient electives to complete the fifteen (15.0) credits required for a general Bachelor of Science.

As of 1 September 1997, students beginning their studies in the Faculty of Science or returning students officially declaring their major as of the above date, are NOT permitted to use the following courses as "other sciences" in fulfilling the requirements of their academic program:

- 217.1(.2) Life in the Universe
- 203.0 Biology and the Human Environment
- 220.1(.2) Chemistry and Industry
- 221.1(.2) Chemistry of Life
- 204.0 The Earth: Atlantic Province Perspective
- 190.1(.2) Pre-Calculus Review
- 200.1(.2) Introduction to Psychology

Bachelor of Science - Major

Subject to the regulations set forth in this Calendar, students must complete twenty (20.0) credits. Courses beginning with zero (0) are designed to prepare students for entry level course work and will not be credited towards any academic program.

Students will normally take five (5.0) credits during the regular academic year.

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

one (1.0) credit in English, normally EGL 201.1(.2) and 202.1(.2);

one (1.0) credit in Mathematics: either MAT 210.1(.2) and one of 211.1(.2) or 212.1(.2) or 315.1(.2); or CSC 226.1(.2)/227.1(.2). For science majors, CSC 226.1(.2)/227.1(.2) are not acceptable (see section 5 in this Calendar);

two (2.0) credits in Arts subjects and/or Economics [except ECO 101.2, ECO 206.1(.2), ECO 207.1(.2)] in addition to EGL 201.1(.2)/202.1(.2);

not less than seven (7.0) or more than nine (9.0) credits in the major subject. The Astrophysics major requires seven (7.0) credits in Physics and three (3.0) credits in Astronomy, namely, AST 202.0 plus two credits at the 300 level or above (or equivalent);

four (4.0) science credits — excluding the following courses: AST 202.0; BIO 203.0; CHE 220.1(.2) and 221.1(.2); GEO 204.0; MAT 190.1(.2) and PSY 200.1(.2) — and in addition to the required Mathematics or Computing Science credit (1.0); and

sufficient elective credits to complete the twenty (20.0) credits required for a Bachelor of Science with a major.

Double Major

With the approval of the departments 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:

at least six (6.0) credits in each major subject;

two (2.0) science credits not in the major subjects and in addition the required Mathematics or Computing Science credit (1.0); and

sufficient electives to complete the twenty (20.0) credits required for a Bachelor of Science with a double major.

In accordance with academic regulation 7c(i) students must achieve a minimum cumulative quality point average of 1.70 in order to qualify for graduation with a Bachelor of Science degree - general, major, or with a double major.

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.

Students must obtain a grade of not less than C in every course in the major subject(s). A student obtaining a grade of less than C in any such course may be permitted to continue in the major program with the approval of the Dean of Science, acting in consultation with the department(s) concerned.

Degree of 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:

a. at least seven (7.0) credits in the major subject;

b. at least five (5.0) credits in the minor subject;

c. two (2.0) science credits not in the major or minor subjects, in addition to the required Mathematics or Computing Science credit (1.0);

d. sufficient electives to complete the twenty (20.0) credits 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 in both the major and the minor subjects. A student obtaining a grade of less than C in any such course will be permitted to continue in the major-minor program only with the approval of the Dean of Science, acting in consultation with the departments concerned.

Degree of Bachelor of Science - Honors and Double Honors

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

12. For the Bachelor of Science degree with honors, students must complete the requirements for a major (see section above) and the following:

a. ten (10.0) to twelve (12.0) credits in the honors subject, or in double honors [see Science Regulation 12(d)], or in Astrophysics at least nine and one half (9.5) credits in Physics and three and one half (3.5) credits in Astronomy, namely, AST 202.0 plus two and a half (2.5) credits in Astronomy at the 300 level or above (or equivalent);

b. four (4.0) science credits not in the honors subject [one (1.0) in double honors, three (3.0) in Astrophysics and Computing Science] in addition to the required Mathematics and Computing Science credit (1.0);

c. sufficient electives to complete the twenty (20.0) credits required for a Bachelor of Science with honors.

d. For a double honors program, students must complete eight (8.0) credits in the subject in which they are completing their thesis. (This includes the thesis and seminar course where relevant.) Students must complete seven (7.0) credits in their second honors subject, one (1.0) credit in another science, two (2.0) credits in Arts, as well as the required credits for English [EGL 201.1(.2) and 202.1(.2)], Mathematics or Computing Science [MAT 210.1(.2) and one of 211.1(.2) or 212.1(.2) or 315.1(.2); or CSC 226.1(.2)/227.1(.2) as stipulated in the departmental regulations] for a minimum of twenty (20.0) credits. Entry into this double honors program requires approval by the Chairs of the two departments.

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

14. For a Bachelor of Science degree with honors, students must obtain a grade of not less than C (2.00 quality points) in every honors course described in regulation 11a above and a quality point average of not less than B in the same courses. A student receiving a mark of less than C in any honors course may be permitted to continue in the honors program with the approval of the Dean of Science, acting in consultation with the department(s) concerned.

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

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

Bachelor of Science (Geology/Commerce)

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

Combined Co-operative Education Program in Commerce/Geology

Students enrolled in the combined commerce/geology major/honors

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/honors programs.

Bachelor of Science (Major/Honors in Geology/Geography)
For details on this program, please consult the "Geology" entry in Section 5 of this Calendar.

Bachelor of Science (Major/Honors in Environmental Studies)
For details on this program, please consult the "Environmental Studies" entry in Section 5 of this 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 fulfil 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.

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

Commencing with the 1998-99 academic year, a new minor in Film Studies was introduced in the Faculty of Arts and made available to undergraduate students in all three faculties. Details are found in Section 5 of the Calendar.

A minor in the Faculty of Commerce is available for students pursuing a Bachelor of Arts or Bachelor of Science degree. This consists of the equivalent of five (5.0) credits, namely:

ACC 241.1(.2) Introductory Accounting - Part I
ACC 242.1(.2) Introductory Accounting - Part II
CML 201.1(.2) Legal Aspects of Business - Part I
COM 293.1(.2) Managerial Communications
MGT 281.1(.2) Introduction to Business Management
MGT 383.1(.2) Organizational Behavior I
MKT 270.1(.2) Introduction to Marketing
MSC 225.1(.2) Introduction to Computers
One (1.0) elective credit in Commerce subjects

The regular "Declaration of Major/Minor/Concentration" form is to be used to declare a minor. Students must fulfil 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 fulfilment 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.

Co-operative Education Programs (Major and Honors)

Mary Ellen MacEachern, Liaison Officer, Co-operative Education Programs

The Faculty of Science offers Co-operative Education programs in Biology, Chemistry, Environmental Studies, Geology, and Computing Science. Co-operative Education is a dynamic approach to uni education which integrates academic classroom studies with re practical work experiences in the major subject. The principle u which this concept is based is that learning and individual deve ment are greatly enhanced when the concepts studied in the cl room are periodically applied, tested and observed by the stud meaningful work situations. Through this program, participating industries have an excellent opportunity to observe and influen education of bright enthusiastic students. They also benefit fro access gained to university faculty and expertise, while universi ulty and students become aware of the concerns of industry an technical problems which they face.

A "Co-operative Education" notation is entered on the parchme and academic transcripts of undergraduate students who succ ly complete Co-operative Education requirements in addition to regular degree requirements.

Admission Requirements for Undergraduate Co-operative Education Programs
a. Application for admission to the program is normally after t semester of Year 1. Final decision on admission to the program made at the end of the second semester.

b. Students should make application for admission to the Co- tive Education program on a special form obtainable from the C operative Education Office. Students will be admitted to the Co ative Education program on the basis of their formal academic achievement and interviews with the Liaison Officer of the Co-o tive Education Programs, and the appropriate departmental Co ative Education Advisor.

c The normal prerequisite for admission to the Co-operative Education program in a regular Bachelor of Science program is minimum cumulative quality point average of 2.50 and a minim quality point average of 3.00 in the course(s) of the student's declared major subject(s).

d. Students will be admitted to the Co-operative Education pr on the basis of their interest, aptitude and assessed ability to c bine successfully the academic requirements of a major or hon science program together with the special work term require me the Co-operative Education program they wish to enter.

Requirements for Continuance in and Graduation from the operative Education Program
a. Students must complete all of the regular requirements for Bachelor of Science degree (see regulations 1 through 13 abov Since individual programs may have specific additional require for Co-operative Education students, students should consult t appropriate departmental section of this Calendar for a descrip these regulations.

b. In addition to the above requirements, students must offici register for and complete a minimum of four work terms as spe by the department of their major program (see regulations belo departmental Co-operative Education regulations). Official regis is on the regular registration forms available from the Registrar' Office.

c. To continue in and graduate from the Co-operative Educati program, students must earn a minimum cumulative quality poi average of 2.50 with a minimum qualty point average of 3.00 i courses in their major subject(s).

Policies and Regulations Governing Co-operative Educatio Work Terms
a. The University will make every effort to locate work term po tions for Co-operative Education students in academically relat areas of employment, but cannot guarantee placements. Emplo settings may also be identified by Co-operative Education stud but require the approval of the Liaison Officer, Co-operative Education Programs, in consultation with the appropriate depa tal Co-operative Education Advisor.

b. The satisfactory fulfilment of Co-operative Education work require:
(i) the completion of four terms of work experience in academ related, paid employment situations of 13 to 16 weeks duration Under certain circumstances, and with the approval of the app ate department, students may be permitted to satisfy their wor terms requirements in an unpaid position.

(ii) a satisfactory employer evaluation for each Co-operative Education work term;

satisfactory completion of a written report submitted within days after the end of each work term detailing the student's work ...rience in accordance with departmental standards and expecta-...

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

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

Students may be required to withdraw from the Co-operative ...ation program if:

- they are dismissed from, quit, or fail to accept an appropriate and ...roved Co-operative work term position;
- they fail to submit or successfully complete a work term report;
- they do not maintain the required quality point average neces...y for continuance in the Co-operative Education program;
- in the judgement of their department, they are no longer suited ...the particular requirements of the Co-operative Education pro...am.

Students who voluntarily withdraw from or who are required to ...draw from the Co-operative Education program may remain ...olled in and continue with the major or honors degree program ...ered by their department.

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

Since academic study during work terms is discouraged, registra...ion...y courses during a work term requires the approval of the Dean of Science or appropriate departmental Co-operative Education Advisor. If approval is granted, no more than one (1.0) credit may be taken during a work term.

Fees for Co-operative 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 100.1(.2)
Work Term 2 = COP 200.1(.2)
Work Term 3 = COP 300.1(.2)
Work Term 4 = COP 400.1(.2)

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

c. Students pay a fee equivalent to the tuition for one (1.0) credit plus differential fees, if applicable, for each work term they undertake.

A sample Co-operative Education study program for Science majors is presented below:

Year	Fall	Winter	Summer
1	AT1	AT2	—
2	AT3	AT4	WT1
3	WT2	AT5	WT3
4	AT6	WT4	—
5	AT7	AT8	

In general, the Co-operative 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 Co-operative Education program to the non Co-operative Education program.

Information concerning the Faculty of Science's programs at the graduate level is found later in this Calendar.

3

...ivision of Engineering

... A. ...man, Director

...eral Information

...ering studies at Saint Mary's University provides the first two ...rs of the Bachelor of Engineering degree in association with ...Tech, the technical school of Dalhousie University. Students follow ...gram for the discipline of their choice leading to a Diploma of ...ering, or a Bachelor of Science with Diploma in Engineering, ...completion of their courses at Saint Mary's.

...rance Requirements

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

- ...lish 441
- ...matics 441
- ...ics 441
- ...istry 441
- ...e other 441 course

...irements for the Diploma in Engineering

Year One:	Credit:	Definitions:
...matics 210	(0.5)	Math I
...matics 212	(0.5)	Math II
...istry 203	(1.0)	University General Chemistry
...ics 205	(1.0)	University Physics
...lish 201	(0.5)	Humanities/Social Sciences I
...lish 202	(0.5)	Humanities/Social Sciences II
...ering 206	(0.5)	Graphics (Design I)
...ering 203	(0.5)	Statics Mechanics I)
...ering 204	(0.5)	Computer Methods for Engineers
...ering 209	(0.5)	Engineering Economics

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 six, 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 (see Notes below)
5. Civil Engineering
6. Industrial, Metallurgical & Mining Engineering
7. Mechanical Engineering

Courses:	Definitions:	Disciplines:
Mathematics 301	(0.5) (Linear Algebra)	All
Mathematics 303	(0.5) (Math III)	All
Mathematics 311	(0.5) (Math IV)	3, 4, 5, & 6
Hum./Soc.Sci. III	(0.5) Free Elective	1, 2, 3, 4, 6, 7,
Hum./Soc.Sci. IV	(0.5) Free Elective	7 only
Biology 200	(1.0) Principles of Biology	1 & 2
Geology 200	(1.0) Intro. To Earth Science	1 & 5
Organic Chemistry I	(0.5) Intro. To Organic Chem.	1, 2, & 3
Engineering 301	(0.5) Mechanics II	2, 5, 6, & 7
Engineering 303	(0.5) Fluids	1, 2, 3, 5, 6, & 7
Engineering 304	(0.5) Strength of Materials	2, 5 , 6, & 7
Engineering 305	(0.5) Digital Circuits	4 only

Engineering 306	(0.5) Thermodynamics	3, 4, 5, 6, & 7
Engineering 307	(0.5) Design II	4 & 7
Engineering 308	(0.5) Electric Circuits	All
Engineering 309	(0.5) Probability and Statistics	All
Engineering 310	(0.5) Technical Communications	1, 2, 4, 5, & 6

Notes:
(a) Electrical Engineering (4) requires one more half credit (0.5) free elective in an appropriate subject (consult your adviser).

(b) Chemical Engineering requires 3 more half (0.5) courses, i.e., one and one half credits (1.5), (Chemical Process Industries, Fundamentals of Chemical Engineering, and Fundamentals of Environmental Engineering) which are offered only at DalTech.

(c) To qualify for the Diploma in Engineering, a student is required to achieve a minimum quality point average of 1.70. This may be raised subsequent to the signing of a new Memorandum of Agreement with DalTech, under negotiation at the time of this Academic Calendar going to print.

Three Year Bachelor of Science (General) plus Diploma of Engineering
This program entails an extra year of five (5.0) credits as listed below:

one (1.0) Mathematics elective credit at the 400-level

one (1.0) Chemistry elective credit at 300 level or above

one (1.0) Physics elective credit at 300 level or above

two (2.0) Humanities or Social Sciences elective credits at 200 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 twenty (20.0) credits consistent with the requirements for the Bachelor of Science degree. Students who anticipate taking this option are advised to substitute CSC2[illegible] and 227 for EGN 204, and consult with the Department of Mathematics and Computing Science before registering for any 3 math course or EGN 309.

NOTE: It is also possible to arrange a four year program consisti[illegible] Diploma in Engineering and Bachelor of Science degree with oth[illegible] concentrations.

Entrance to DalTech
With a Saint Mary's University Diploma of Engineering and witho[illegible] additional examination students may enter DalTech, the technica[illegible] lege of Dalhousie University, and obtain the degree of Bachelor o[illegible] Engineering on successful completion of the DalTech portion of th[illegible] Bachelor of Engineering Degree. This will normally require an add[illegible] tional two years of study, and students will normally be admitted t[illegible] the discipline they have selected for the second year Diploma pro[illegible] gram. However, all Departments at DalTech are subject to a max[illegible] mum number of annual admissions, and therefore available seats[illegible] be allotted on the basis of academic standing. Students with low[illegible] academic standings may be offered alternative departments.
DalTech will treat students from the Associated University progra[illegible] in the same manner as students who entered the program as fres[illegible] men at Dalhousie University. Academic merit will be the only ded[illegible] ing factor on admission to disciplines.

Objectives
Saint Mary's University offers Engineering programs accredited by[illegible] Associations of Professional Engineers of the Provinces through t[illegible] Canadian Accreditation Board, which will assist students in deve[illegible] ing the following qualities:

— a basic understanding of scientific principles

— a foundation in engineering mathematics

— a competence in engineering design and technical communica[illegible]

— creativity

— social understanding

— an appreciation for continued learning

Faculty of Education

Acting Dean	Dr. Michael J. Larsen
Associate Professor	B. Davis
Assistant Professor	B. Hanrahan

For the 1999-2000 academic year Saint Mary's University will not be admitting students to any of its programs in the Faculty of Education. Students who have been accepted and are currently pursuing their studies will continue to follow the rules and regulations delineated in the Academic Calendar in existence when they began their progr[illegible] In addition, the Acting Dean of Education is available for consulta[illegible] as required.

Undergraduate Elective Courses
A number of courses are now available as electives to undergradu[illegible] students interested in exploring aspects of education. These are described in Section 5 of this Academic Calendar.

Educational Exchange Programs for National and International Study

Saint Mary's University believes that exposure to other cultures in the national and international community is an important part of a university education. Thus, Saint Mary's students are encouraged to do a part of their university study at an institution in another country or in another part of Canada. Student exchanges are a wonderful opportunity to learn what it is like to live in another culture. Furthermore, in today's global economy, students with international and cross-cultural experience are more attractive to potential employers after graduation.

International exchange programs are available to students in all Faculties. Saint Mary's University offers opportunities to obtain credit toward your academic program, gain volunteer work experience, or participate in field trips overseas. 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. Such courses are offered in all faculties.
- Plan well in advance, to allow time for academic, logistical, fin[illegible] cial, and travel arrangements.
- Investigate the options available. Each program is unique, and range of opportunities for students is different each year. All "study abroad" materials and information bulletins are on disp[illegible] at the International Centre. Students should consult these ma[illegible] als as a first step, and then meet with the appropriate progra[illegible] coordinator. Most of the international programs available for S[illegible] Mary's students are open to students from any academic pro[illegible] of study. Credits earned from these programs are applicable t[illegible] the extent that they fulfil the requirements of each student's o[illegible] degree program. Some of the options are described in the foll[illegible] ing paragraphs.

China: Study Abroad

Xiamen University, in Xiamen, People's Republic of China, offers a[illegible] intensive eight-week program of Chinese language and culture ea[illegible]

Accommodation is provided on the university campus. may be applied towards the Bachelor's programs at Saint University. Details are available from the Coordinator of Asian

apan: Study Abroad

University of Education in Hakodate, Japan, offers an program of Japanese language and culture each summer. modation is provided on campus or with a local family. may be applied towards a Bachelor's program at Saint Mary's . Details are available from the Coordinator of Asian

ear of Study Abroad: Angers, France

years ago Saint Mary's University entered into an arrangement qualified students have the opportunity to study at the international d'etudes franÁaises (C.I.D.E.F.) de l'UniversitÈ de l'ouest in Angers, France. Permission to participate in program is granted by the Dean of Arts, the Chairperson of the 's area of concentration, and the Chairperson of the Modern ages and Classics Department. Credits may be applied toward lors' programs at Saint Mary's University. Usual registration dures are to be followed, except that tuition fee payments must ade directly to the University of the West.

tudy at the Université du Québec

arrangements exist for students, competent in the French age, to undertake regular studies at the UniversitÈ du Québec - imi, Rimouski or Trois Riviéres, and to receive credit for these towards their Saint Mary's degree. Further details are avail- from the Department of Modern Languages and Classics.

Nova Scotia/New England Student Exchange Program

Saint Mary's University is also a participant in the Nova Scotia/New England Student Exchange Program. Currently there are 16 New England post-secondary institutions participating.

The most important feature of the program is that accepted students in either their junior or senior year of study at participating Nova Scotia institutions remain registered full-time at their home institutions and pay tuition and academic fees there. Any existing Canadian financial aid may be maintained. Further general details are available at the Registrar's Office.

Free Trade in the Geological Past: An Ancient Common Heritage - A Student Mobility Program Relating to Geology and the Environment. Geology students are the main focus of this program. Students may take courses at other universities in the United States or Mexico, or may participate in a special summer fieldwork program that visits all three countries. Further details are available from the Department of Geology.

Other Exchange Programs

Other official agreements have also been negotiated with The Bermuda College, Universidad La Saile (Mexico), the University of Glasgow (UK), the University of Sheffield (UK), Sapporo University (Japan), Pontifical Catholica University of Paran (Brazil), Narsee Manjee Institute (India), and McKenzie Presbyterian University (Brazil). Details of current opportunities which are available for students as part of these agreements are available at the International Centre, located on the third floor of the Student Centre.

3

re-Professional Programs

ofessional Schools

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

h not strictly required by some professional schools, it is rec- nded that the student complete an undergraduate degree, usu- with a major or honors program, before seeking admission to a ional school. Students taking a program as preparation for to professional schools are urged from the beginning to special emphasis on a high standard of performance. site course requirements apply and students should ensure meet the application deadline and complete tests, such as the in time to make the application deadline.

e-Medical

intending to study medicine should have a solid academic i.e., at least a B+ average) for admission into medical school . In the case of Dalhousie Medical School, take five (5.0) credits for each of the two years prior to admission to medical

owing subjects are the normal minimum requirements of many medical schools: Biology, Chemistry, Physics and English, an academic year's duration. Students should extend their beyond the minimum requirements and include microbiology, ogy, etc., and biochemistry as well as a course in the humani- and social sciences in their program. In addition to the academic , medical schools also take into consideration other criteria as the Medical College Admission Test, volunteer work, inter- , and factors such as emotional stability, social values, leader- personal maturity, motivation, life experience, etc.

ousie University requires applicants to hold a university degree. student should write for information and consult the academic r of the university to which medical school admission is

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 DalTech University:

- two years (10.0 credits) 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.

Pre-Theological Courses

Students who are candidates for the Christian Ministry are in mos cases required to obtain a Bachelor of Arts degree, or its equiva before proceeding to Theology. Normally the Bachelor of Arts de will be followed by three years in Theology. Requirements may va somewhat from one denomination to another, but generally speal students are advised to select a broad range of subjects from su departments as English, History, Philosophy, Classics, Psycholo and Sociology, along with some course in Religious Studies. A w ing knowledge of Greek is desirable for students entering Theolo

Pre-Education

Students intending to pursue a career in teaching must apply to e a Bachelor of Education program after completing a Bachelor's degree in Arts, Science, or Commerce. Those persons who wish t teach at the secondary school level should undertake a program the first Bachelor's degree that will develop sound academic prep tion in a subject area normally taught at the secondary school lev Students wishing to teach at the elementary level should develo program in the first Bachelor's degree which has a breadth of aca mic courses. Students who plan on applying to enter a Bachelor Education program should determine the course requirements fo particular university where they plan to attend.

Student Counselling for Pre-Professional Programs

Because of the keen competition for admission to graduate and p fessional schools, students from any Faculty who are interested i applying to graduate or professional schools are urged to contac Office of the Dean of Science for further information.

Graduate Programs

General Requirements
The University offers programs of study leading to graduate certifications in the following academic areas:

Master of Arts in Atlantic Canada Studies
Master of Arts in Criminology
Master of Arts in Education
Master of Arts in History
Master of Arts in International Development Studies
Master of Arts in Philosophy
Master of Arts in Women's Studies
Graduate Diploma in International Development Studies
Graduate Diploma in Criminology
Graduate Courses in Geography
Master of Business Administration
Master of Education
Master of Science in Astronomy
Master of Science in Applied Psychology
Doctor of Philosophy in Business Administration (Management)

The program of each student is administered by the academic unit concerned. Each student shall comply with the general regulations, the degree requirements, and any additional requirements of the appropriate academic unit.

1. Qualifications for Admission
a. Admission is limited and at the discretion of the Department concerned. General, as well as program-specific admission requirements have been established as a guide to applicants. Possession of these minimum requirements does not establish the right of the applicant to be admitted or readmitted to the University. The University reserves the right to accept or reject any applicant. An acceptance is valid only for the two summer sessions preceding an academic year (i.e., May to August) and the academic session (i.e., September to May). It cannot be deferred. An applicant who does not register in this twelve month timeframe must reapply for admission. Admission is not guaranteed. 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 University without refund of tuition or any other fees paid by the s dent to the University. To be considered, an applicant shall hold a bachelor's degree or its equivalent from an institution recognized the Senate and shall have a knowledge of the proposed field of s cialization satisfactory to the Department concerned (or Departm when interdisciplinary study is intended).

b. Preference will be given to applicants who hold an honors degree. In addition, admission will be granted only to those stud who show a high promise of success in post graduate study as demonstrated by the results of appropriate tests and their recor previous academic accomplishment. See the regulations listed u each graduate program for specific additional minimum requirem for admission to that program.

c. Applicants whose mother tongue is not English may be requi to demonstrate an appropriate level of proficiency in English.

2. Procedure for Admission
a. Application for admission shall be made to the Director of Admissions. Applicants shall arrange to have forwarded to the Director of Admissions an official transcript of their academic rec and letters of recommendation from at least two persons in a po to judge the applicant's capacity for graduate study. Application forms and all supporting documents must ordinarily be on hand b May 31 of the academic year prior to the one for which admissio sought.

b. Successful applicants will be notified by the Director of Admissions.

3. Registration
a. Registration of students in graduate studies shall take place a times indicated in this Calendar and the Registration Book, publi annually.

b. Students are not permitted to register until they have receive notification of acceptance.

Students can register on either a full or part-time basis depending on the terms of acceptance to their graduate program and with permission of the Department Chairperson/Director. The normal academic and fiscal definitions of full-time and part-time, as delineated in the Academic Regulations in Sections 2 and 6 of this Calendar, apply except in the instance where official verification has been provided by the Registrar from a student co-signed by the Department Chairperson/Director indicating that the individual is working on a full-time basis on a dissertation, thesis, major research paper/project, or is employed on an official Co-operative Education work term for which the student has officially registered. The verification is valid only for a single academic term but can be extended on the authorization of the Department Chairperson/Director/Coordinator. A special form for this purpose is available from the academic unit in which the student is enrolled.

Program of Study and Research

Students entering with an honors degree (or equivalent) must complete four (4.0) credits and submit an acceptable thesis. On the recommendation of the Department concerned, a three (3.0) credit program is permissible for a student undertaking a proportionately less demanding thesis. In Departments authorized by the Committee on Graduate Studies, a five (5.0) credit program, without thesis, is also acceptable for the degree. Courses in all programs must be at the 500 or 600 level, but where advisable, courses at the 400 level may be included in a program, provided that the requirements applying to graduate students in such courses be of a graduate standard.

On the recommendation of the appropriate Department or Graduate Council, a maximum of twenty percent of the credits required for a graduate degree in Education, Astronomy, Philosophy, History, Psychology, and Atlantic Canada Studies at Saint Mary's can be recognized for graduate courses previously completed at another recognized academic institution and not previously used in the fulfilment of the requirements for another degree. In the case of the MBA program, the maximum number of such transfer credits is five (5.0).

A student may be required to audit a course as part of the program of study.

Where required, a student shall submit a thesis on a subject approved by the Department in which research has been conducted under the direction of a supervisor appointed by the appropriate Department(s). An oral defense in the presence of an Examining Committee appointed by the Department is mandatory.

Changes in either the program of courses or the topic of the thesis require the approval of the Department.

Period of Study

The maximum period of a Master's degree program in Astronomy, Education, History, and Women's Studies shall be five years, and six years in Atlantic Canada Studies, Criminology, International Development Studies, and the MBA. For Philosophy and Psychology, the maximum period is three years for students with full-time admission status and five years for students with part-time admission status. Extensions may be granted. In order to establish a uniform standard across the University for the extension of Senate deadlines for completion of graduate degrees and for the re-admission of those graduate students who did not complete their graduate degree during the specific period of time, Department Chairpersons and/or Program Coordinators concerned must make their recommendations in either of the above matters to the Graduate Studies Committee which will consider the matter and communicate its final decision to the Chairperson of the Department or the Coordinator of the Program.

Students may apply to the Committee on Graduate Studies through the Department Chairperson/Director for official withdrawal, for non-academic reasons, from their graduate program. If granted, students would then be required to reapply for admission at the point in time when they are in a position to resume their studies. If readmitted, the Department Chairperson/Director would be responsible for delineating the terms of readmission, including the outstanding academic requirements and the deadline for completion of the entire graduate program.

Evaluation

In order to qualify for a Master's degree a student shall obtain a qualifying average of 3.00. Failure of any full course (or the equivalent) normally will require withdrawal from the program. In exceptional circumstances, the Department and the Dean of the Faculty concerned may allow the student to remain in the program. In such a case, failure of a second full course (or equivalent) will require withdrawal from the program.

a. Letter grades and quality points for graduate courses will be assigned as follows:

A+	= 4.00	=	Excellent
A	= 4.00	=	Excellent
A-	= 3.67	=	Very Good
B+	= 3.33	=	Good
B	= 3.00	=	Satisfactory
B-	= 2.67	=	Below graduate standard
C	= 2.00	=	Marginal pass
F	= 0.00	=	Failure
IP	= —	=	In Progress (Applicable for graduate level courses, thesis, dissertation, major research paper/project, and practicum courses; also for Co-operative Education work terms; and undergraduate honors courses.)

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

Aegrotat	AE
Authorized withdrawal from a course	W
In progress	IP

Grades earned on advanced standing and transfer courses are also not included in the calculation of averages.

c. In the case of advanced standing and transfer courses, credit will not be awarded for less than a grade of B (or the equivalent).

7. Thesis/Major Research Project (if required)

a. To be eligible for graduation at Spring Convocation, the student's finished thesis/major research project must be submitted to the Department no later than the last day of classes of the regular academic year and by 30 September for Fall Convocation.

b. The thesis/major research project must be ruled acceptable by the Examining Committee appointed by the Department. Any suggestions by the Committee concerning corrections, additions and other necessary changes must be either carried out or formally refuted by the students before the thesis/major research project can be accepted.

c. The Student's Responsibilities

(i) The thesis/major research project must be submitted in the following form:

(a) Paper: Good quality bond paper, 21.5 cm (8 1/2") x 28 cm (11")

(b) Typescript: Double spaced

(c) Margins:

- Left hand margin: 4 cm (1 1/2")
- All other margins: 2.5 cm (1")

(d) Abstract:

- Length: approximately 300 words
- Must be in typescript
- Should bear the title "Abstract/Executive Summary" and include the name of the author, the title of the thesis/major research project and the date of submission.

(e) Signature Page: A page designed to contain the signature of all members of the Examining Committee, including any external examiners, if applicable.

(ii) The student must also meet any additional requirements of the Department concerned.

(iii) The student must submit one original and two (2) copies of the accepted thesis/major research project with the binding fee paid at the Business Office at the current rate ($45.00 for 1997-98). The original of this receipt is to be submitted to the Registrar when the requisite number of copies of the thesis/major research project are submitted. A duplicate receipt for this amount must accompany the unbound thesis/major research project when delivered to the library, as proof of payment.

(iv) A completed "Permission to Microfilm" form must also accompany the above. This form, from the National Library of Canada, Canadian Theses Division, is available from Information Services in the Library. It grants permission for the microfilming of the

thesis/major research project and the sale of the microfilm.

d. The Library's Responsibilities

(i) The Library arranges for the binding of all accepted theses/major research projects.

(ii) Original copies of Master's theses/major research projects are sent to the National Library in Ottawa for microfilming before they are bound and placed in the archives.

(iii) Copies of the theses/major research projects are bound and distributed as follows:

(a) One copy is sent to the student's Department;

(b) One copy is catalogued and made available through the General Collection of the library; and

(c) One copy (the original) is placed in archives and remains as non-circulating material.

(iv) The Library will accept for binding additional copies of a thesis/major research project only if the student provides the extra copies and pays the additional binding fee of $15.00 per copy. (Proof of payment in the form of a duplicate receipt must accompany additional copies.)

8. Academic Regulations

Section 2 of this Calendar contains the University's academic regulations, revised as of 1 September 1997. While many of these pertain primarily to undergraduate students, the attention of students in graduate programs are specifically directed to the following regulations:

1. Number of Courses in an Academic Session
2. Auditing Courses
4. Grading System
5. Undergraduate Rating, Grades and Quality Points (all except subsections a. and c.)
6. Quality Point Average
7. Standing Required
8. Examinations
9. Evaluations
10. Special Examinations
11. Academic Appeals
12. Credit without Final Examination
13. Course Changes
16. Withdrawing from a Course
17. Retaking a Course
18. Withdrawal for Academic Reasons
19. Academic Responsibility
20. Advanced Standing
21. Transfer Credit
27. Convocation Dates, Degrees, Diplomas, and Certificate
28. Degree, Diploma, or Certificate in Absentia
29. Distinctions
30. University Medals
32. Students' Academic Records and Transcripts
33. Safety and Responsibility in Officially-Sanctioned Univ Activities

Graduate students are also advised that the information in the re tration portion of Section 2 of the Calendar applies, in most instances, to them.

9. Specific Requirements of Academic Units

In addition to the above requirements, students must comply wi any additional requirements of the Department concerned. These delineated below and also in Section 5 of this Calendar.

10. Financial Regulations

Please consult Section 6 of this Calendar for details on all applic fees.

At a Special Convocation, 9 October 1998, Her Excellency, Mary Robinson, President of Ireland received a Doctor of Civil Law degree (honoris causa). She is shown above (centre) with Chancellor Emeritus Rev. Dr. James Hayes (left) and the President of Saint Mary's University, Dr. Kenneth L. Ozmon, O.C. (right). (Photo credit: Tim MacPherson)

Faculty of Arts - Graduate Programs

Faculty of Arts offers five graduate programs in the areas of Atlantic Canada Studies, History, International Development Studies (with a Master's degree and a Graduate Diploma), Philosophy, and Women's Studies. In addition, a graduate degree and a graduate diploma in Criminology are being reviewed by the Maritime Provinces Higher Education Commission.

Master of Arts in Atlantic Canada Studies

Committee on Atlantic Canada Studies

Coordinator	History
	Political Science
	Sociology
	English
	Management
	Finance and Management Science
Hoffmansen-Ruffman	Sociology
	Biology
	Sociology
	Sociology
	Anthropology
	Geography
	Environmental Studies
	French
	English
	History
	History
	Economics
	English
	Geography
	Anthropology
	Geography
	History
	Political Science
	Irish Studies
	Sociology
	Geography
	English
	History
	History
	Sociology
	Geology
	English
	Biology
	graduate student representative
	undergraduate student representative

Mount Saint Vincent University offers an interdisciplinary program in Atlantic Canada Studies (ACS) that integrates the teaching and research expertise of 30 faculty members in ten different Departments.

The program was established in 1975 in response to a clearly defined need for regional research and as a unique experiment within the emerging area of Canadian studies. At the time, a study of higher education concluded that there was a remarkable level of ignorance in Canada about the Atlantic Region.

There are sound intellectual and practical reasons for pursuing an interdisciplinary program of regional studies. It offers a unique combination of social-scientific and cultural-historical perspectives. The program takes an interdisciplinary approach to three areas of specialization: the culture, political economy, and resource development of the region. Students learn to apply the conceptual perspectives and analytical tools of one or more academic disciplines in their research and study.

There are particular advantages to an interdisciplinary approach to graduate study. This applies, for instance, to people employed by government at various levels. It also applies to managers in public and private enterprise, members of the teaching profession, business people, policy makers, and individuals whose occupation requires them to deal with social, economic, political, or cultural problems. For many of these people, a broad understanding of the region's political economy and culture is vital.

Admission to the program is through an honors degree in Atlantic Canada Studies, or a degree which the ACS Committee deems to be equivalent. At the discretion of the Committee, a student may be admitted to the program subject to the prior completion of such qualifying work as the Committee shall prescribe. Once the student has embarked full-time on the Master of Arts program, the normal goal is completion within 12 months, although in some cases thesis work may extend beyond this time period. The degree may also be taken through part-time study.

The general requirements for the Master's degree (delineated above) apply to the graduate program in Atlantic Canada Studies.

Specifically, the Master's degree in Atlantic Canada Studies involves the following considerations and includes the following requirements:

1. The normal qualification for entry into the one-year Master's program is an honors degree in Atlantic Canada Studies, or a degree which the Atlantic Canada Studies Committee deems to be equivalent. At the discretion of the Committee, a student may be admitted to the program subject to the prior completion of such qualifying work as the Committee shall prescribe.

2. The ACS Coordinator will work with all Master's students from the earliest stages of their participation in the graduate program to determine the area of a thesis topic and to select a thesis supervisor. The thesis supervisor will be the Graduate Faculty Advisor for the duration of a given student's participation in the program.

3. For the Master of Arts in Atlantic Canada Studies, all students must complete an acceptable thesis. It is not possible to satisfy the requirement for a thesis by means of extra course work.

4. Students are expected to produce a thesis which shows both originality and the analytical-critical skills of sound research and interpretation. The topic must deal directly with an Atlantic Canada subject matter.

5. All students must present and defend a thesis proposal and ultimately a thesis, before a Thesis Examining Committee. This Committee consists of a thesis supervisor, the ACS Graduate Studies Coordinator (or appointee), and a third reader acceptable to the thesis supervisor and the ACS Committee.

6. Students must complete four (4.0) credits at the 600 level approved for the ACS graduate program. Two (2.0) of these credits must be selected from the following ACS seminars:

ACS 620.0 Culture of Atlantic Canada
ACS 630.0 Seminar on Atlantic Canada Ecology and Resources
ACS 640.0 Atlantic Canada Political Economy Seminar
ACS 660.0 History and Society: The Atlantic Provinces Seminar

7. All students, as part of their four (4.0) credit program, must complete ACS 690.0. Credit for the course will be determined when the student satisfies the thesis supervisor that both thesis research and all other preparation for the successful handling of the thesis topic have been completed. Supervisors may require a demonstration of language competence or extra course work as preparation for the treatment of certain thesis topics.

The following constitute the offerings in this graduate program. Detailed course descriptions are found in Section 5 of this Calendar.

620.0 Culture of Atlantic Canada
630.0 Seminar on Atlantic Canada Ecology and Resources
640.0 Atlantic Canada Political Economy Seminar
650.0 Directed Reading
660.0 History and Society: The Atlantic Provinces Seminar
690.0 Thesis Research

Master of Arts in Criminology

Chairperson, Professor	G. Barrett
Professors	L. Christiansen-Ruffman, P. Connelly, R. Cosper, J. McMullan, M. Overington, H. Veltmeyer
Associate Professors	S. Bell, R. Hadden, I. Okraku, D. Perrier, E. Tastsoglou
Assistant Professors	W. Chan, G. Rigakos, M. VanderPlaat
Coordinator of Criminology	D. Perrier
Professor Emerita	H. Ralston

The purpose of the proposed Master of Arts program is to educate students for careers in teaching or research in criminology as well as for employment in agencies in the criminal justice system and related fields. The Department of Sociology at Saint Mary's University has established an excellent scholarly and professional reputation in the field of criminology. The Master of Arts degree in criminology will provide graduates with analytical and research skills necessary for policy, research and administrative jobs in the field, as well as provide the scholarly basis for students to pursue doctoral studies in socio-legal studies, criminal justice, and criminology.

Students with a Master's degree in criminology will be trained in the study of crime and crime control. This knowledge will enable them to work in research, administration and front-line service within the many private and public agencies that make up the criminal justice system.

1. Admission Requirements
The following conditions must be satisfied to be eligible for admission to the Master of Arts degree program in criminology.

a. Students who have earned an honors baccalaureate undergraduate degree in criminology (or equivalent) or an honors baccalaureate undergraduate degree with a concentration in criminology (or equivalent) may be admitted to a four (4.0) credit Master of Arts degree program.

b. All applicants must have achieved a minimum cumulative quality point average of 3.33 (B+) in their overall academic record.

c. Applicants must submit official transcripts; a statement that specifies areas of preparation and interest for their thesis; and three letters of recommendation from individuals who can attest to their academic competence and/or interest in pursuing graduate training.

d. All applicants whose native language is not English and whose undergraduate education was conducted in a language other than English, must fulfil the language requirement as set out in the Academic Regulations and Information section of the Calendar.

e. The Graduate Criminology Committee of the Department of Sociology will review the files of all applicants and make final decisions about admission into this Master of Arts degree program.

2. Qualifying Year
Students may be admitted to a qualifying year prior to making an application to the Master of Arts degree program. In exceptional circumstances, students who have earned an honors baccalaureate undergraduate degree; a baccalaureate undergraduate degree in criminology; or a baccalaureate undergraduate degree with a concentration in criminology may be admitted to a five (5.0) credit qualifying year for consideration into the Master of Arts degree program.

Qualifying Year Requirements:

a. All applicants must have achieved a minimum cumulative quality point average of 3.33 (B+) in their overall academic record.

b. Applicants must submit official transcripts; a sample of their written academic work; and three letters of recommendation from individuals who can attest to their academic competence and/or interest in pursuing graduate training.

c. All applicants whose native language is not English and whose undergraduate education was conducted in a language other than English, must fulfil the language requirement as set out in the Academic Regulations and Information section of this Calendar.

d. The Graduate Criminology Committee of the Department of Sociology will review the files of all applicants and make final decisions about admission into the qualifying year.

e. Applicants admitted to the qualifying year must have their courses approved by the Criminology Graduate Studies Coordinator.

f. A student in the five (5.0) credit qualifying year must make for application to the Master of Arts degree program by February 1 their qualifying year and have attained a minimum cumulative qu point average of 3.33 (B+) to be considered for admission to thi Master of Arts degree program.

3. Degree Requirements
Requirements for continuance in and graduation with a Master o degree:

a. Students must earn at least four (4.0) credits.

b. Students must receive credit for the following:

(i) CRM 600.0 Advanced Seminar in Criminology;

(ii) CRM 601.1(.2) Advanced Criminological Theory;

(iii) CRM 602.1(.2) Advanced Research Methodology in Criminology;

(iv) one (1.0) course at the 600 level, relevant to the studen area of interest from among the following courses: CRM 603.1(. CRM 604.1(.2); CRM 605.0, CRM 606.1(.2); CRM 607.1(.2); CRM 608.0; CRM 609.1(.2); CRM 610.1(.2); and CRM 611.0;

(v) CRM 615.0 Thesis Research.

c. Students must attain a minimum grade of B+ in each course an overall cumulative quality point average of 3.33 to graduate in Master of Arts degree program.

d. Students must meet the following thesis (CRM 615.0) requir ments:

(i) to produce a thesis which shows both originality and th analytical/critical skills of research and interpretation;

(ii) to form a Thesis Committee which will consist of a Thes Supervisor and one faculty member.

(iii) to have a thesis proposal submitted to and approved b Thesis Committee and Criminology Graduate Studies Coordinato prior to commencement of the research;

(iv) to defend their theses before an Examining Committee sisting of the Thesis Committee, the Criminology Graduate Stud Coordinator, and one outside reader chosen by the Thesis Com in consultation with the Criminology Graduate Studies Coordinat and the student. In instances where the Criminology Graduate Studies Coordinator is a member of the Thesis Committee, the Criminology Graduate Studies Coordinator will appoint a repres tive on the Examining Committee; and

(v) to defend their theses publicly.

e. All degree requirements must be completed within five years entry into the Master of Arts degree program.

Graduate Courses
The following constitute the offerings in this graduate program. Details descriptions are found in Section 5 of this Calendar.

CRM 600.0 Advanced Seminar in Criminology
CRM 601.1(.2) Advanced Criminological Theory
CRM 602.1(.2) Advanced Research Methodology in Criminology
CRM 603.1(.2)/604.1(.2) Advanced Topics in Criminology
CRM 605.0 Advanced Topics in Criminology
CRM 606.1(.2)/607.1(.2) Directed Readings in Criminology
CRM 608.0 Directed Readings in Criminology
CRM 609.1(.2)/610.1(.2) Selected Topics in Criminology
CRM 611.0 Selected Topics in Criminology
CRM 615.0 Thesis Research

[illegible] of Arts in History

[illegible]	G. Young
[illegible]	E. Haigh, C. Howell,
	J. Morrison, J. Reid, R. Twomey
[illegible] Professors	B. Kiesekamp, J. Lee, W. Mills
[illegible] Professors	M. Vance, L. Warner
[illegible] Emeriti	S. Bobr-Tylingo, J. MacCormack

[illegible] students of History learn techniques of research and analy[illegible] enable them to make critical evaluations, whether in read[illegible] newspaper, studying a report, or in many other fields. Someone [illegible] historical background will be able to look beneath the sur[illegible] question and analyze what is written.

[illegible] discipline in which students learn to declare themselves [illegible] and arguing the best case they can. The ability to [illegible] evidence and make a judgement about it is important for [illegible] especially for people who may later be dealing with [illegible] legal context. It is also useful in business or journalism, [illegible] judgements must often be based, as in historical analysis, on [illegible] less than complete.

[illegible] in History can also be invaluable for more special[illegible] In addition to working as university scholars, histori[illegible] the teaching profession and are employed by such [illegible] departments as Parks Canada. There are also opportuni[illegible] work writing historical articles and books on com[illegible]

[illegible] general requirements for admission to graduate stud[illegible] Master's degree apply to the Department of History. [illegible] admission to the graduate program in History must [illegible] statement of their anticipated field of study and [illegible] choice of a thesis topic.

[illegible] the research interests of members of the [illegible] of History:

[illegible] North America, 1480-1725
[illegible] and Early National Eras
[illegible] Canada (particularly Sport, Leisure and Medicine)
[illegible] Education in Canada
[illegible] Punishment in Canada
[illegible] Juvenile Delinquency
[illegible] Science (particularly in the Maritimes)
[illegible] Family in Canada
[illegible] (Germany, France, Italy and Spain)
[illegible] Since Independence
[illegible] Century South Africa
[illegible] Colonial Experience (particularly within the British Empire)
[illegible] Revolution
[illegible] Century Radicalism and Social Change
[illegible] Irish Emigration (particularly to Eastern Canada)
[illegible] History
[illegible] East Asia
[illegible]
[illegible] in Canada
[illegible] Nationalism and Politics

[illegible] requirements of the Department, which include a thesis [illegible] course work, are as follows:

[illegible] a general Bachelor of Arts must satisfy the course [illegible] the honors program in History or its equivalent before [illegible] year Master's program. Candidates must then com[illegible] additional history credits at the 600 level in addition to [illegible] 690.0. The program of each student must be [illegible] the Department.

[illegible] of Arts candidates in History, whether studying on a [illegible] basis, must register for HIS 650.0 and 690.0 in their [illegible]

[illegible] be required to demonstrate a reading knowledge [illegible] language other than English. The Department will [illegible] equivalent of no less than a satisfactory grade in Saint [illegible] undergraduate language courses, or a pass in the [illegible] Modern Language's French Proficiency Exam. French [illegible] required of students intending to write a thesis on any [illegible] Canadian history.

[illegible] of the thesis must be decided in consultation with [illegible] advisor.

5. Upon completion of the thesis, an oral defence will be required. Two months prior to this defence, the student will be invited to select an examination board subject to the approval of the Department of History. While the Department will make every attempt to meet individual requests, it cannot guarantee full compliance.

The following constitute the offerings in this graduate program. Detailed course descriptions are found in Section 5 of this Calendar.

602.0 Local History: Halifax, A Case Study
610.0 Global History: History and Historians
611.0 Modern East Asia, Selected Problems in Modernization
615.0 Seminar in Historiography
617.0 Seminar in Modern British History
619.0 Seminar in Modern European History
620.0 The Two World Wars
622.0 Seminar in American History
623.0 Seminar on North American Social History
624.0 The U.S.S.R.
625.0 Seminar in Irish and Scottish Immigration
635.0 Northeastern North America, 1480-1720
650.0 Seminar in Advanced Historiography
660.0 History and Society: The Atlantic Provinces Seminar
689.1(.2) Reading Course in History - Selected Topics in Irish History
695.1(.2)-699.1(.2) Reading Courses in History

3

Master of Arts in International Development Studies

Executive Committee on International Development Studies

S. Dansereau, Coordinator	International Development Studies
C. Beaupré	Modern Languages
G. Cameron	International Development Studies
P. Connelly	Sociology
J. Chamard	Management
T. Charles	Finance and Management Science
A. M. Dalton	Religious Studies
E. Keeble	Political Science
D. Leclaire	International Activities
H. McGee	Anthropology
R. McKinnell	International Development Studies
J. Morrison	History
N. Sharif	Economics
E. Tastsoglou	Sociology
L. Vasseur	Environmental Studies
H. Veltmeyer	Sociology
S. Wein	Philosophy
Adjunct Professors	K. Ahooja-Patel, C. Amaratunga, G. Cameron, D. Fletcher, J. Kirk, R. McKinnell, A. O'Malley, J. Parpart, S. Patel, R.J. Sacouman, R. Sargent, B. Suso, T. Shaw, J. Tellez

Note: In addition to the IDS Executive Committee, there are over 35 professors within the University who teach credit courses in the IDS program.

The graduate degree program is based on a core program of policy-oriented courses in the field of International Development Studies in addition to offerings by associated academic Departments, primarily Economics, Sociology, and History, but also Anthropology, Political Science, Geography, International Business (Management and Marketing), as well as Finance and Management Science.

The interdisciplinary program of courses offered in International Development Studies has as its primary focus an analysis of the problems experienced by developing countries in the Caribbean, Latin America, Asia and Africa; and of the social, cultural, economic, historical and political structures and forces that underlie and produce these problems. Another concern of the program is with the development strategies pursued by groups of people and governments in these developing countries. An evaluation of the different models and strategies for national development that countries pursue in an increasingly global context is an important feature of the program.

The graduate program of study will be useful to those seeking employment in national and international settings, as knowledge of the Third World is increasingly needed in many departments of the Federal government (CIDA, External Affairs), international develop-

ment agencies, refugee and immigration services, non-governmental organizations like Oxfam and CUSO, and professions such as teaching, journalism, development planning, administration, and business.

Graduate courses are available to students registered in the Master degree program; other students must have approval of the Coordinator of International Development Studies.

Requirements
The general requirements for the Master's degree delineated above in this section of the Calendar apply to the graduate program in International Development Studies (IDS). The specific requirements and conditions of the Master's degree in International Development Studies are as follows:

1. Students who have earned an honors baccalaureate undergraduate degree with a major concentration in International Development (or its equivalent) may be admitted directly into a four (4.0) credit program (Category I).

2. Students who have earned an honors baccalaureate undergraduate degree (or its equivalent) with a minor concentration [four (4.0) relevant credits] or practical experience in the field of International Development will be required to take between four and one-half (4.5) and eight (8.0) credits (Category II).

3. Students who have earned an honors baccalaureate undergraduate degree with a major concentration in a discipline or a field of study related to International Development will be required to take an eight and one-half (8.5) credit program (Category III).

4. All students must receive credit for a minimum of four (4.0) and a maximum of eight and one-half (8.5) credits. At least one-half of the students' credits must be from Saint Mary's University course offerings.

5. A minimum average of B (or equivalent) is required for graduation.

6. All degree requirements must be completed within 6 years of the date of first registration in the program.

7. Applicants must submit academic transcripts; a statement that specifies areas of preparation and interest; and two letters of recommendation from individuals who can attest to their academic or professional competence and/or interest in pursuing graduate training in International Development.

8. A minimum score of 550 on the TOEFL is required of all International applicants whose native language is not English and whose undergraduate education was conducted in a language other than English.

9. The Graduate Committee of the IDS Program will review the files of all applicants and determine, on a competitive basis, final admission into the program. Successful students will be advised of the category of their admission and the credit requirements of their program in the letter of acceptance.

10. For the Master's degree, all students must complete and receive credit for the following courses:

a. IDS 601.1(.2) Dynamics of Development: Framework of Analysis and Practice

IDS 602.1(.2) Dynamics of Development: Critical Issues

b. A minimum of one of the following half-credit (0.5) courses:

IDS 620.1(.2) Research Methodology
IDS 630.1(.2) Contemporary Development Planning

c. A minimum of one of the following half-credit (0.5) courses:

IDS 622.1(.2) Gender and Development: Theory and Method
IDS 623.1(.2) Gender and Development: Policy and Practice
IDS 640.1(.2)-645.1(.2) Special Topics in International Development
IDS 650.1(.2)-655.1(.2) Directed Readings
IDS 660.1(.2) Field Research in Development

d. A minimum of one full course (1.0) chosen from an approved list in consultation with the Program Coordinator.

e. IDS 690.0 Thesis
or
IDS 691.0 Practicum

A thesis or practicum that shows analytical/critical skills of research/interpretation and makes an original contribution to the of International Development.

11. Students admitted under Categories II and III above will also required to complete and receive between one-half (0.5) and four one-half (4.5) additional credits (as stipulated in the letter of acceptance). These courses will be drawn from.

a.
IDS 520.1(.2) Research Methodology
IDS 525.1(.2) International Justice
IDS 530.1(.2) Contemporary Development Planning
IDS 540.1(.2)-545.1(.2) Special Topics in International Development
IDS 545.1(.2) [645.1(.2)] Project Cycle
IDS 550.1(.2)-555.1(.2) Directed Readings
IDS 560.1(.2) Field Research in Development
IDS 570.1(.2) Environment and Development

b. Selected courses offered by associated departments at Saint Mary's University. These courses will be chosen from an approved in consultation with the International Development Studies Coordinator.

Courses Approved for the Master's Program
IDS 520.1(.2) Research Methodology
IDS 525.1(.2) International Justice
IDS 530.1(.2) Contemporary Development Planning
IDS 540.1(.2)-545.1(.2) Special Topics in International Developme
IDS 550.1(.2)-555.1(.2) Directed Readings
IDS 560.1(.2) Field Research in Development
IDS 570.1(.2) Environment and Development
IDS 601.1(.2) Dynamics of Development: Framework of Analysis Practice
IDS 602.1(.2) Dynamics of Development: Critical Issues
IDS 620.1(.2) Research Methodology
IDS 622.1(.2) Gender and Development: Theory and Method [Cr listed as SOC 422.1(.2)]
IDS 623.1(.2) Gender and Development: Policy and Practice [Cr listed as SOC 423.1(.2)]
IDS 625.1(.2) International Justice
IDS 630.1(.2) Contemporary Development Planning
IDS 640.1(.2)-645.1(.2) Special Topics in International Developme
IDS 650.1(.2)-655.1(.2) Directed Readings
IDS 660.1(.2) Field Research in Development

Other selected courses are offered by associated departments at Saint Mary's University. These courses will be chosen from an approved list in consultation with the IDS Coordinator.

Master of Arts in Philosophy

Chairperson, Assistant Professor	S. Crooks
Professor	W. Grennan
Associate Professors	P. March, S. Wein
Assistant Professors	R. Ansell, J. Blair, J. MacKinnon
Professors Emeriti	R. Beis, A. Monahan, W.A. Stewart, S.J.

The University's general requirements for admission for graduate studies and for the Master's degree apply to the Department of Philosophy. The particular requirements of the Department are as lows. They are currently under review and are subject to revision.

1. Admission Requirements

a. Only students who have earned an honors degree in Philoso or the equivalent, will be admitted to the one-year program. Othe students must first obtain the equivalent of an honors degree in Philosophy.

b. Applicants must submit academic transcripts, a statement sp fying areas of preparation, and three letters of reference. In addi applicants must have identified a topic for their research.

c. The Departmental Graduate Studies Committee will review ap cants' files and make recommendations to the Department on ad sions. The Committee must be satisfied that there is a member of Department able and willing to act as a thesis supervisor. The Department will make final decisions on admissions.

2. Degree Requirements

a. The student will take a total of three (3.0) 600-level credits, an addition will write a thesis (696.0 Master's Thesis). In some cases

attend undergraduate classes, but in all cases
independent syllabus agreed on between the
course instructor, and the student.

possible after acceptance into the Master of Arts pro-
will submit a formal thesis proposal to the
Graduate Studies Committee. In consultation with the
members concerned, and subject to
approval, the Graduate Officer will appoint a thesis
for each graduate student and authorize each student to
the writing of the thesis. Normally the thesis will have a
approximately 20,000 words (eighty pages). The thesis must
understanding of the issues with which it deals, an ability to
arguments concerning them, and an ability to make
of positions and arguments.

thesis is completed, the student will submit it to the
Graduate Studies Committee, which will, subject to
approval, appoint three examiners, one of whom will
be the thesis supervisor. Copies of the thesis will be made
in advance to the examiners. The Graduate Officer will set a
for the thesis defense, to which members of the academic com-
will be invited. Following the thesis defense, the examiners will
their assessment to the Graduate Officer and the student in

constitute the offerings in this graduate program.
course descriptions are found in Section 5 of this Calendar.

Philosophy of Language: Meaning
Philosophy of Language: Speech Acts
Theory of Knowledge
Political Philosophy
Philosophy of Mind
Phenomenology
Philosophy of Science
Philosophy of History
Aesthetic Philosophy
Augustine on Philosophy
Aquinas on Philosophy
Medical Ethics
Meta-ethics
Foundation of Ethics
Senior Seminar
Philosophical Issues in Feminism
690.0-695.0 Reading Courses in Philosophy
Master's Thesis

aster of Arts in Women's udies

ered jointly by Mount Saint Vincent versity, Dalhousie University, and Saint ry's University)

Graduate Program
Studies (Saint Mary's) M. MacDonald

faculty members across the three universities are avail-
as student supervisors in the Master of Arts in Women's

Dal)	Theatre
MSVU)	Sociology and Anthropology
Dal)	Law
Dal)	Sociology and Social Anthropology
Dal)	French
SMU)	Sociology
MSVU)	English
Dal)	Philosophy
Dal)	Political Science
SMU)	Modern Languages
Ruffman (SMU)	Sociology/IDS
SMU)	Sociology/IDS
MSVU)	Women's Studies
SMU)	Philosophy
Dal)	History
SMU)	Religious Studies
MSVU)	Modern Languages/Fine Arts
F. Early (MSVU)	History
D. Evenden (MSVU)	History
J. Fingard (Dal)	History
S. Flnson (AST)	Pastoral Theology
P. Fitzgerald (SMU)	Management
B. Frank (MSVU)	Education
D. Ginn (Dal)	Law
J. Gordon (MSVU)	Sociology/Anthropology
J. Jarman (Dal)	Sociology and Social Anthropology
W. Katz (SMU)	English
B. Keddy (Dal)	Nursing
E. Keeble (SMU)	Political Science
U. Kelly (MSVU)	Education
T. Laidlaw (Dal)	Medical Education
C. Luckyj (Dal)	English
M. MacDonald (SMU)	Economics
A. Manicom (MSVU)	Education
S. Medjuck (MSVU)	Sociology/Anthropology
R. Neal (Dal)	Social Work
L. Neilsen (MSVU)	Education
M. O'Brien (MSVU)	Gerontology
I. Oore (Dal)	French
J. Parpart (Dal)	History/IDS
H. Ralston (SMU)	Sociology
M. Ralston (MSVU)	Women's Studies
B. Richard (Dal)	Social Work
J. Scrimger (MSVU)	Public Relations
S. Sherwin (Dal)	Philosophy
M. Stone (Dal)	English
E. Tastsoglou (SMU)	Sociology/IDS
G. Thomas (SMU)	Classics
G. Thomas (SMU)	English
S. Tillotson (Dal)	History
N. Trèves (Dal)	French
E. van Roosmalen (Dal)	Sociology and Social Anthropology
M. VanderPlaat (SMU)	Sociology
D. Varga (MSVU)	Child and Youth Studies
R. Zuk (MSVU)	English

Consult the Academic Calendars of the three cooperating institutions.

Program
This degree is offered jointly by Mount Saint Vincent University, Dalhousie University, and Saint Mary's University. The degree will be granted jointly by the three cooperating universities, and each student's program will be approved by the Joint Graduate Admissions and Program Committee (GAPC).

The Master of Arts in Women's Studies emphasizes the interdisciplinary basis of Women's Studies, its community linkage, and the emerging body of feminist theories and methodologies. Drawing on the collective resource of faculty members across the three universities, the program invites applications from students whose research interests fall within ten broad categories: feminist theory and methodology; women and work; gender and development; women and health; North American women's history; feminist literary/cultural theory and practice; gender and education; women and social change; women and sexuality; and lesbian/bisexual and queer studies.

Admission Requirements
Admission will also be based on the availability of Women's Studies faculty with the expertise to supervise in the student's proposed area of research.

In addition to following normal university procedures for application to graduate programs, students must submit official transcripts, three letters of reference, and a supplementary application form. Application can be made to any of the three universities. Decisions on admission are made by the Interuniversity Joint Graduate Admissions and Program Committee (GAPC) for Women's Studies. Enrolment is limited.

Program Requirements
The one-year program includes both course work and thesis and can be pursued either full-time or part-time.

Normally, the five (5.0) credit program will consist of:

a. one and one-half (1.5) credits from core courses (Theories of Feminism, Feminist Methodologies, Graduate Seminar);

b. two (2.0) credits from thesis;

c. one (1.0) credits from electives oriented toward the thesis (its substance, theories, or methodologies);

d. one-half (0.5) credits from elective courses.

3

The electives can be chosen from among a range of graduate level courses offered by a range of departments at the three universities, in consultation with the student's faculty advisor.

The following constitute the offerings in this graduate program. Detailed course descriptions are found in Section 5 of this Calendar.

GWS 601.1(.2) Theories of Feminism
GWS 602.1(.2) Feminist Methodologies
GWS 603.1(.2) Graduate Seminar (half-credit, meets throughout both semesters)
GWS 604.1(.2)-605.1(.2) and 606.0 Contemporary Issues in Feminism
GWS 609.1(.2)-611.1(.2); 612.0-613.0 Directed Study
GWS 614.1(.2)-615.1(.2) and 610.0 Directed Readings in Women's Studies
GWS 620.1(.2)-621.1(.2) Seminar on Women's Studies
GWS 698.0/699.0 Thesis

Graduate Diploma in Criminology

Chairperson, Professor	G. Barrett
Professors	L. Christiansen-Ruffman, P. Connelly, R. Cosper, J. McMullan, M. Overington, H. Veltmeyer
Associate Professors	S. Bell, R. Hadden, I. Okraku, D. Perrier, E. Tastsoglou
Assistant Professors	W. Chan, G. Rigakos, M. VanderPlaat
Coordinator of Criminology	D. Perrier
Professor Emerita	H. Ralston

Admission Requirements
To be eligible for admission to this graduate diploma program, applicants must satisfy the following criteria:

a. have a baccalaureate undergraduate degree in criminology or a baccalaureate undergraduate degree with a concentration in criminology (or equivalent);

b. have achieved a minimum cumulative quality point average of 3.33 in their academic record.

c. submit an official transcript from a recognized post-secondary academic institution; and

d. submit three letters of reference attesting to their academic and/or professional experience.

e. All applicants whose native language is not English and whose undergraduate education or professional experience was conducted in a language other than English, must fulfil the language requirement as set out in the Academic Regulations and Information section of the Calendar.

f. The Graduate Criminology Committee of the Department of Sociology will review the files of all applicants and make final decisions about admission into the Graduate Diploma in Criminology.

Degree Requirements
Requirements for continuance in and graduation from the Graduate Diploma in Criminology. Students must:

a. earn at least four (4.0) credits;

b. achieve a minimum grade of B+ in all courses required of their program; and

c. complete the course requirements within five years of formal admission to the program.

Program Requirements
The Graduate Diploma in Criminology requires a minimum of four (4.0) credits: two (2.0) core courses (as designated below) and two (2.0) elective courses (also so designated):

a. Core Courses (2.0 credits):
CRM 600.0 Advanced Seminar in Criminology
CRM 501.1(.2) or CRM 601.1(.2) Advanced Criminological Theory
CRM 502.1(.2) or CRM 602.1(.2) Advanced Research Methodology in Criminology

b. Elective Courses (2.0 credits):
CRM 603.1(.2) Advanced Topics in Criminology
CRM 604.1(.2) Advanced Topics in Criminology
CRM 605.0 Advanced Topics in Criminology
CRM 606.1(.2) Directed Readings in Criminology
CRM 607.1(.2) Directed Readings in Criminology
CRM 608.0 Directed Readings in Criminology
CRM 609.1(.2) Selected Topics in Criminology
CRM 610.1(.2) Selected Topics in Criminology
CRM 611.0 Selected Topics in Criminology

Graduate Courses
The following constitute the offerings in this graduate program. Details descriptions are found in Section 5 of this Calendar.

CRM 600.0 Advanced Seminar in Criminology
CRM 601.1(.2) Advanced Criminological Theory
CRM 602.1(.2) Advanced Research Methodology in Criminology
CRM 603.1(.2)/604.1(.2) Advanced Topics in Criminology
CRM 605.0 Advanced Topics in Criminology
CRM 606.1(.2)/607.1(.2) Directed Readings in Criminology
CRM 608.0 Directed Readings in Criminology
CRM 609.1(.2)/610.1(.2) Selected Topics in Criminology
CRM 611.0 Selected Topics in Criminology
CRM 615.0 Thesis Research

Graduate Diploma in International Development Studies

Executive Committee on International Development Studies

S. Dansereau, Coordinator	International Development Studies
C. Beaupré	Modern Languages
G. Cameron	International Development Studies
P. Connelly	Sociology
J. Chamard	Management
T. Charles	Finance and Management Science
A. M. Dalton	Religious Studies
E. Keeble	Political Science
D. Leclaire	International Activities
H. McGee	Anthropology
R. McKinnell	International Development Studies
J. Morrison	History
N. Sharif	Economics
E. Tastsoglou	Sociology
L. Vasseur	Environmental Studies
H. Veltmeyer	Sociology
S. Wein	Philosophy
Adjunct Professors	K. Ahooja-Patel, C. Amaratunga, G. Cameron, D. Fletcher, S. Jallow, J. Kirk, R. McKinnell, A. O'Malley, J. Parpart, S. Patel, R.J. Sacoumey, R. Sargent, T. Shaw, B. Suso, J. Te

Program
The graduate diploma program is based on a core of policy and practice oriented courses offered in International Development Studies and associated academic departments. It is aimed at professionals who do not require an advanced research program leading to the production of a thesis. It consists of four full credits (4.0) and can usually be completed in a nine month period. This interdisciplinary program of courses will be useful to practitioners at the level of government, international and non-government organizations, including business.

Admission Requirements
a. Either an undergraduate degree and practical experience as a development practitioner or an undergraduate honors degree (or equivalent) in International Development Studies or a closely-related field;

b. an official transcript from a recognized post-secondary academic institution;

c. at least two letters of reference attesting to the applicant's academic and/or professional competence, suitability, and relevant experience; and

whose first native language is not English and graduate education was conducted in a language other a minimum score of 550 on the TOEFL (or its equiva-

of IDS faculty members will review the completed files and will make the final determination of admission program.

Requirements
must complete the following requirements:

credit (2.0) core program, namely,

IDS 543.1(.2) Seminar in Development Studies: Conceptual

or

IDS 601.1(.2) Dynamics of Development: Framework of Analysis and Practice

IDS 544.1(.2) Seminar in Development Studies: Contemporary Issues

or

IDS 602.1(.2) Dynamics of Development: Critical Issues

IDS 545.1(.2) The Project Cycle

IDS 530.1(.2) Contemporary Development Planning

elective program, consisting of at least two (2.0) credits from graduate offerings. Permission to register for these courses received in writing in advance of registration from the of the Graduate Diploma Program. Courses must be select- an area of concentration such as: gender and develop- global perspectives; popular approaches to environmental management and enterprise development.

minimum cumulative quality point average of 3.00 is required graduation.

Note: Courses taken to fulfil the requirements of an undergraduate program cannot be used again to fulfil the requirements of the Graduate Diploma in IDS.

The offerings of this graduate program are found in the description of the Master of Arts (International Development Studies) and also in the I.D.S. Handbook, available from the Coordinator of this program

Graduate Courses in Geography

Although the Department of Geography does not offer a graduate program, a number of graduate level courses are available. These are:

GPY 602.0 Directed Studies in Urban/Regional Geography
GPY 603.0 Directed Studies in Environmental Geography
GPY 604.0 Directed Studies in Marine Geography
GPY 605.0 Directed Studies (General)
GPY 612.1(.2) Directed Studies in Urban/Regional Geography
GPY 613.1(.2) Directed Studies in Environmental Geography
GPY 614.1(.2) Coastal Zone Planning
GPY 615.1(.2) Directed Studies (General)
GPY 624.1(.2) Directed Studies in Marine Geography
GPY 629.0 Urban Historical Geography
GPY 632.1(.2) Social Geography of the City
GPY 642.1(.2) Urban Planning
GPY 652.1(.2) The Geography of Urban Transportation
GPY 656.1(.2) Remote Sensing of the Environment
GPY 686.1(.2) Concepts in GIS
GPY 696.1(.2) Applications in GIS

For further information, please consult the Chairperson of the Department of Geography.

3

culty of Commerce - Graduate Programs

of Commerce offers two programs of study leading to a Business Administration degree.

ecutive Master of Business dministration (EMB)

Hermann Schwind
Professors Timothy O'Neill, Robin Stuart-Kotze
Manager Bonnie Kirby

Program
ive MBA is a four-semester program designed to meet the eds of both mid-career managers who have demonstrated to reach senior management positions and senior man- who want to increase significantly their personal and organiza- ectiveness. The Executive MBA is structured as an integra- program that will enhance participants' ability to think across lines and understand better the "whole enterprise" in its petitive situation.

nce of Program
program administration is under the direction of the EMBA reporting to the Dean of Commerce.

program policies are formulated and guided by an EMBA Council. Council consists of one member representing each of the in Commerce; the EMBA Director; a representative from Graduate Council; and representatives from the Alumni, the students, and industry.

of course scheduling and required withdrawal of students, Council will make the decisions and communicate these to administrative bodies through the EMBA Director. In the recruiting, faculty members will be recommended to the the EMBA Council.

the EMBA Council will constitute a subcommittee called missions Committee". This Committee shall have two EMBA members, both of whom are instructors in the program at Saint Mary's and the EMBA Director. The Dean of Commerce may also opt to sit on this Admissions Committee.

An EMBA participant who fails in a course will be required to withdraw from the program. No credit will be recognized for the other courses which the student may have successfully completed.

An EMBA student who is required to withdraw may, after the lapse of one calendar year, seek re-admission. The application for re-admission shall be evaluated by the EMBA Council (and not the Admissions Committee alone). The Council may deny re-admission or re-admit subject to stipulated conditions. A student may withdraw voluntarily and seek admission in later years. After a lapse of three years, credit for previous EMBA courses will not be recognized.

Qualifications for Admission
The EMBA Admissions Committee will consider an applicant's prior academic record, scores on the GMAT, military or work experience, extracurricular activities, letters of recommendation, and the written application. While each of these general criteria is important, the applicant's entire profile will be evaluated, where significant strengths in one area may help compensate for weaknesses in another.

Test scores and academic records will be evaluated as evidence of academic quality; however, the Admissions Committee will also look for personal qualities, such as leadership and motivation, which are important for success as a manager.

A written application, including a statement of the objectives of the student, and interview will be the basis of the Admissions Committee's decision. Applications will not be evaluated until the application is complete, including test scores. It will be the responsibility of the applicant to ensure that the application is complete.

In general, an applicant for admission to the Executive MBA program will have:

1. substantial experience at the senior management level;

2. sponsorship by an employer who agrees to pay all or part of the fees and guarantees the involvement of the employer to facilitate successful completion of the program; or the ability to pay the fees independently;

3. a bachelor's degree with high standing or equivalent qualification (in certain cases, consideration will be given to students who do not hold a bachelor's degree);

4. taken the Graduate Management Admissions Test (GMAT), or its equivalent, such as the GRE;

5. two letters of reference from work-related or academic sources.

Upon acceptance, each student will be provided, as appropriate, with orientation materials designed to upgrade skills in Quantitative Methods, Computer Literacy and/or Appreciation of Financial Statements. Where necessary, courses will be run on campus prior to the commencement of classes, so that students are fully conversant in a computerized-learning environment and possess the quantitative skills expected.

Program Highlights

- A four-semester course of study leading to the degree of Master of Business Administration.

- Classes will meet on alternating weeks on Fridays and Saturdays during the academic year.

- Managerial experiences and practical backgrounds of participants will be utilized.

- A broad management view of various business and organizational problems will be provided.

- An understanding of economic, social, political, and environmental forces that affect the organization and influence managerial decisions will be developed.

- An exchange of information and insights will be encouraged among participants from diverse industries, organizations, functions and responsibilities.

- The sponsoring organization and its participating manager will be able to meet common educational goals without major disruptions of job assignments and home life.

Program Structure

The EMBA program consists of 16 modules of 26 hours each, over a four-semester period, or four modules totalling 104 hours in each semester. Classes are held on alternating weeks on Fridays from 9:00 a.m. to 10:00 p.m. and Saturdays from 8:30 a.m. to 6:00 p.m. Eight subjects (see curriculum below) are covered in the first year.

Year II of the program will follow the class schedule followed in Year I.

Curriculum

First Year: Required Courses

EMB 511.1(.2) Managerial and Financial Accounting
EMB 512.1(.2) Organizational Behaviour and Theory
EMB 513.1(.2) Marketing Management
EMB 514.1(.2) Business Research Methods
EMB 521.1(.2) Corporate Finance
EMB 522.1(.2) Managerial Economics
EMB 523.1(.2) Operations Management
EMB 524.1(.2) Human Resource Management

Second Year: Required Courses

EMB 631.1(.2) Management Information Systems
EMB 632.1(.2) International Capital Markets
EMB 633.1(.2) Policy I - Business Strategy
EMB 634.1(.2) Business Research Project I
EMB 641.1(.2) International Business
EMB 642.1(.2) Policy II - Public Policy in Business
EMB 646.1(.2) Business Research Project II
EMB 690.1(.2) Seminar in Business Studies
EMB 691.1(.2) Directed Study

Elective Courses

EMB 643.1(.2) Industrial Relations
EMB 644.1(.2) Financial Innovations
EMB 645.1(.2) International Marketing

Summary: 15 required courses; 1 elective.

Evaluation

In order to qualify for a Master's degree, a student shall obtain a minimum quality point average of at least 3.00. Failure of a course requires the withdrawal from the program.

Letter grades and quality points for graduate courses will be assigned as follows:

A+ = 4.30 = Excellent
A = 4.00 = Excellent
A- = 3.67 = Very Good
B+ = 3.33 = Good
B = 3.00 = Satisfactory
B- = 2.67 = Below graduate standard
C = 2.00 = Marginal Pass
F = 0.00 = Failure
IP = — = In progress (Reserved exclusively for th EMBA's Research Project or Directed S

Custom-Designed Programs

Saint Mary's University can custom design the EMBA program t meet the needs of Canadian or international clients. Instruction c be offered on Saint Mary's premises or on the premises of the cl Program timetable is flexible.

Custom-designed programs observe the regular admission and gram requirements and include the option of a specialized focu the regular general program, specialized programs feature a col driven, lock-step curriculum leading to the Master of Business Administration degree.

Master of Business Administration (MBA)

Director — Ramesh Venkat
Program Manager — Jennifer Johnson

Program Objectives

The primary objective of the Master of Business Administration Program is to provide an intellectual and social environment in w students develop their potential as effective managers. The Sain Mary's MBA program will ensure that students develop an under standing of how the different functions of a business interrelate business situation. This is a priority in the student's educational e rience that is achieved through the emphasis the program place integration and business simulation activities as well as the focu placed on business strategy and policy. The program also provi students with the flexibility to design a program of study that is g eral in orientation or more focused and specialized.

Qualifications for Admission

Admission to the program is open to students with a bachelor's degree from a recognized university, whose academic record ind cates that they should be successful in studying management an administration at the graduate level, and who obtain a satisfacto score in the GMAT.

Application Procedures

Applications for admission to the MBA program should be made early as possible. The normal deadline for the receipt of all appli tion material is May 31, for entry the following September, excep international students whose applications and all supporting doc ments must be received by April 1.

Application material and program information may be obtained b contacting the Director of Admissions at the following address:

Director of Admissions
Saint Mary's University
Halifax, Nova Scotia
B3H 3C3
Tel: 902-420-5415
Fax: 902-496-8100
e-mail: admissions@stmarys.ca
or the international e-mail: admit.international@stmarys.ca

To be considered for admission, students will be required, where applicable, to submit the following to the Director of Admissions:

a. completed application forms;

b. two copies of official transcripts for all previous post-second courses undertaken;

c. two letters of recommendation;

d. a typed one page statement of career goals sought in pursu the MBA degree;

e. a typed, detailed resume of work experience;

f. GMAT results (Note: 0958 is the appropriate code for the MBA program at Saint Mary's University);

...students whose native language is not English, a score of at ...5 on the CanTest with a score of at least 4.0 on each compo... ...listening, reading, and writing) or a score of at least 550 on ...Test of English as a Foreign Language (TOEFL) (the TOEFL-CAT ...score is 213) with a score of at least 5.0 on the Test of ...English (TWE) or 5.0 on the essay rating in the TOEFL-CAT is ...

...non-returnable application fee of $30.00.

...Inquiries regarding the documentation supporting an applica... ...admission are to be addressed to the Director of Admissions. ...Inquiries concerning the program itself and decisions on applications ...admission should be made to the MBA Program Manager.

...cial Aid

...addition to Canada Student and other loans, financial aid is avail... ...through University scholarships and assistantships. The number ...scholarships is limited and they are granted based on information ...provided in the student's application. Students do not apply for ...scholarships. Applications for assistantships should be made to aca... ...departments in the Faculty of Commerce (see Section 6 for ...additional information).

...ration

...refundable confirmation of acceptance deposit of $100.00 ...tuition is applicable to the MBA program. This deposit will be ...applied to tuition fees on registration.

...Time Basis

...program is available on a part-time basis for students who wish ...complete it in part, or whole, while remaining in full-time employ... ...If possible, at least two courses from each year of the program ...are offered in evening classes each semester. Subject to satisfac... ...enrolment, courses will also be offered during the summer ses...

...ching Methodology

...program is neither discipline nor case oriented, but courses ...use combinations of lectures, case discussions, seminars, and ...projects according to the requirements of the individual subjects. ...The Faculty has extensive business as well as academic experi... ...education is focused on both the practical and the academic ...aspects of the materials covered during the program.

...ng at Other Institutions

...students may use a Letter of Permission to enrol in courses at other ...universities and receive credit for the courses in the MBA degree. ...This flexibility enhances the opportunity for students to develop a ...program that best serves their careers and draws on the course offer... ...of other universities. Credit for courses completed using this ...option will only be granted for courses for which a B or better grade ...was received. In completing the MBA degree, for students enrolled in ...the full program (see below) a minimum of six (6.0) credits must ...be completed at Saint Mary's.

...gram Features

...Saint Mary's MBA provides an integrative foundation in manage... ...principles as well as the opportunity for specialized study in tra... ...functional areas of accounting, finance, human resource man... ...management, marketing, or information technology, or in interdisciplinary ...areas such as sustainable development, international develop... ...and entrepreneurship. These elements are sequenced as fol...

...ation Year

...Foundation Year has been revised effective September 1998. ...All MBA students who have not completed the first year of the ...program should consult the MBA Director before registering for ...courses.

...k of September: team building, orientation, technology and ...skills refresher

...ester: internal focus; analytical and managerial skill devel...

...500.1	Statistics for Managers
...501.1	Managerial Economics and Decision Analysis
...540.1	Managerial Accounting
...555.1	Organizational Behaviour
...556.1	Leadership and Behavioural Processes
...571.1	Marketing Management

...Semester: external focus: global economy, information tech... ...hands-on experience

MBA 500.2	Contemporary Issues in Management
MBA 501.2	Integrative Management Exercise
ECO 501.2	Economics of the Enterprise Environment
ACC 540.2	Financial Accounting
FIN 561.2	Business Finance
MSC 521.2	Managing Information and Technology

Spring (first week in April): integrative case competition

Summer:
Internship
or
Foreign exchange/study
or
Elective courses

Executive Speaker Series
Throughout the first and second year of study, students are expected to participate in the Executive Speaker Series. On alternating Fridays, national and regional leaders from the public and private enterprises will address students on current management issues.

Advanced Study Year
The objectives of the second year are to foster further integration of functional studies, to develop research skills, and to provide the opportunity for specialized study in a functional or interdisciplinary field of management.

The second year consists of a minimum of five (5.0) credits. Required courses are as follows:

MGT 689.1(.2)	Strategic Management
MBA 697.1(.2)	Research Methods
MBA 698.1(.2)	Management Consulting Project (MCP)
MBA 699.0	Management Research Project

In addition, six or seven 600-level elective courses (3.0-3.5 credits), depending upon whether the student opts for the Management Research or Management Consulting Project. These electives are selected to support generalist or specialist study in a functional or interdisciplinary area of management.

Students are permitted to register in an area of concentration or pursue a program of general studies. A concentration consists of a minimum of two (2.0) credits of approved courses in one of the areas listed below:

1. Accounting
2. Finance
3. Human Resource Management
4. Marketing
5. Global Sustainable Development
6. International Business
7. Information Systems
8. Small Business and Entrepreneurship

Information on approved courses for each concentration may be obtained from the MBA Director. Students must formally declare their area of concentration for this to be noted on their academic record. It is recommended that students select a topic for their Research or Consulting Project that complements their area of concentration.

Note: Second year students are expected to participate in the Executive Speaker Series. Career planning and development workshops are offered to graduating students.

Exemptions
Students with significant academic preparation in functional business subjects may be eligible for exemption from selected foundation year courses. Candidates should contact the MBA Program Manager for details.

Doctor of Philosophy (Ph.D.) in Business Administration (Management)

The primary objective of this doctoral program is to develop successful researchers for academe, the public sector, and private industry. Research success requires an understanding of context, in addition to discipline-based and research expertise. Entering students are expected to be familiar with accounting, finance, marketing and management prior to commencing the program. What is lacking from the typical MBA is an understanding of the research paradigms. Most doctoral graduates aspire to academic careers. For this reason, it is

important that students are introduced to teaching pedagogy. Since students will come from varied backgrounds and it is desirable to tailor the program to the students and the research program, curriculum requirements must allow for this.

This program has primary focus on human resource management and organizational behavior. Programs specializing in areas such as accounting, finance, marketing, international business, and information management, may be offered in the future.

Each student's program consists of six components:

1. Foundation Courses:

four compulsory half-credit (2.0) courses in management thought and research paradigms:

a. Management Thought and the Management Environment

b. The Nature of Management Research

c. Empirical Research in Management

d. Statistical Methods

2. Functional Courses:

a minimum of four half-credits (2.0) doctoral courses in management, selected and/or designed jointly by the student and the student's Ph.D. supervisory committee. Depending upon the student's background and research focus, the committee may require additional courses.

3. Comprehensives:

Two comprehensive examinations that verify that the student possesses:

a. the depth of knowledge in management necessary to support original research; and

b. mastery of the research methodology and technical skills necessary to support the chosen topic.

These comprehensives will take the form of a set of written examinations, set by the Ph.D. Supervisory Committee, followed by an oral examination before the Committee within six months. This will be followed within six months with the presentation and defense of a research proposal. Normally, students will be permitted at most a maximum of two attempts at the comprehensives. Successful completion of the comprehensives will move the student to the status of "Ph.D. Candidate".

4. Participation in regular graduate seminars presented by faculty and students on both current research topics and research methodologies.

5. Participation in a teaching workshop and supervised teaching, or equivalent demonstration of effective communication, motivation, and assessment skills.

6. Thesis:

an original doctoral thesis worthy of publication in reputable academic journals, defended orally before authorities in the discipline, appointed by the Office of Graduate Studies and Research. The oral defense will be public.

Admission Requirements

Decisions regarding admission to the doctoral program will be made on the basis of the applicant's academic qualifications and achievements, as well as the fit with the program's areas of specialization and available faculty. Students entering the doctoral program must have a Master's degree from a recognized university and some minimal breadth in business studies. Suitable qualifications include: (i) an undergraduate degree in any area of study, plus an MBA degree; or (ii) an undergraduate commerce degree plus a Master's degree in any area.

Students with a Master's degree, but without previous degrees in management education (i.e., without a Bachelor of Commerce or an MBA or equivalent, or a business professional designation) are also invited to apply. These students will be admitted as "qualifying" students. The program will provide such students with a basic knowledge of business administration and allow them to pursue their research interests in an area related to business, economics, management and/or administration. They will normally take the equivalent of one-half of the first year of the MBA program in addition to the normal requirements of the Ph.D. program. The precise courses required will be by the Office of Graduate Studies and Research determined prior to admittance.

All applicants are required to submit three letters of recommend from persons capable of assessing the candidate's academic and research potential; a statement of career objectives; scores the Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE); and official transcripts from all uni attended (sent directly by the granting institution). Applicants w were not educated in English are required to submit official sco the CanTest, Test of English as a Foreign Language (TOEFL), or ognized equivalent test of written and oral English language pr cy.

Normal minimum requirements for admission are a grade/quali point average of 3.6 on a 4.0 scale (high B+ to A-), GMAT abo and TOEFL above 217 on the new 300 scale or 550 on the pre scale. These would be the normal minimum requirements, but case would be evaluated on its own merits.

The Admissions Committee will short-list candidates based up submitted documentation. Faculty approved to supervise will re the short-listed candidates. No candidate will be admitted with support of an advisor in the student's planned area of speciali This advisor may be the candidate's future thesis supervisor. Su to funding, full-time students may obtain employment as the ad sor's research assistant. For these reasons, admission will be l by the availability of potential supervisors in the candidate's cho area of specialization.

Recommended candidates will be assessed by the Office of Graduate Studies and Research and final recommendations ma the Admissions Office of the University.

For Management Specialization, it is presumed that entering stu will have a background "equivalent" to the following course listi These are from the Saint Mary's MBA Program and are offered f illustrative purposes only.

MGT 683.1(.2) Management of Interpersonal Relations
MGT 684.1(.2) Management of Organizational Design and Development
MGT 685.1(.2) Strategic Human Resource Management
MGT 689.1(.2) Strategic Management

In addition, candidates should be competent in the statistical in ence, including analysis of variance and categorical data analy

Required Courses

THE FOUNDATION COURSES

BUS 701.1(.2) Management Thought and the Management Environment
BUS 702.1(.2) The Nature of Management Research
MGT 703.1(.2) Empirical Research in Management
MGT 704.1(.2) Applied Multivariate Analysis

THE FUNCTIONAL CORE

MGT 710.1(.2) Doctoral Seminar in Human Resource Manage
MGT 720.1(.2) Doctoral Seminar in Organizational Theory and D
MGT 730.1(.2) Directed Readings in Management I
MGT 740.1(.2) Directed Readings in Management II

In addition, two special topics courses (MGT 7xx and 7yy) will be offered each year.

THE THESIS

MGT 899 Thesis (externally assessed)

Special Requirements

1. Supervision - Advisor
At admission each student will be assigned a Ph.D. Advisor in th student's planned area of specialization. The Ph.D. Advisor will g the student in course selection and other aspects of the initial ye the program. The Ph.D. Advisor agrees to take on the student w the understanding that there is a significant possibility that the P Advisor will be the student's Ph.D. Supervisor.

The Ph.D. Advisor and the Ph.D. Supervisor need not be Saint M faculty, but must be tenured faculty members at an institution in Atlantic Canada. Such faculty must be recommended by the Offi Graduate Studies as Adjunct Professors at Saint Mary's Univers

2. Comprehensive Examinations
Within 28 months of admittance to the program, students must c

comprehensive examinations in research methodology chosen area of specialization. The comprehensive examinadesigned to verify that the candidate has the academic pursue research in the chosen area of specialization. ensive examinations will be set by the Ph.D. Supervisory under the supervision of the Office of Graduate Studies

- Thesis Committee
practical and well in advance of writing the Examinations, the Supervisor will be selected. The be the student's principal guide for the remainder of studies. In consultation with the Ph.D. Program Director, the form a Ph.D. Supervisory Committee of at least four at least one which must be external to Saint Mary's At least two members of this Committee must be tenured faculty. The membership of the Committee must be the Office of Graduate Studies and Research. The Ph.D. Committee will define the course requirements in the specialization and will have considerable input to the Examinations.

Defense
months of successfully completing the comprehensive the candidate must successfully defend the thesis folguidelines established by the Office of Graduate Studies and The thesis must be defended before a panel consisting of Supervisory Committee and a distinguished authority in the outside Atlantic Canada and the defence will be open to The Director of Graduate Studies and Research will chair and prepare the final report of the panel's decision.

of Delivery
feature of the proposed program is accessibility and residency flexibility. Although it is envisioned that most students will opt to remain at Saint Mary's on a full-time basis, residency must be flexible to make the program accessible to non-traditional doctoral students. Students will be required to fulfil the equivalent of two semesters of full time residency. Normally, these semesters will be in the summer and are composed of intensive classes in the months of June and August, with July devoted to the writing of major papers.

Although it is possible that a course may be taught over a continuous four week period, the preferred format is two weeks of face to face interaction, a six week break for the writing of a major paper, followed by a second two week period of face to fac interaction.

For entering students, BUS 701 will be offered each year in the first two weeks of June and concluding in the first two weeks of August. Similarly, BUS 702 would be offered in the last two weeks of June and conclude in the last two weeks of August. This would leave all of the month of July for the writing of major papers for each course. MGT 703, MGT 704, MGT 710 and MGT 720 would each be offered in alternating years, following the same format. Two additional special topics courses (MGT 7xx and 7yy) will be offered each year. At least one of these special topics courses will be taught by an invited visiting faculty member and would be open to any full time business school academic in Atlantic Canada. The intent is to invite a noted authority from Canada, the US or Europe that could expose faculty from across the region to leading-edge research in a manner that conference presentations cannot achieve.

The directed readings course can be completed through distance education during the academic year for students enrolled on a part-time basis.

Within 28 months from admission to comprehensives, students have three summers in which to complete the residency requirements.

3

aculty of Science - Graduate Programs

of Science offers two graduate programs in the areas of and Applied Psychology.

aster of Science in stronomy

Observatory Director,
Professor — G. Welch
— G. Mitchell, D. Turner
Coordinator,
Professor — D. Clarke
Coordinator,
Professor — M. West
Professors — M. Butler, D. Guenther
Professors — A. Coley, K. Darvesh, D. Forbes, T. Harriott, M. Jain
Emeritus — W. Lonc

has been closely linked with Saint Mary's University for In 1974 Saint Mary's became the first and only university Canada to offer a program of instruction in Astronomy, a still holds. Two years earlier a 40-cm reflecting telescope installed in an observatory atop the newly-completed high-rise residence complex on campus, and was opened for weekly program of observing tours of the heavens. Named Michael W. Burke-Gaffney, S.J., the very enthusiastic and astronomer, engineer and educator who had popularized at Saint Mary's over the previous three decades, the Observatory has played an important role in widening appreciation of the universe and our place in it. During the year the Observatory is also used heavily by undergraduate students, supporting projects which range from sketch- features of the Moon and planets to imaging stellar spec- prominences.

ductory Astronomy courses have been offered at Saint since 1957. Prior to 1971 these were taught by Father Burke- Between 1971 and 1974 three astronomers joined the in response to the University's decision to build on the tradition established by him. With the founding of the Astronomy Department in 1974, Saint Mary's launched its first graduate program in the sciences, a two-year program leading to the Master of Science degree. Increasing student interest over the years stimulated a gradual expansion of undergraduate offerings, culminating in 1989 with the Astrophysics major program offered in cooperation with the Department of Physics. In 1993 the Astronomy and Physics Departments at Saint Mary's united into one Department, and a new program of study was created to provide students with a strong undergraduate experience in astronomy and physics and a more comprehensive graduate education in astronomy and astrophysics.

Research and Facilities
The complement of the Department includes a balanced mix of observational/experimental and theoretical interests. Observational and experimental research includes interstellar chemistry and gas outflows from young stellar objects, the study of open clusters and associations of various ages, the evolution of massive stars and pulsating variables, globular clusters, the cluster distance scale, interstellar reddening in the galactic disk, the origin and structure of early-type galaxies, radio interferometric observations of extragalactic radio sources and their environs, and large-scale structure of the universe. Theoretical research includes particle physics and the solar neutrino problem, the modelling of stellar pulsation modes, magnetohydrodynamical modelling of the interstellar medium, the study of supernova remnants and extragalactic radio sources, and the propagation of cosmic rays and their associated emissions. Observational research utilizes change-coupled device (CCD) imaging and spectroscopy obtained from various sites, the Sudbury Neutrino Observatory, the Very Large Array radio interferometer in the U.S., and the James Clerk Maxwell and other M M - wave radio telescopes. Theoretical research makes use of local computing facilities as well as Cray-class supercomputers accessed remotely from local workstations. Graduate student projects are normally initiated on the basis of student research interests and the identification of an appropriate faculty supervisor.

The Burke-Gaffney Observatory, situated on the roof of the 23-story Loyola academic/residence building on campus, houses a computer-controlled 40-cm reflecting telescope equipped for direct imagery and spectroscopy with CCD cameras. The 40-cm reflector is the

largest professional telescope in Atlantic Canada and is used for public tours, undergraduate and graduate training in observational astronomy, and less frequently for astronomical research. Faculty members and graduate students normally make use of other observatory sites around the world to obtain the scientific data used for their research, with the facilities at Saint Mary's being used to analyze the observational material gathered in this manner.

The Patrick Power Library on campus and the city-wide NOVANET system provide students and faculty with access to extensive library collections of books and journals in physics and astronomy. These resources are supplemented by faculty subscriptions to additional key journals, and a variety of electronic preprint services. The Saint Mary's community has high-speed Internet access (Web home page http://www.stmarys.ca) and connections from students and faculty offices to central DEC-alpha servers. The Department operates its own computing network (http://apwww.stmarys.ca) based on a multiprocessor Sun SPARC server, with a number of UNIX - and WINDOWS 95-based workstations for students and faculty. Peripherals include a large format high-resolution scanner, several color and b/w laser printers, and a growing electronic library of catalogs and sky surveys. Available data reduction and analysis software includes IRAF, VISTA, SPECX, CLASS, AIPS, SUPERMONGO, and IDL.

Admission Requirements
Full-Time Students
Graduate students in Astronomy come from diverse university backgrounds. Some have previously had no exposure to Astronomy at the undergraduate level, although such exposure is clearly desirable. Admission to the two-year Master of Science program at Saint Mary's normally requires an honors degree in astronomy, mathematics, physics, or the equivalent, with a minimum graduating average of B. Students who have not completed such a program, or who have weak backgrounds in mathematics or physics, may be admitted into a qualifying year in which they take additional courses in these areas prior to attempting graduate courses in astronomy. Prospective students who are in doubt about their qualifications should write to the Chairperson of the Department, enclosing an up-to-date transcript with their inquiry. Applications for the graduate program received by May 1 will be given the highest priority.

Part-Time Students
Under special circumstances, students may enrol in the program on a part-time basis. In addition, full-time students may change their status to part-time should circumstances warrant the change. While entrance requirements are the same for all students regardless of their registration (i.e., full- or part-time), part-time students are not normally eligible to receive financial assistance from the department.

Degree Requirements
The Master of Science program is normally of two years duration and involves course work, seminars, an oral comprehensive examination, and an original thesis on an astronomical topic. If desired, course work may be concentrated in the first two or three semesters so that students may work almost exclusively on their thesis during the summers and the final one or two semesters.

Full-time students must complete at least three (3.0) credits per year, for a total of six (6.0) credits over two years. Of these six (6.0) credits, students must take AST 695.1(.2) (Graduate Seminar I), AST 696.1(.2) (Graduate Seminar II), AST 697.0 (Research Project in Astronomy), AST 698.0 (Thesis), and three (3.0) additional credits drawn from the AST half courses numbers 430 or greater or from the upper-year courses offered in Physics, Mathematics, or Chemistry (where recommended by the student's supervisor). Normally, AST 695.1(.2) is taken in the first year and AST 696.1(.2) in the second year. AST 697.0 may be taken in either the first or second year, while AST 698.0 is taken when the student has passed the oral comprehensive examination. To be eligible for graduation, students must achieve an overall grade of at least B (qpa = 3.00) on courses taken for credit. In all cases, the student's program must be approved by the Department.

Students must also pass an oral examination in which they are expected to demonstrate comprehensive knowledge of basic areas in Astronomy, including first-year undergraduate Physics. The examination is normally taken at the end of the first year of study. Students must also prepare and defend an original thesis on a topic selected by the student and the student's supervisor. The thesis shall be examined by a committee of no fewer than three faculty from Saint Mary's University plus, when available, one member external to the University and competent in the subject area of the thesis. The student will be examined on the thesis by the committee in a formal oral thesis defence normally scheduled near the end of the second year of study.

Full-time students are normally accepted into the program with provisions for support from various sources, including graduate scholarships, University teaching assistantships, and research assistantships drawn from faculty grants. The normal level of support is usually sufficient to cover living expenses and tuition for one person.

Graduate Scholarships for Students in Astronomy
Qualified students are eligible for a variety of graduate awards, including NSERC postgraduate scholarships and Saint Mary's University graduate scholarships. Certain named graduate awards are restricted to full-time students in the Astronomy Master of Science program. These include the Father Burke-Gaffney Memorial Scholarship, which was established by the Saint Mary's University Alumni Association in memory of Father Michael Walter Burke-Gaffney, S.J., one of the original group of Jesuits who came to the University in 1940, and the John Despard deBlois Scholarship, which was established by Marcia Watts deBlois in memory of her late husband, a former professional photographer employed by the National Research Council of Canada who had a long-time interest in Astronomy. Graduate students in Astronomy are also eligible for the Reuben and Helen Hornstein Bursary, which was established by Mr. and Mrs. Reuben Hornstein in 1982. Reuben Hornstein, a former meteorologist for a local television station, is an honorary degree recipient of Saint Mary's University.

Graduate Courses
The following constitute the offerings in this graduate program. Detailed descriptions are found in Section 5 of this Calendar.

AST 435.1(.2) Data Analysis in Astronomy
AST 445.1(.2) Solar System Astronomy
AST 602.1(.2) Galactic Astronomy
AST 604.1(.2) The Interstellar Medium
AST 606.1(.2) Techniques and Instruments in Astronomy I
AST 607.1(.2) Binary and Variable Stars
AST 608.1(.2) Selected Topics in Astronomy and Astrophysics
AST 609.1(.2) Galaxies Beyond the Milky Way
AST 611.1(.2) Directed Readings in Current Literature
AST 612.1(.2) Particle Astrophysics
AST 613.1(.2) Gas Dynamics
AST 614.1(.2) Stellar Astrophysics I
AST 615.1(.2) Stellar Astrophysics II
AST 616.1(.2) Techniques and Instruments in Astronomy II
AST 619.1(.2) Cosmology
AST 620.1(.2) Clusters of Galaxies
AST 695.1(.2) Graduate Seminar I
AST 696.1(.2) Graduate Seminar II
AST 697.0 Research Project in Astronomy
AST 698.0 Thesis

Master of Science in Applied Psychology

Chairperson, Professor	V. Catano
Professors	D. Bruce, J. Darley, K. Hill, R. Konopasky, I. Lenzer
Associate Professors	P. Street, B. Vulcano
Assistant Professors	A. Day, L. Methot, S. Newsome, V. Stinson
Adjunct Professors	C. Hayes, C. Humphreys
Professor Emeritus	J. Chadwick-Jones

The Department of Psychology offers a Master of Science in Applied Psychology in two fields: Clinical and Industrial/Organizational Psychology. Students are admitted with either full-time or part-time status. Full-time status students will need at least two years to complete all degree requirements, and must finish these within three years; whereas part-time status students must complete all requirements within five years. Normally, part-time students are concurrently employed in an occupation related to Applied Psychology. Students completing Master of Science degree requirements in this area are eligible to apply for registration as a psychologist in Nova Scotia and may pursue careers in public organizations, independent practice or consulting. They may also continue their graduate education in a Ph.D. program. Further information can be obtained from the Graduate Program Coordinator.

Psychology

The Clinical program is designed on the scientist-practitioner model and aims to educate students in the assessment and treatment of a wide range of psychological problems ranging from normal developmental problems to severe and chronic forms of distress. Students will acquire a theoretical and practical understanding of applied research. The Psychology Department at Saint Mary's is a member of the Co-operative Ph.D. program in Clinical Psychology at Dalhousie University and students may take graduate courses in this program with permission of both Departments.

Admission to this Clinical Program has been suspended. Please contact the Graduate Program Coordinator or the Chairperson of the Department for further information.

Industrial Organizational Psychology

The program in Industrial/Organizational Psychology prepares students to examine and understand the behaviour of individuals and groups in organized environments. Since Industrial/Organizational psychologists may perform a variety of jobs in industry, business and public service, students in the program are expected to have a sound understanding of quantitative and research methods, acquire skills which will help them in the training and selection of personnel, design of jobs, workplaces and habitats, and the development of social skills and work-team structures. Students in this program may be permitted access to courses and supervisors in the MBA program at Saint Mary's.

Admission Requirements

Admission to the program requires an honors degree in Psychology or equivalent [the equivalent of ten (10.0) credits in Psychology including an independent research project]. Admission materials are available from the Director of Admissions, Saint Mary's University. A completed application form, official transcript(s), letters of reference, Graduate Record Exam scores (verbal, quantitative, analytical, psychology) must be forwarded to the Director of Admissions no later than February 1st. Within recent years the minimum quality point average (hereafter qpa) of successful applicants has been 3.25. Consideration will also be given to relevant work and volunteer experience. First year students who wish to change their admission status (full- or part-time) after they have received notice of their acceptance must make this request to the Chairperson before July 1st. Change in status is not guaranteed and must be approved by the Department.

Program Requirements

Students are required to take the equivalent of four (4.0) credits, in addition to completing a supervised 500-hour practicum (PSY 690.0) and preparing a thesis (PSY 695.0). The following first year courses are required for all students: PSY 601.0 (Advanced Psychological Statistics) and PSY 603.1(.2) (Advanced Assessment). Graduate students in the Industrial/Organizational Psychology program are also required to take PSY 605.1(.2) (Personnel Psychology) and PSY 625.1(.2) (Organizational Psychology) in their first year. Graduate students in the Clinical program must take one of the following: PSY 604.1(.2) (Clinical Assessment) or PSY 606.1(.2) (Neuropsychological Assessment).

Students must achieve an average of at least B (3.00). A review of students' progress will be undertaken by the Department at the end of the first year of study [three (3.0) credits]. Notwithstanding students' quality point averages, the Department reserves the right to recommend to the Dean that students be required to withdraw from the program.

Each student must submit a thesis on a topic chosen in consultation with their Thesis Committee, which shall consist of the student's advisor, one other member of the Department, and one person from outside the Department, recommended by the Department on the advice of the supervisor. The Thesis Committee is normally formed towards the end of the first year of study for a full-time student, or after completion of three (3.0) credits by a part-time student. Each thesis must be approved by the student's Thesis Committee, after which it will be presented orally to the Department and interested scholars from the community.

Financial Aid

Students are eligible to apply for several types of University awards and graduate assistantships. Application forms for these awards can be obtained from the Director of Financial Aid at Saint Mary's University. The competition for graduate scholarships is adjudicated by the Psychology Department on the basis of qpa, GRE scores, research experience, and letters of reference. Graduate assistantships are also provided by the Department as remuneration for assisting professors in course and lab instruction.

The following constitute the offerings in this graduate program. Detailed descriptions are found in Section 5 of this Calendar.

601.0 Advanced Psychological Statistics and Research Design
603.1(.2) Advanced Assessment
604.1(.2) Clinical Assessment
605.1(.2) Personnel Psychology
606.1(.2) Neuropsychological Assessment
610.1(.2) Applied Multivariate Analysis
615.1(.2) Social Skills and Mental Health
620.1(.2) Topics in Engineering Psychology
625.1(.2) Organizational Psychology
640.1(.2) Field Research Methods
650.1(.2) Community Psychology
655.1(.2) Counselling and Psychotherapy
660.1(.2) Behaviour Therapies
670.1(.2) Special Seminar: Topics
680.1(.2) Psychological Disorders
690.0 Practicum and Directed Readings
695.0 Thesis

Faculty of Education - Graduate Programs

Acting Dean Michael J. Larsen

For several years Saint Mary's University has not been admitting students to any of its programs in the Faculty of Education. Students who are currently pursuing their studies will continue to follow the rules and regulations delineated in the Academic Calendar in existence when they began their program. In addition, the Acting Dean of Education, Dr. Michael J. Larsen, is available for consultation as required.

Continuing Education

Continuing Education

The Division of Continuing Education coordinates administration of University programs for part-time and mature learners. This includes a summer sessions program, admission advising for mature and non-degree student courses in extension centres, coordinated programs with professional associations, and professional development programs. As well in cooperation with the Frank H. Sobey Faculty of Commerce and the Department of Psychology, the Division coordinates the Certificate in Human Resource Management. 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. The Division also maintains an extension office and seminar rooms at the World Trade Centre, 8th Floor, 1800 Argyle Street.

Information Session - Mature Students

The staff of the Division of Continuing Education hold regular information sessions both on and off campus on program availability and application procedures for mature and non-degree students. To receive an information package and reserve a place at the next information session, call the Division of Continuing Education, (902) 420-5492. For details of the mature and non-degree admissions procedures, consult Section 2 of this Academic Calendar.

Part-time Degree Programs

It is possible to complete the Bachelor of Arts, the Bachelor of Commerce and the Certificate in Human Resource Management programs entirely through part-time, evening study. As well, it is possible to begin the Bachelor of Science program and Diploma in Engineering programs by part-time study. Each year the Division of Continuing Education publishes a schedule of 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.

Summer Sessions

Saint Mary's University offers a wide selection of courses in two summer sessions offered each year. The tentative dates for the summer sessions are listed in the Calendar of Events in the front of this Academic Calendar. A preliminary listing of summer school courses is available from the Division of Continuing Education by December. A brochure detailing all of the summer session course offerings is published each year in early March.

Saint Mary's at the World Trade Centre

Our downtown office at the World Trade Centre draws upon the academic resources of the University to deliver programs and courses for the benefit of the workplace, the business sector, and the local economy. Through its initiative at the World Trade Centre, Saint Mary's University recognizes its commitment to developing innovative managerial practices that promote business success. Recognizing that learning is lifelong, Saint Mary's University at the World Trade Centre offers a variety of courses for career and professional development. In partnership with the Division of Executive Development, York University, Saint Mary's offers advanced management seminars to the business community of Atlantic Canada. More extensive programs for managers are the Certificate in Business Communications, the Certificate in Financial Management, and the Certificate in Leadership Development.

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: Sackville, Dartmouth and downtown Halifax. Several 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 and the summer sessions contact the Division of Continuing Education.

Certificates in Human Resource Management

Saint Mary's provides a series of courses to fulfil the requirem a certificate program in human resource management with eit Management option or a Management and Psychology option These programs can be completed on either a full or part-time

These Certificate programs are beneficial to both individuals cu working in the human resources departments and those who w prepare themselves for a career in the field. Completion of the cate satisfies the educational component for certification in the human resources and the designation Certified Human Resou Practitioner (CHRP).

To obtain a Certificate, a student must complete either the com ry core management courses (3.5 credits) and elective courses for a total of eight (8) credits (in which case the designator is HR the compulsory management and psychology courses (4.0 cred and elective courses (4.0) for a total of eight (8.0) credits (in wh case the designator is HRP) and enough elective courses to ful eight (8.0) course credits. It is possible to complete the certifi program along with the Bachelor of Commerce, Bachelor of Art Bachelor of Science degree programs. It is also possible to rec the Certificate in Human Resource Management by itself.

Compulsory Core Courses (Management Option: 3.5 credits)

MGT 281.1(.2)	Introduction to Business Management
MGT 383.1(.2)	Organizational Behavior I
MGT 384.1(.2)	Organizational Behavior II
MGT 385.1(.2)	Human Resource Management
MGT 386.1(.2)	Industrial Relations
MGT 485.1(.2)	Wage & Salary Administration
MGT 486.1(.2)	Personnel Staffing, Training and Developme

Compulsory Core Courses (Management & Psychology Opti 4.0 credits)

MGT 281.1(.2)	Introduction to Business Management
PSY 327.1(.2)	Industrial/Organizational Psychology
MGT 385.1(.2)	Human Resource Management
MGT 386.1(.2)	Industrial Relations
PSY 426.1(.2)	Training and Development
PSY 427.1(.2)	Organizational Psychology
PSY 428.1(.2)	Personnel Psychology
MGT 485.1(.2)	Wage & Salary Administration

Elective Courses for both the Management Option as well as Management and Psychology Option

ACC 241.1(.2)	Introductory Accounting Part I
ACC 242.1(.2)	Introductory Accounting Part II
CML 201.1(.2)	Legal Aspects of Business Part I
COM 293.1(.2)	Managerial Communications
COM 394.1(.2)	Oral Communications and Presentation Techniques
COM 475.1(.2)	Advanced Managerial Communications
ECO 201.1(.2)	Principles of Economics (Micro)
ECO 202.1(.2)	Principles of Economics (Macro)
ECO 339.1(.2)	Labour Economics
ECO 340.1(.2)	Human Resource Economics
MGT 388.1(.2)	Business and Society
MGT 391.1(.2)	Women in Management
MGT 481.1(.2)	Organization Theory: Structure Process, Anal & Design
MGT 483.1(.2)	Interpersonal Behavior I
MGT 484.1(.2)	Interpersonal Behavior II
MGT 488.1(.2)	International Business Management
MGT 493.1(.2)	Business-Government Relations in Canada
MGT 496.1(.2)	Collective Bargaining
MGT 497.1(.2)	Issues in Industrial Relations
MGT 499.1(.2)	Senior Management Perspectives
MSC 225.1(.2)	Introduction to Computers
PSY 309.1(.2)	Human Factors
PSY 327.1(.2)	Industrial/Organizational Psychology
PSY 417.1(.2)	Interpersonal Relationships
PSY 425.1(.2)	Organizational Development
PSY 426.1(.2)	Training & Development
PSY 427.1(.2)	Organizational Psychology
PSY 428.1(.2)	Personnel Psychology

(2) Psychological Tests
(2) Seminar in Psychology

Requirements
ic regulations governing students in degree and diploma apply to students enrolled in this Certificate Program.

ents for Graduation
cumulative quality point average of at least 2.00 in the Resource Management Certificate Program courses is for graduation with the certificate.

Standing
with courses from previous post-secondary study will be by the Dean of Commerce (or designate) according to the standing procedures of the university (Academic 20). To be awarded the Certificate at least two credits compulsory courses and two credits (2.0) from the elective be completed at Saint Mary's University.

not automatically be recognized for university courses more than ten (10) years prior to the students return to study.

dinated Programs with essional Associations

icate in Management (CIM) Program

icate program is offered by the Canadian Institute of ent in cooperation with the Division of Continuing . This program can be completed by taking the series of ses offered by the Canadian Institute of Management or by equivalent Saint Mary's University degree credit courses. ed courses are as follows:

Institute of Management Core Courses
Business Management, Operations and Philosophy
Managerial Communications
Canadian Business Law
Managerial Process and Organizational Behavior
Marketing Management
Managerial Accounting
Financial Management
Policy and Administration

Fall 1995, application can be made to have CIM core courses toward the requirements for a university degree.

's University Courses Satisfying CIM Core Course ents
MGT 281.1(.2) Introduction to Business Management
COM 293.1(.2) Managerial Communications
CML 201.1(.2) Legal Aspects of Business - Part I
MGT 383.1(.2) Organizational Behavior I
MKT 270.1(.2) Introduction to Marketing
ACC 241.1 (.2) Introductory Accounting - Part I
FIN 360.1 (.2) Business Finance I
MGT 489.1 (.2) Strategic Management

course and courses taken previously may be applied as standing toward the Certificate in Management designa-

information or a descriptive brochure contact:

Continuing Education
-5492, Fax (902) 420-5103

Institute of Management
162
Nova Scotia B3J 2M4
-6245

Certificate Program

ation with the Canadian Professional Sales Association the Division of Continuing Education is offering CPSA Sales courses and the national sales certification exam at Saint ampus. CPSA Sales Institute courses are part of the national fication program, but are also open to anyone interested in field. The Division of Continuing Education offers Skills for ccess and Sales Management.

Payroll Courses

In partnership with the Canadian Payroll Association, Saint Mary's University offers the Introduction to Payroll course. This is the first level of the Payroll Management Program. For more information, contact the Division of Continuing Education at 420-5492 or the Canadian Payroll Association at 1-800-387-4693.

Other Coordinated Programs

Saint Mary's University courses can be used as credit towards professional designations offered by the following associations:

Appraisal Institute of Canada
Canadian Hospital Association
Certified General Accountants Association
Institute of Canadian Bankers
Insurance Institute of Canada
Purchasing Managers Association of Canada
Real Estate Institute of Canada

For information on any of these programs contact the association directly.

Certificate in Information Technology Solutions (ITS)

The ITS program is designed for non-computer industry workers and students who want to increase their computer technology and problem-solving skills. In contrast to other programs that offer IT training for a career change, the ITS program is aimed at people who simply want to take charge of the computer technology around them to make their own work more efficient, and often more interesting. The program consists of a Foundations Course and eight "hands-on" course modules covering a broad range of topics including Operating Systems, Local Area Networks, Database Management, and Troubleshooting. The ITS program is a 14-week full-time program (with a part-time option) that begins each September, January, and May. Please call 420-5492 for further information.

Computer Training

The Division of Continuing Education offers an extensive program of computer courses for professionals, managers, office administrators, and other computer users. All courses feature "hands-on" instruction on computers using the "Windows" operating system. For a brochure describing current courses, times and prices contact the Division of Continuing Education, 420-5492.

Diploma in Marketing and International Business

This diploma program is designed for managers, professional, and individual business owners who have an in-depth practical knowledge of the principles and strategies of marketing and international business. Of the eight program modules, four focus on marketing and four on international business. For further information, please contact Saint Mary's at the World Trade Centre, 420-5638.

Management Development for Women

To help employers develop the management performance of capable women, the Management Development for Women program provides practical skills in management functions in a supportive learning environment. This ten month program, offered jointly by Mount Saint Vincent University and Saint Mary's University, gives participants a thorough grounding in management skills through intensive classroom learning and in-depth assignments. For information please contact Saint Mary's at the World Trade Centre, 420-5638.

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 fourteen full day seminars over a six month period covering such topics as finance, marketing, human resources, negotiation, leadership and strategic management. To help apply the concepts and techniques featured in the program, the program includes ten hours of individual coaching by course instructors.

University Preparatory Courses

The Division of Continuing Education offers an upgrading course in writing skills. Preparation and review courses are offered for both the General Management Admissions Test (GMAT), the Law School Admissions Test (LSAT) and the Medical School Admissions Test (MCAT). For descriptive course brochures please contact the Division of Continuing Education at 420-5492.

General Interest Courses

Each year a variety of general interest courses for personal development and enjoyment are offered. In past years, these courses have included ElderLearners and Slide Photography. For more information on current course offerings please contact the Division of Continuing Education, 420-5492.

Information

Descriptive pamphlets, summer session brochures, and evening program schedules are available from the Division of Continuing Education, Saint Mary's University, Halifax, Nova Scotia, B3H 3C
Telephone (902)420-5492; Fax (902)420-5103.

"How may senior administrators and faculty members does it take to cook a meal?" President Kenneth L. Ozmon, O.C., supervises his "team" as they prepare dinner for new students during the 1998 Orientation Week.

Section 5

Description of Courses

This section includes all courses approved for offering by academic units. Some of the courses will not be offered in 1999-2000. Students are therefore advised to consult the academic timetable for those courses which will be taught in the 1999-2000 academic year and the times and location(s) at which they will be offered. Courses are normally offered for three hours per week. Any variations to this are noted below the relevant course descriptions. Students' attention is directed to the fact that those courses carrying double numbers, i.e., HIS 517.0 or 717.0, will require additional work and a higher level of academic performance for students registering for the higher number. If students are unsure about the requirements, they should check with the faculty member offering the course.

Accounting (ACC)

Chairperson, Associate Professor	B. Emerson
Professors	T. Cheng, R. Chesley
Associate Professors	D. Bateman, B. Gorman, W. Hamby, P. Secord, N. Young
Assistant Professors	G. Ansong, J. Power, X. Song
Adjunct Professor	K. Mader

The Department of Accounting offers a program for accounting majors which will prepare students for careers in professional accounting, industry, government and institutions. The Department also offers courses in financial and managerial accounting and information systems for all Commerce students.

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, 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 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: In addition to meeting the general requirements for a Bachelor of Commerce degree, students must complete the following:

Year 3
ACC 323.1(.2) Management Information Systems I
ACC 334.1(.2) Cost Accounting
ACC 341.1(.2) Intermediate Financial Accounting I
ACC 342.1(.2) Intermediate Financial Accounting II
ACC 345.1(.2) Financial Accounting Theory

Year 4
ACC 455.1(.2) Financial Accounting Seminar
or
ACC 470.1(.2) Management Accounting Seminar
One Accounting elective (1.0) - see note (i) below
Two non-Commerce electives (2.0)
One free elective at 200-level or above (1.0) - see note (ii) below

Notes:
(i) MSC 324.1(.2), MSC 326.1(.2), or MSC 335.1(.2) as well as any 400 level course in Accounting except ACC 455.1(.2) and 470.1(.2) may be used to satisfy this requirement.

(ii) CML 202.1(.2) is normally required by professional accounting associations in order to receive an exemption for commercial law.

Students with a grade of D in ACC 242.1(.2), ACC 341.1(.2) or ACC 342.1(.2) are advised against pursuing an accounting major.

241.1(.2) Introductory Accounting - Part I
Prerequisite: ECO 201.1(.2) or 202.1(.2); MGT 281.1(.2); or appropriate work experience, determined in advance of registration by the Chairperson of the Department.

Part I of a two-course series. This course is concerned with a study of basic accounting concepts and principles, their application to business transactions and financial statements, and an introductory consideration of the balance sheet and income statement. This course is to be followed by Introductory Accounting - Part II.

Classes 3 hrs. and lab 75 minutes a week. 1 semester.

242.1(.2) Introductory Accounting - Part II
Prerequisite: ACC 241.1(.2); ECO 201.1(.2); ECO 202.1(.2); or appropriate work experience, determined in advance of registration by the chairperson of the Department.

Part II of a two-course series. This course deals with accounting for intercorporate investments, analysis of financial statements, the statement of changes in financial position, introduction to manufacturing accounting and managerial uses of accounting data.

Classes 3 hrs. and lab 75 minutes a week. 1 semester.

323.1(.2) Management Information Systems I
Prerequisite: ACC 242.1(.2) and MSC 225.1(.2).

The study of computer-based data processing and information s terms, management problems of computers in business such as nization, control and feasibility.

332.1(.2) Planning and Control
Prerequisite: ACC 242.1(.2) and MSC 225.1(.2).

Covers concepts and techniques of planning and control such a profit planning, financial forecasting, budgets, performance me ments, management control systems, and the analysis of perfo mance.

Classes 3 hrs. and lab 75 minutes a week. 1 semester.

334.1(.2) Cost Accounting
Prerequisite: ACC 332.1(.2); FIN 360.1(.2); and MSC 206.1(.2) or 301.1(.2).

This is a course about cost accounting information for decision analysis. It covers both the accumulation of cost and the contr tures of information provided by the cost system. Topics introd in ACC 332.1(.2), such as job order costing, standard costs and ance analysis, will be explored for their relevance to decision an sis.

Classes 3 hrs. and lab 75 minutes a week. 1 semester.

341.1(.2) Intermediate Financial Accounting - Part I
Prerequisite: ACC 242.1(.2) and MSC 225.1(.2).

Part I of a two-course sequence which provides a comprehensi study of financial accounting and financial reporting. This cours be followed by Intermediate Financial Accounting - Part II.

342.1(.2) Intermediate Financial Accounting - Part II
Prerequisite: ACC 341.1(.2).

Part II of a two-course sequence which provides a comprehens study of financial accounting and financial reporting.

Classes 3 hrs. and lab 1 hr. a week. 1 semester.

345.1(.2) Financial Accounting Theory
Prerequisite: ACC 341.1(.2).

Study of objectives of financial accounting, major accounting the ries, evolution of financial accounting theory and practice, surv contemporary accounting practice with emphasis on latest deve ments and issues. This course should be taken concurrently wit ACC 342.1(.2) or after the completion of ACC 342.1(.2).

357.1(.2) International Accounting
Prerequisite: ACC 242.1(.2).

An introduction to accounting in the international environment, b ing on introductory financial (and to a lesser extent, managerial) accounting to provide the requisite background to understand accounting issues facing multinational firms. Topics will include: national accounting standards; foreign exchange, foreign curren transactions, and translation of financial statements; intercorpora investment, including consolidation of subsidiaries, both foreign a domestic; inflation and current value accounting; transfer pricing; well as information systems and audits.

423.1(.2) Accounting Information Systems and Control
Prerequisite: ACC 323.1(.2), 332.1(.2) and 341.1(.2); also MGT 384.1(.2).

This course expands on the systems and control concepts intro duced in ACC 323. Accounting transaction processing, the use o accounting information systems (AIS), and their design and cons tion are analyzed. Internal controls within AIS, evaluation techniq and techniques for developing, documenting, and monitoring the effectiveness of AIS are investigated.

Classes 3 hrs. and lab 75 minutes a week. 1 semester.

424.1(.2) Small Business Accounting Information Systems
Prerequisite: ACC 323.1(.2).

This course examines issues relating to the role, selection, desig and implementation of commercially-developed accounting infor tion systems in small business. The course provides students wi an opportunity to gain practical experience by utilizing a decision support system to assist in the software selection process for a l

Students will also learn to use at least one commer- accounting software package.

Management Information Systems II
ACC 323.1(.2).

is an introductory systems analysis and design course mental systems concepts; the systems development and processes, tools and techniques for each stage in the with emphasis on requirements analysis and design. ment, proposal development and presentation and analysis techniques are also discussed. These concepts are applied in a major practical case project.

Seminar in Management Information Systems
ACC 323.1(.2) and one of ACC 423.1(.2), ACC 425.1(.2), 425.1(.2).

MIS course addresses the rising need of managers to the strategic importance of information systems. The con- tion as a corporate resource is emphasized. for planning, developing, controlling and evaluating an 's "information architecture" are presented. Special placed in reviewing how information technology (IT) can as a management tool to increase organizational competi- strategic information systems planning). Alternative IT and implementation strategies are evaluated. Corporate in existing and emerging information technologies (elec- rce, executive support systems, expert systems, distrib- processing, office automation, etc.) is evaluated in terms of to produce real efficiency, effectiveness and transformation course will make extensive use of case studies.

Advanced Financial Accounting - Corporate Accounting
ACC 342.1(.2).

covers long term investments in equity securities, inter- rations, non-business and not-for-profit organizations, counting.

hrs. and lab 1 hr. a week. 1 semester.

Advanced Financial Accounting - Special Topics
ACC 342.1(.2) and 345.1(.2).

includes extended consideration of special topics in cor- counting, partnerships, fiduciary accounting, receivership, and liquidations, and alternatives to historical cost.

Financial Statement Analysis
FIN 361.1(.2).

will examine how accounting information can be used to a firm. The importance of economic conditions, accounting , and strategic management decisions for statement will be considered. The course will also explore the useful- and limitations of public disclosure for decision-making. for analysis and forecasting will be discussed as well as research findings that impact on financial statement analysis.

Management Control Systems
ACC 332.1(.2) and MGT 383.1(.2)/384.1(.2).

the management control system which examines problems and efficient control from the perspective of the total sys- centers, profit centers, investment centers, strategic budgeting, performance appraisal. This course is recom- non-accounting majors seeking further study in account-

Auditing
ACC 342.1(.2).

the basic concepts and theory of auditing including the nment; the auditor's role; the structure of the profes- sibilities of auditors; nature and theory of evidence; the port and other related material.

Taxation - Part I
ACC 342.1(.2) or FIN 361.1(.2).

is the first of a two course sequence which introduces to the fundamental principles of taxation (the theory), the aspects of the law (the practice), and the rationale for provisions (the policy). The course also examines the taxation law on the investment decisions of individuals and Both personal and corporation income taxation are

454.1(.2) Taxation - Part II
Prerequisite: ACC 453.1(.2) or permission of instructor.

This course examines in greater depth the topics covered in ACC 453.1(.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.

455.1(.2) Financial Accounting Seminar
Prerequisite: ACC 342.1(.2) and 345.1(.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.

480.1(.2) Internal/Operational Auditing
Prerequisite: ACC 332.1(.2) and 342.1(.2), or permission of the chairperson of the Department and instructor.

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.

470.1(.2) Management Accounting Seminar
Prerequisite: ACC 334.1(.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 behavioral consequences of using the data.

475.1(.2) Business Consultancy
Prerequisite: ACC 332.1(.2), ACC 341.1(.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.stmarys.ca/smubdc.

Internship. One semester.

480.1(.2) Accounting and Small Business
Prerequisite: ACC 323.1(.2), ACC 332.1(.2), and FIN 360.1(.2).

This course addresses a variety of accounting issues from the perspective of small business: business plans and feasibility studies, accounting information systems, internal control, working capital management, financial statement analysis, business valuation, and other issues of current concern.

492.1(.2) Directed Study
Prerequisite: permission of The 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.

The following courses are available only to students registered in the Master of Business Administration Program and, with permission of the MBA Director, to students registered in other master's programs.

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540.1(.2) Financial Accounting
This course provides an introduction to financial accounting and presumes no prior knowledge of the subject. Using a conceptual approach, the student is given a thorough understanding of financial accounting concepts, principles and practices. Emphasis is placed on providing the student with a fundamental knowledge of how to interpret and analyze financial statements and also with an appreciation of the limitations inherent in published financial information.

548.1(.2) Managerial Accounting
Prerequisite: ACC 540.1(.2).

The primary objective of this course is to provide the student with a knowledge of the various types of accounting information which are available for use by managers in decision-making. The student examines selected cost concepts and the appropriateness of their use in diverse areas of decision-making. Product costing, budgeting, profit-planning and performance measurement make up the major portion of the course content.

624.1(.2) Small Business Accounting Information Systems
Prerequisite: completion of all 500-level MBA courses or permission of the MBA Director.

This course examines issues relating to the role, selection, design, and implementation of commercially-developed accounting information systems in small businesses. The course provides students with an opportunity to gain practical experience by utilizing a decision support system to assist in the software selection process for a local small business. Students will also learn to use at least one commercially-developed accounting software package.

626.1(.2) Management Information Systems: Strategy and Practice
Prerequisite: completion of all required 500-level MBA courses or permission of MBA Director.

This course addresses the rising need of managers to recognize the strategic importance of information systems and to be able to create new work environments which allow their organizations to leverage knowledge globally, organize for complexity, work electronically, and handle continuous and discontinuous change. The concept of information as a corporate resource which must be effectively planned, developed, managed and controlled is emphasized.

641.1(.2) Financial Reporting and Statement Analysis
Prerequisite: completion of all required 500-level MBA courses or permission of MBA Director.

This course examines financial statements from the perspective of both preparers and users of financial information. Commencing with analytical models of information production, the course focuses on various mechanisms of information extraction. Techniques such as ratio analysis, signal extraction, forecasting are used to establish functional relations between the accrual process and the economic position of a firm. Consequently, the course provides a framework for using accounting information to evaluate a firm.

648.1(.2) Management Control Systems
Prerequisite: completion of all required 500-level MBA courses or permission of MBA Director.

Designed to provide the student with an understanding of the nature of management control systems, this course places particular emphasis on organizational structure and the control process. Various applications of the 'responsibility center' concept are examined as well as planning, budgeting and performance appraisal. The emphasis is on the design of systems suitable to the organization and its objectives and includes consideration of both profit-oriented and non-profit organizations.

650.1(.2) Managerial Decision Analysis and Information
Prerequisite: completion of all required 500-level MBA courses or permission of MBA Director, an accounting major undergraduate degree including a quantitative managerial accounting course, and permission of Department.

This course will explore formal decision analysis to assess the approach and the requirements it places on the information system. Focus will be on formal rational models of decision analysis under certainty and uncertainty including decision support systems and computerized analysis.

652.1(.2) Integrative Managerial Accounting
Prerequisite: ACC 650.1(.2) and permission of the Chairperson of the Department.

Current developments in managerial accounting and integrative lem analysis will be emphasized in the course and modern ma ment thinking and analysis approaches will be included.

653.1(.2) Taxation
Prerequisite: completion of all required 500-level MBA courses permission of instructor.

An introductory study of federal corporate and personal taxati particular emphasis on the managerial decision making and im ment implications of taxation. The course will also introduce st to the basic federal sales tax system.

654.1(.2) Advanced Financial Accounting Theory
Prerequisite: completion of all required 500-level MBA courses permission of MBA Director, an accounting major undergradu degree including an accounting theory course, and permissio Chairperson of the Department.

Accounting theory involves conceptual, historical, and empiric developments. Exploration of these issues in light of recent de ments will be made in this course. Included are theoretical issu surrounding advanced accounting topics such as not-for-profit nizations, foreign currency, business combinations, non-going c cerns, partnerships, and resource industries.

656.1(.2) Integrative Financial Accounting
Prerequisite: ACC 654.1(.2) and permission of the Chairperson Department.

Theory and practice will be combined to investigate complex fi accounting issues and problems. Recent research and practic be explored as part of this course.

657.1(.2) International Accounting
Prerequisite: ACC 540.1(.2) and 548.1(.2).

An introduction to accounting in the international environment a especially within multinational enterprise, which will involve in-d examination of international accounting issues. Topics will inclu international accounting standards; foreign exchange, foreign cu cy transactions, and translation of financial statements; interco investments; accounting for changing prices; transfer pricing; in tional aspects of taxation; culture and accounting; as well as accounting in developing countries.

658.1(.2) Computer Based Auditing
Prerequisite: completion of all required 500-level MBA courses permission of MBA Director, an accounting major undergradua degree including an auditing course, and permission of Depart

This course investigates internal controls and audit in computer data communications environments. Topics include hardware an software control features, data security, control evaluation, com assisted auditing, statistical sampling and working paper prepa and selected current topics. Microcomputer and networked sys will be emphasized.

660.1(.2) Integrative Public Auditing
Prerequisite: ACC 658.1(.2) and permission of the Chairperso Department.

Specialized public auditing areas such as forensic audits, envir mental audits, and computer systems investigations will be com with the study of recent audit questions of concern to both prac ers and researchers.

662.1(.2) Integrative Internal Auditing
Prerequisite: ACC 658.1(.2) and permission of the Chairperson o Department.

This course covers value-for-money auditing, and operational an management audits, investigations of computer systems and em ing issues in internal auditing. Modern management practices an approaches will constitute necessary background.

664.1(.2) Advanced Taxation Legislation - Corporate and Sal
Prerequisite: completion of all required 500-level MBA courses o permission of MBA Director, an accounting major undergradua degree including an income tax course, and permission of Department.

Tax legislation is not only complex but subject to continual cha This course will explore the recent changes in both corporate an sales tax legislation and engage in an in-depth study of selected areas of the legislation relevant to business decisions.

Taxation and Financial Planning
Prerequisite: ACC 664.1(.2) and permission of the Chairperson of the Department.

Tax implications for various complex business decisions such as corporate capital restructuring, investments, and business valuations will be investigated. Recent income tax legislation will also be considered as part of the investigation conducted.

Advanced Management Information Systems (MIS)
Prerequisite: completion of all required 500-level MBA courses or permission of MBA Director, an Accounting MIS course, and permission of Department.

This course analyzes advanced topics in computerized information systems from an accounting perspective. Systems analysis and design, database design, systems documentation and the role of expert systems and artificial intelligence will be explored.

Environmental Accounting
Prerequisite: completion of all required 500-level MBA courses or permission of MBA Director.

This course is designed to help students understand how to monitor, measure, and report the environmental impact of business and public sector organizations. The course will include an overview of sustainable development from an accounting perspective, external reporting of environmental costs and obligations, internal planning, budgeting and control of costs, and an introduction to environmental auditing. The course is oriented toward integration of the concepts of sustainable resource management into the integral planning and external reporting of the organization, and will include case studies and projects which endeavour to integrate the field of accounting with others related to the interaction of the environment with the economy. To the extent possible, applications and cases, as well as the skills of professionals not members of the Department of Accounting, will be used to strengthen this integration.

Classes and seminars 3 hrs. a week. 1 semester.

690.1(.2) Seminar in Accounting
Prerequisite: completion of all required 500-level MBA courses or permission of MBA Director and instructor.

The course deals with selected topics in the accounting area. The topics to be covered will vary depending on the interests of the students and instructor.

692.1(.2) Directed Study
Prerequisite: completion of all required 500-level MBA courses and permission of MBA Director and instructor.

Intended to supplement or provide an alternative to the regular accounting 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.

699.0 Research Project
Prerequisite: Permission of MBA Director.

Each student is required to complete a project involving the practical application of the research concepts and techniques used in accounting, under the direct supervision of a faculty member. Interdisciplinary projects are acceptable.

Anthropology (ANT)

Professor — S. Davis
Professors — P. Erickson, H. McGee
Professors — M. Daveluy, S. Walter
Professors — J. Dayle, M. Zelenietz

Departmental Policy
To obtain a major concentration, a student is required to have completed at least six (6.0) credits in anthropology. These must include ANT 200.0, 450.0, and three (3.0) additional credits at the 300 level or above. The program for majors must be approved by the student's departmental advisor who will be assigned at the time the major is declared.

To obtain an honors concentration in anthropology, a student is required to:

a. satisfy pertinent Faculty of Arts requirements;

b. have a cumulative quality point average of at least 3.00 for courses in the program;

c. have an approved statement of a thesis topic;

d. meet departmental major requirements;

e. complete the equivalent of ten (10.0) credits in anthropology, including the following obligatory core: ANT 200.0, 271.1(.2)/272.1(.2), 282.1(.2), 380.0, 391.1(.2)/392.1(.2), 450.0, and 500.0;

f. in addition, honors majors are urged to take at least one of the methods courses: ANT 321.0, 362.1(.2)/363.1(.2), 382.1(.2), 470.0; and

g. to obtain an honors degree (or equivalent), students must achieve a minimum grade of B in ANT 500.0.

To obtain a minor in Anthropology, students are required to have completed at least four (4.0) credits, including ANT 200.0 and three additional ANT courses of which two (2.0) must be at the 300 level or above.

The Department offers a prize for excellence in anthropological studies to major or honors students in anthropology. The prize is named for Prince John Loewenstein, the founder of the Department, consists of a cash award, certificate of merit, and the prize-holder's name will appear on a memorial plaque. Details may be obtained from the Chairperson of the Department.

200.0 Introduction to Anthropology
An introduction to the scientific study of humanity. Origins, physical and cultural evolution and diversification, prehistory, ecological adaptation, social organization, economic systems, religion, language and value systems of the world's peoples.

201.0 Women: A Cultural Perspective
[WMS 201.0]

The differential status of women and men in a variety of societies will be examined. Special attention will be given to the portrayal of "woman" in expressive media. Differential patterns of enculturation for women and men will be the focal, but not exclusive, explanatory thesis.

221.1(.2) Native Peoples of Canada
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 discussed.

222.1(.2) Native Peoples of the United States and Mexico
A survey of the diverse Native cultures and societies of the United States and Mexico. Cultural ecology and theories of socio-cultural evolution are considered as are some of the changes linked to European colonization of these regions.

251.1(.2) Folklore and Anthropology: An Introduction
This course introduces students to the study of traditional culture. Emphasis will be placed on ethnographic as well as library/archival research techniques in a cross-culture exploration of such areas as folk narrative and song, material culture, belief, occupational folklife, custom, foodways, oral history, and the interface between folklore and technology in everyday communication. In addition to lectures, students will be provided with practical lab/tutorial sessions designed to help develop their skills in such areas as: interview and recording techniques, transcription, the use of photography and video in ethnographic research, and folklore research with Internet resources and communities. Students will also be familiarized with other archival and museum resources in the Halifax area. Where possible, guest speakers will be invited to present on various aspects of folklore research.

Classes and tutorials 3 hrs. a week. 1 semester.

271.1(.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.

272.1(.2) Introduction to World Prehistory
The 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.

301.1(.2) Nature of Culture
Prerequisite: ANT 200.0; or SOC 210.1(.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.

302.1(.2) Social Organization
Prerequisite: ANT 200.0; or SOC 210.0; or permission of instructor.

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.

310.0 Applied Anthropology: Culture Change and Development
Prerequisite: ANT 200.0 or permission of instructor.

An introduction to the applications of socio-cultural anthropology. Consideration is given to the nature of society and culture as well as to anthropological and other theories of culture change, including development.

315.0 Peasant Society and Culture
[IDS 315.0]
Prerequisite: ANT 200.0 or permission of instructor.

A treatment of theories and substantive studies of peasant society and culture.

320.0 World Ethnology
Prerequisite: ANT 200.0 or permission of instructor.

A survey of selected societies and cultures of Africa, North America, South America, Asia and Oceania. Ethnographic examples include peoples with varied economies and social systems. Foragers, horticulturalists, pastoralists and intensive food producers are represented as are "egalitarian" peoples, societies emphasizing inherited rank, and non-industrialized state systems. Theories of socio-cultural evolution are considered.

321.0 Ethnohistory
Prerequisite: ANT 200.0 or permission of instructor.

Ethnohistory and the development of ethnohistorical research, with particular reference to North America. This course is concerned with the anthropologist's use of archival material, and the critical evaluation of different types of oral traditions as sources of historical information. Some ethnohistorical studies are examined.

323.1(.2) Traditional Culture of Micmac and Maliseet Peoples
An examination of the "traditional" culture of the Micmac and Maliseet peoples with emphasis upon the relationship between mythology and social organization.

324.1(.2) Contemporary Culture of Micmac and Maliseet Peoples
An examination of the contemporary issues facing Micmac and Maliseet peoples with an emphasis upon those issues pertaining to the continuity of traditional values and behaviors.

325.0 Ethnology: Oceania
Prerequisite: ANT 200.0 or permission of instructor.

Ethnological survey of selected (representative) societies of Polynesia, Micronesia, Melanesia and Australia.

326.1(.2) Ethnology: East Asia
Prerequisite: ANT 200.0 or permission of instructor.

A survey of the cultures and societies of the peoples of China, Korea, Japan, Mongolia, Siberia, and Southeast Asia. Special attention will be given to the socio-cultural integration of community and state.

327.1(.2) Ethnology: Japan
Prerequisite: ANT 200.0 or permission of instructor.

An examination of the culture and society of contemporary Japan. Emphasis will be placed upon the topics of world view, community type, and gender issues.

329.1(.2) The Arctic Culture Area
This course focuses on the contemporary situation of people in circumpolar regions of the world with an emphasis on northern Canada. Students will be introduced to issues of modernity in the north, including environmental problems, health, culture, development and power. Specific attention will be paid to the evolution of political agreements and autonomy by Aboriginal peoples.

330.0 Warfare and Aggression: Anthropological Approaches to Human Conflict
Prerequisite: ANT 200.0 or permission of instructor.

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 socioblological theories of human aggression.

332.0 Anthropological Approaches to Folklore
Prerequisite: ANT 200.0 or permission of instructor.

As a traditional system for the storage and transmission of information about how the world is perceived by a people, folklore is of interest to the anthropologist. In this course, the student will be made familiar with current anthropological approaches to the study of folklore and will have the opportunity to analyze a body of folklore.

335.0 Psychological Anthropology
Prerequisite: ANT 200.0, PSY 200.1(.2), or permission of instructor.

Deals with the interaction between the individual and culture. Examines roots of both individual and group differences and explores human nature from an anthropological perspective. Looks at contemporary relations between heredity, culture and environment in a cross-cultural context.

340.0 Socio-cultural Aspects of Health and Illness
Prerequisite: a social science credit (1.0).

This course examines the relationships among health, illness, society and culture. Conceptions of health and illness differ around the world, particularly when they concern the definitions, causes, and cures of health. Light will be shed on these complexities by examining cross-cultural views of health and illness, theories of disease causation, deviance and stress, culture-bound and transcultural syndromes, non-Western medical systems, trance and possession and other aspects of health and illness.

341.1(.2) Cross-listed as IRS 340.1(.2) The Early Christian in Britain and Ireland
361.0 Fieldwork in Archaeology
Prerequisite: one of ANT 200.0, 271.1(.2)/272.1(.2), 362.1(.2)/363.1(.2) or 371.1(.2)/372.1(.2); and permission of instructor.

Course involves detailed instruction in, and practical application of, archaeological field techniques in the excavation of archaeological sites. The course will offer training in the laboratory analysis of artifacts recovered in the excavation phase of the course. This course may be offered during summer sessions. Please consult the Departmental Chairperson regarding availability.

3 weeks field work and 3 weeks lab.

362.1(.2) Method and Theory in Historical Archaeology
Prerequisite: ANT 271.1(.2) or ANT 272.1(.2) or permission of instructor.

Concepts and methods of historical archaeology, survey techniques, data collection and lab analysis. Suggested for students who intend to take the fieldwork courses in archaeology.

363.1(.2) Method and Theory in Prehistoric Archaeology
Prerequisite: ANT 271.1(.2) or ANT 272.1(.2) or permission of instructor.

Concepts and methods of prehistoric archaeology, survey techniques, data collection and lab analysis. Suggested for students who intend to take the fieldwork courses in archaeology.

365.1(.2) Myth: Anthropological Approaches
[REL 365.1(.2)/465.1(.2)]
Prerequisite: ANT 200.0 or REL 201.0 or REL 202.0.

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.

Worldview: Anthropological Approaches
[466.1(.2)]
ANT 200.0 or REL 201.0 or REL 202.0.

examination of anthropological theories pertaining to people's perception of the world and how it works). examples will be drawn from many societies, the course will upon the beliefs current in a single society.

Prehistory of Canada
ANT 200.0 or 271.1(.2) or 272.1(.2) or permission of

development of prehistoric cultures in Canada. The archaeological record from the Arctic, sub Arctic, far Northern Plains and West Coast to follow cultural change.

Prehistory of the United States
ANT 200.0 or 271.1(.2) or permission of instructor.

development of prehistoric cultures in the United course uses the archaeological record from the Plateau, Plains, Southern Northeast, California, Great Basin, Southeast to follow cultural change.

Cross-listed as IRS 379.1(.2) Irish Material Culture

Physical Anthropology
ANT 200.0 or permission of instructor.

treatment of primate behavior, primate anatomy and genetics involving laboratory and workbook exercises.

Introduction to Linguistic Anthropology
[
]
ANT 200.0 or LIN 300.0.

relationships between linguistics and anthropology understanding of the nature of language. Concepts and used by anthropologists to analyse linguistic data. Training manipulation of linguistic tools in the analysis of languages English.

Language, Culture and Society
[
]
ANT 391.1(.2) (or equivalent).

different approaches and concepts in linguistic anthropology (ethnoscience, ethnosemantics, ethnolinguistics). Exposure to topics of interest in the field (the relationships between language and thought, for example). Characteristics of an ethnological perspective on language(s).

396.1(.2), 397.1(.2), 398.0, 399.0 Directed Independent

Independent study on a reading or research program agreed student and the instructor. The student must obtain the approval of the proposed study plan prior to registering course. A student is limited to 2.0 credits of DIS in fulfilling requirements for a major or honors degree.

Language Use and Issues in Northern Canada
[
]
focus of the course is Inuktitut, the language spoken by the linguistic situations in Nunavut and Nunavik (northern compared. Topics discussed include linguistic identity, status, language maintenance and official languages of Although some formal exposure to Inuktitut is provided, this language course.

Data Collection in Socio-cultural Anthropology
at least 2.0 credits at the 300 level or above from any in the Faculty of Arts.

introduces the student to the techniques of recording pertaining to human socio-cultural experience. Special be given to computer assisted means of recording qualitative data. Usually the student will be expected to participate in a project within the metropolitan area.

Explanation in Socio-cultural Anthropology
at least 2.0 credits at the 300 level or above from any in the Faculty of Arts.

be expected to take a body of socio-cultural information present it in a manner that communicates an understanding of intellectual issue. Although emphasis is placed upon approaches, quantification will be employed when relevant. While essay format will generally be employed by most students, there is an opportunity to explore other formats (documentary radio or television scripts, museum exhibition, and the like).

445.0 Evolution and Human Behavior
Prerequisite: ANT 380.0 or permission of instructor.

An examination of physical anthropology's contribution to the nature/nurture debate focusing on human sociobiology, human ethnology and human behavioral genetics.

450.0 History of Anthropological Theory
Prerequisite: ANT 200.0 and two (2.0) additional credits in anthropology or permission of instructor.

The development of anthropological theory from Antiquity to the present with reference to current theoretical issues.

461.0 Advanced Fieldwork in Archaeology
Prerequisite: ANT 361.0.

Students are expected to have knowledge of field and laboratory techniques used in archaeology. They will assist in the conducting of excavations and analysis of an archaeological site and its material. This course may be offered during summer sessions. Please consult Departmental Chairperson regarding availability.

3 weeks field work and 3 weeks lab.

470.0 Forensic Anthropology
Prerequisite: ANT 380.0 or permission of instructor.

Forensic anthropology is the analysis of human skeletal remains in the legal investigation of accidents and crimes involving death. This course surveys the field of forensic anthropology in lectures, readings, seminars and substantial laboratory work.

Classes 1 hr.; lab 1 1/2 hrs.; and seminar 1/2 hr. a week. 2 semesters.

475.1(.2)-478.1(.2); 479.0; 480.0 Seminar
To be offered in response to expressed student desire for advanced instruction in anthropological topics not covered intensively in substantive course offerings. It will be given as a formal seminar.

Classes 1 hr. and lab 1 1/2 hours a week. 1 semester.

491.1(.2) Ethnography of Communication
[LIN 491.1(.2)]
Prerequisite: ANT 392.1(.2) or 390.0 or LIN 300.0.

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.

Classes 1 hr. and lab 1 1/2 hrs. a week. 1 semester.

492.1(.2) Anthropological Analysis of Linguistic Communities
[LIN 492.1(.2)]
Prerequisite: ANT 392.1(.2) or 390.0 or LIN 300.0.

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 ethnolinguistic groups in one region).

Classes 1 hr. and lab 1 1/2 hrs. a week. 1 semester.

500.0 Honors Thesis
Prerequisite: restricted to students who have been accepted into the honors program.

Supervised preparation of a significant research paper for honors students in anthropology.

5

Asian Studies (ASN)

Committee on Asian Studies

C. Beaupré, Coordinator	Asian Studies/ Modern Languages and Classics
P. Bowlby	Religious Studies
H. Das	Management
M. Fung	Asian Studies
E. Keeble	Political Science
J. Lee	History
H. McGee	Anthropology
H. Millward	Geography
J. Morrison	History
B. Robinson	Geography
H. Schwind	Management
P. Secord	Accounting
S. Walter	Anthropology
S. Wein	Philosophy
E. Laffey	Adjunct Professor
M. Fung	Adjunct Professor

The Asian Studies degree program at Saint Mary's University has been in operation for over twenty 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 encouraged to pursue 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 the Faculty of Arts (Undergraduate) entry, Section 3 of this Calendar.

Regulations for Majors

Although it is possible to complete a major in Asian Studies with 15.0 credits, extra time and additional credits will often be desirable and necessary. Facility in an Asian language is important and possible participation in cultural exchange programs in Asia will provide a deeper understanding of Asian societies. Students intending to complete a major in Asian Studies are required to complete 7.0 credits. These 7.0 credits must include the following with a minimum of 4.0 credits at the 300 level or above.

a. 2.0 consecutive Asian language credits (Introductory and Intermediate).

b. ASN 300.1(.2) and ASN 400.1(.2).

c. 4.0 additional core credits from at least two different disciplines other than language. The list of core courses is given below.

For first year students interested in completing an honors or major in Asian Studies, the following introductory courses will meet three of the four General Arts requirements, namely:

Requirement 3b

JPN 100.0	Introductory Japanese
CHI 100.0	Introductory Modern Chinese

Requirement 3c

HIS 208.0	Global History: 1450 to the Present
HIS 209.0	East Asia: From Prehistory to Modern Times
REL 202.0	Introduction to Comparative Religion

Requirement 3d

ANT 200.0	introduction to Anthropology
ECO 201.1(.2)	Principles of Economics: Micro
ECO 202.1(.2)	Principles of Economics: Macro
GPY 203.1(.2)	Physical Geography: Global Patterns
GPY 204.1(.2)	Demographics and Culture
GPY 213.1(.2)	Physical Geography: Local and Regional Patterns
GPY 214.1(.2)	Environment and Livelihood
POL 200.0	Introductory Political Science
SOC 210.1(.2)	Introductory Sociology
SOC 212.1(.2)	Understanding Society

Regulations for Honors

1. Admission to and continuance in the honors program in As Studies follows the general regulations of the Faculty of Arts, r regulations 11, 12, and 13.

2. Students seeking an honors degree in Asian Studies are re to pursue a major program in one of the departments offering Studies courses. See Faculty of Arts regulation 14.

3. Students in either an honors or double honors program in A Studies must complete at least 10.0 credits and satisfy the foll requirements:

a. at least 3.0 credits in Asian languages, one of which m at the intermediate level;

b. core courses ASN 300.1(.2) and ASN 400.1(.2);

c. at least 1.0 Asian Studies credit within each of the foll departmental groupings:

(i) History and Religious Studies;

(ii) Anthropology, Economics, Geography, Political Sci Sociology;

d. An honors thesis (ASN 500.0) will be prepared during t year of study in the program. The topic must be approved by t Asian Studies Committee and the thesis will be supervised and ed by three faculty members chosen by the Asian Studies Committee;

e. Annual approval of their program of study by the Chai of the Asian Studies Committee.

Regulations for Minors

Minor in Asian Studies

Students majoring in another academic discipline may obtain a in Asian Studies by completing the equivalent of four (4.0) cred approved for the program:

These must be:

(a) CHI 100.0 or JPN 100.0;

(b) ASN 300.1(.2) and ASN 400.1(.2); and

(c) two (2.0) credits from any academic discipline regarded as of the Asian Studies Program (see 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 co ing the following courses: Chinese 100.0 and three other cours China in at least two different disciplines taken from the follow

ANT 326.1(.2); ASN 300.1(.2); ASN 310.1(.2); ASN 450.0; CHI 20 HIS 323.0; HIS 342.0; HIS 396.1(.2); REL 327.1(.2); REL 345.1(.2

Two (2.0) credits must be at the 300 level or above. Transfer cre 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 co pleting the following courses: Japanese 100.0 and three other co es on Japan in at least two different disciplines taken from the fo ing list:

ANT 326.1(.2); ANT 327.1(.2); ASN 300.1(.2); ASN 302.1(.2); ASN 303.1(.2); ASN 410.1(.2); GPY 360.1(.2); HIS 354.1(.2); HIS 355.1 HIS 356.1(.2); HIS 396.1(.2); JPN 200.0; REL 327.1(.2); REL 340.1

Two (2.0) credits must be at the 300 level or above. Transfer cre from other academic institutions may be recognized.

Information concerning the requirements for the Certificate of Chinese Studies Program and also the Certificate of Japanese Studies Program are found in the Faculty of Arts (Undergraduate portion of Section 3 of this Calendar.

Dual Degree Program

Since it is possible to obtain two undergraduate degrees from Sa

...sity, for Commerce students it may be very attractive to ... degree in their field with a major in Asian Studies, espe... of the interest which the Canadian federal and provincial ... and private industries have in developing trade with the ... countries. It is relatively easy to combine Commerce and ... Commerce students select their non-commerce and ... carefully. The second degree can be obtained in a year ... addition to the normal time requirement for a Commerce ... more information please contact either the Dean of Arts, ... Commerce, or the Coordinator of Asian Studies, and also ... material at the conclusion of the Faculty of Arts entry in ... of this Calendar.

... Ethnology: Oceania
... Ethnology: East Asia
... Ethnology: Japan

... Multidisciplinary Study of Asia
...-306.1(.2) Selected Topics in Asian Studies
... Japan in Film and Literature
... Contemporary Japan: Institutions and Culture
... Chinese Film and Literature
... Southeast Asian Popular Culture
... Seminar in Asian Studies
...-406.1(.2) Selected Topics in Asian Studies
... Special Topics on Japan
... China, Eternal and Transforming: Travel and Study
...-499.1(.2) Directed Study
... Honors Thesis

... Geography of China
... Geography of Japan

... East Asia: From Prehistory to Modern Times
... China Before 1800
... Asian Crossroads: Southeast Asia from 1600 to ... dependence
... China in Revolution: 1840 to the Present
... Traditional Japan: History and Culture
... The Rise and Fall of Imperial Japan, 1867-1945
... Post-W.W. II Japan: 1945-present
... East Asia and the West to 1800
... East Asia and the West Since 1801
... Sexuality, Love, and Marriage in East Asia
... The Emergence of Modern Korea
... China and Japan in the 20th Century: Ideology, State and Society
... Modern East Asia, Selected Problems in Modernization

... Languages and Classics - Chinese
... Introductory Modern Chinese
... Intermediate Modern Chinese

... Languages and Classics - Japanese
... Introductory Japanese
... Intermediate Japanese

... Religious Studies
... Introduction to Comparative Religion
...-423.1(.2)] The Islamic Religious Tradition
...-425.1(.2)] Myth and Story
...-426.1(.2)] The Hindu Religious Tradition
...-427.1(.2)] The Buddhist Religious Tradition
...-437.1(.2)] Hindu and Buddhist Religious Art
...-440.1(.2)] Japanese Religious Traditions
...-441.1(.2)] Violence and Non-Violence: East and West
...-445.1(.2)] Chinese Religious Traditions

... Work and the Empowerment of Women in India

... Courses

... Multidisciplinary Study of Asia

... course will introduce students to the study of Asia from a ... perspective. Using various disciplines in the humani... science and commerce fields, students will review how ... disciplines intersect to create a fuller understanding of Asia.

301.0; 304.1(.2)-306.1(.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.

302.1(.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.

303.1(.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.

310.1(.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.

311.1(.2) Southeast Asian Popular Culture
This course will study the development of fiction and film in the rich and varied cultural traditions of several Southeast Asian countries, namely Indonesia, Malaysia, the Philippines, Thailand and Vietnam. Other aspects of popular culture such as drama, music and art will be considered as well.

400.1(.2) Seminar in Asian Studies
Prerequisite: ASN 300.1(.2) and 2.0 core credits 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.

401.0; 402.1(.2)-406.1(.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.

410.1(.2) Special Topics on Japan
Prerequisite: 1.0 Asian Studies credit or permission of instructor.

Special Topics on Japan is a seminar to be taught by a Japanese specialist invited to Saint Mary's University.

450.0 China, Eternal and Transforming: Travel and Study
Prerequisite: permission of ASN Coordinator.

This course takes place between May and July in China with guided tours of urban centres and cultural sites. Students will be accompanied by a faculty member from Saint Mary's, and on-site instruction will be provided. Subjects taught will cover a broad range of topics on Chinese language, history, and culture. The course is offered contingent upon sufficient enrolment.

Time in China is approximately four weeks.

Six weeks full time.

490.1(.2)-499.1(.2) Directed Study
Prerequisite: permission of ASN 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.

Classes: Tutorial and independent study. 1 semester.

500.0 Honors Thesis
Prerequisite: admission to final year of the honors program.
Asian Studies students are required to submit and defend a thesis to be selected and prepared in conjunction with a faculty advisor.

5

Astronomy and Physics (AST and PHY)

Chairperson, Observatory Director, Associate Professor	G. Welch
Professors	G. Mitchell, D. Turner
Undergraduate Coordinator, Associate Professor	D. Clarke
Graduate Coordinator, Associate Professor	M. West
Associate Professors	M. Butler, D. Guenther
Adjunct Professors	A. Coley, K. Darvesh, D. Forbes, T. Harriott, M. Jain
Professor Emeritus	W. Lonc

Astronomy (AST)

Astronomy is an ancient science which can trace some of its earliest practitioners to the neolithic builders of Stonehenge and to Minoan navigators of the third millennium B.C. The modern version of this branch of the physical sciences is interdisciplinary in nature, and draws heavily upon its roots in the cognate areas of physics and mathematics as well as in the fields of chemistry, space science, geology, biology, and computer science. Current research in astronomy and astrophysics relies upon space age detectors and modern computer systems to acquire and analyze large quantities of data, so its graduates are usually familiar with new technological developments as well as with the often-unique analytical approaches used to study objects in the universe. Like physicists, students of astronomy and astrophysics are well qualified to pursue a variety of scientific or teaching careers.

The Department offers programs of study that are designed to provide students with a strong undergraduate experience in both astronomy and physics. In addition to providing courses for degree-seeking students in these areas, the Department offers courses for the non-science major who wants to explore astronomy and physics using a less mathematical and more intuitive approach. AST 215.1(.2), AST 216.1(.2) and AST 217.1(.2) are non-mathematical half-credit courses (0.5) intended for non-specialists. AST 202.0 is an introductory course for science students which provides a broad background in all areas of astronomy. The 300- and 400-level courses are half-credit courses in a variety of areas in astronomy and astrophysics, and are suitable as electives for science majors (item 5b of the Faculty of Science requirements for Undergraduate Programs), including students in Co-operative Education programs.

Note: 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.

Undergraduate Courses

202.0 Introductory Astronomy for Science Students
Prerequisite: Nova Scotia Grade 12 PHY 441, and Nova Scotia Grade 12 MAT 441 or MAT 010.1(.2)/011.1(.2), or equivalents.

This course is an introduction to general astronomy for students specializing in the physical sciences. The topics presented include: the celestial sphere and objects of the night sky, the development of astronomy as a science, orbits of the Earth and planets, time measurement, eclipses and their prediction, telescopes and astronomical instruments, the solar system, the Sun as a star, properties of stars and star clusters, gaseous nebulae, white dwarfs and stellar evolution, supernovae and pulsars, black holes and X-ray binaries, the structure of our Milky Way galaxy, the properties of external galaxies and quasars, and the nature of the universe. Homework exercises consist of laboratory and observing exercises that are done outside of regular class times. Students have access to the Burke-Gaffney Observatory on campus for exercises involving the use of a telescope.

Classes 3 hrs. and lab/telescope observing 1 hr. a week. 2 semesters.

215.1(.2) The Sky and Planets
This course is intended as an introduction to general astronomy for students who are not science majors and who have little background in science and mathematics. The topics presented include: an introduction to the night sky and where to locate objects of interest, the motions and phases of the Moon and planets, timekeeping and the calendar, the historical development of astronomy as a science, eclipses of the Sun and the Moon, telescopes and instruments for detecting and measuring light from celestial objects, and the planets and other members of our solar system. Homework exercises consist of laboratory and observing exercises that are done outside of regular class times. Students have access to the Burke-Gaffney Observatory on campus for exercises involving the use of a telescope.

Classes 3 hrs. and lab/telescope observing 1 hr. a week. 1 semester.

216.1(.2) Stars and Galaxies
This course is intended as an introduction to general astronomy for students who are not science majors and who have little background in science and mathematics. Although the topics presented follow sequentially those of AST 215.1(.2), the course may be taken separately or concurrently. The topics presented include: the Sun as a star, the properties of stars and star clusters, the evolution of stars, gaseous nebulae, the properties of our Galaxy, other galaxies beyond the Milky Way, and quasars, active galaxies, and the universe. Homework exercises consist of laboratory and observing exercises that are done outside of regular class times. Students have access to the campus Burke-Gaffney Observatory for exercises involving the use of a telescope.

Classes 3 hrs. and lab/telescope observing 1 hr. a week. 1 semester.

217.1(.2) Life in the Universe
The possibility that life might exist elsewhere in the universe has fascinated human beings ever since our ancestors first gazed into the starry skies. Could life also have arisen on other worlds, or is the Earth unique? Are there other intelligent civilizations in the cosmos with whom we might someday make contact? In this course the question of extraterrestrial life is considered from astronomical, biological and sociological perspectives. Topics discussed 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.

312.1(.2) Foundations of Astrophysics
Prerequisite: AST 202.0, MAT 211.1(.2), PHY 205.0 or permission of instructor.

This course is concerned primarily with directly observable quantities: the positions of stars in the sky, their motions, and the light they emit. Students will become involved with one or more observing projects using the Burke-Gaffney Observatory's 40-cm telescope. Class discussion will begin with the celestial sphere, time in astronomy, and astronomical catalogs. Topics in celestial mechanics will include the two-body problem, and the dynamic characteristics of star clusters. Properties of the continuous spectra of stars will be reviewed, and this will lead to a discussion of the formation of emission and absorption lines in the Bohr model. The course will conclude by examining the operation of astronomical telescopes.

Classes 3 hrs. a week and telescope observing session.

313.1(.2) Properties of Stars
Prerequisite: AST 312.1(.2) or permission of instructor.

This course reviews one of the major scientific achievements of the 20th Century, the quantitative understanding of the nature of the stars. This course begins with a discussion of binary stars and their use in determining stellar properties, and is followed by a discussion of spectral classification, and its interpretation, using the Boltzmann and Saha equations. The characteristics of radiative transfer will be discussed as they relate to modelling the atmospheres of stars. The equations of stellar structure will be derived, and these will be used to discuss the interiors of hydrogen burning stars, with special attention given to the Sun.

412.1(.2) Interstellar Matter and Stellar Evolution
Prerequisite: AST 313.1(.2) or permission of instructor.

The course begins by examining the physical processes within neutral and ionized clouds and is followed by a discussion of star formation. Concepts introduced in AST 313.1(.2) are used to follow the evolution of stars of various initial mass, elucidating their internal structure and energy production. Finally, attention will turn to the physical properties of stellar remnants; white dwarfs and neutron stars.

Galaxies and Cosmology
AST 313.1(.2) or permission of instructor.

properties of our Milky Way galaxy and their theoretical will be the initial focus of this course. Subjects to be include the kinematic properties of nearby stars, the galactic rotation, the cause of spiral structure, and the formation of the galaxy. The observed features of other galaxies will be with emphasis on how these features may have arisen evolutionary processes which include galaxy interactions. then shift to the physical properties and evolution of clusters, and to the large scale structure of our universe. This to a discussion of modern cosmological models and recent tests of the models.

Data Analysis in Astronomy
AST 312.1(.2) or permission of instructor.

of this course is to instruct the student in the analysis of real data. Following a general introduction to errors and data the bulk of the course will consist of the use of computers reduction. Student projects will include the analysis of images line maps.

Solar System Astronomy
AST 202.0 and PHY 205.0, or permission of instructor.

covered include fundamental data for planets and satellites, mechanics, rocks and minerals, age dating of rocks by decay, meteorites and tektites, comets, asteroids and sampling techniques, cosmogony and the early history of the planetary and satellite interiors, surfaces and atmosand comparative planetology.

Courses
600-level courses are intended primarily for graduate stuastronomy, fourth year students in either the major or honors may enrol in these courses with the permission of the if the other requirements for the degree are satisfied. undergraduate students should consult the Chairperson or Graduate Coordinator before enroling in these courses.

Galactic Astronomy
describes the contents and structure of the Milky Way Topics covered include: historical highlights, reference frames astronomy, spectral classification, photometric systems, calibrations, clusters and associations, star counts and density functions, the luminosity function, chemical compositions in the Galaxy, solar motion, statistical and secular parallactic groups, galactic rotation and structure, spiral arms, introduction to galactic dynamics.

The Interstellar Medium
covered include: the phases of the interstellar medium, neutral ionized hydrogen regions, interstellar molecules, dust grains, gravitational collapse, bipolar outflows, and accretion disks.

Techniques and Instruments in Astronomy I
of the celestial sphere and timekeeping systems begins this which deals primarily with the optical region of the spectrum. of radiation measurement will include the effects of the atmosphere. An investigation of the properties of modern leads to a summary of the observing and data reduction associated with them. Assignments will include a variety currently used in the Department and Burke-Gaffney

hrs. a week. 1 semester. Required observing sessions at telescope extend through second semester.

Binary and Variable Stars
is devoted to the study of both binary stars and variable covered under binary stars include: fundamentals of and the properties of binary star systems, analytical techniques for studying visual, astrometric, spectroand eclipsing binaries, the mass-luminosity relation, and classof close binaries by Roche-lobe filling. Topics covered stars include: light curves and variable star classificavariables, pulsating variables and pulsation theory, variables, unique types, and the link between variability and evolutionary stages.

Selected Topics in Astronomy and Astrophysics
selected specialty areas in astronomy will be examined in greater detail than is possible within the broader scope of other courses. Topics will be chosen by the Department and made available to interested students prior to registration.

Seminar 3 hrs. a week.

609.1(.2) Galaxies Beyond the Milky Way
This course summarizes our understanding of nearby galaxies, and of how these galaxies evolved to the objects we see today. A review of our concept of the nebulae introduces the main topics, which include galaxy classification, the nature of the present stellar population and interstellar medium in galaxies, and galaxies as they were in the remote past. The presentation will reflect our growing awareness of the importance of interactions between and among galaxies as an agent of their evolution.

611.1(.2) Directed Readings in Current Literature
A topic of current interest in astronomy will be chosen in consultation with a faculty member. After a thorough study of recent work on the topic, a detailed written report with references will be submitted. Extensive use will be made of available research journals.

612.1(.2) Particle Astrophysics
An introduction to particle physics and its application to astrophysics. Topics will include concepts of the standard model and grand unification, the early universe, high-energy cosmic rays, neutrino astrophysics and inflation.

613.1(.2) Gas Dynamics
This course introduces the student to the fundamentals of compressible fluid (gas) dynamics. Topics include the equations of ideal gas dynamics, the jump-shock conditions, the Riemann Problem, the formalism of characteristics, numerical techniques, and astrophysical applications.

614.1(.2) Stellar Astrophysics I
An introduction to the theory of stellar atmospheres and interiors. Topics include: the basic equations of stellar structure, nuclear processes, radiative transfer theory, pre-main-sequence evolution, white dwarfs, neutron stars, and black holes.

615.1(.2) Stellar Astrophysics II
An introduction to current topics in stellar astrophysics. Topics include: variable stars and stellar pulsation theory, solar seismology, the solar neutrino problem, globular cluster ages, the theory of stellar rotation, novae, and supernovae.

616.1(.2) Techniques and Instruments in Astronomy II
This course complements AST 606.1(.2) by dealing primarily with wavelengths outside the optical spectral region. It begins with a summary of atmospheric effects across the spectrum. A discussion of astronomical telescopes and detectors will include descriptions of specific hardware being used to study electromagnetic radiation and other information from beyond the atmosphere. The techniques of radio interferometry will be investigated in detail.

619.1(.2) Cosmology
Cosmology-the study of the large-scale structure and evolution of the universe-is one of the most exciting and active fields of astronomy today. This course presents a broad overview of observational and theoretical cosmology. Emphasis is on how basic physics, guided by observations, is used to construct a remarkably successful model of the universe. Topics include the Big Bang model, formation of galaxies and clusters of galaxies, the large-scale structure of the universe, quasars and radio galaxies, and dark matter.

620.1(.2) Clusters of Galaxies
Clusters of galaxies are the largest gravitationally bound objects in the universe, and their study has yielded valuable insights into such diverse topics as high energy astrophysics , galaxy formation and evolution and cosmology. This course introduces students to clusters of galaxies from both observational and theoretical perspectives. Topics discussed include galaxy populations, dark matters, the intracluster medium, gravitational lensing, and clusters as tracers of the large-scale structure of the universe.

695.1(.2) Graduate Seminar I
Articles of interest from the current literature are discussed and critiqued. Students are expected to read articles chosen for discussion, contribute to the critiquing process, and make several presentations during the course. All graduate students must normally enrol in this course in the first year of the Master of Science program.

Seminar 11/2 hrs. a week. 2 semesters.

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696.1(.2) Graduate Seminar II
A continuation of AST 695.1(.2) normally taken by graduate students in the second year of the Master of Science program.

Seminar 1½ hrs. a week. 2 semesters.

697.0 Research Project in Astronomy
This required course for the graduate program must be taken in either the first or second year of study. Students earn credit for the course in the first year of the Master of Science program by completing a project on a research topic under the supervision of a faculty member. The research topic may, but need not, be related to the thesis project chosen. Students earn credit for the course in the second year of the Master of Science program through concentrated research related to their thesis project or by completion of an independent project with, perhaps, a faculty member other than their thesis supervisor.

698.0 Thesis
Normally taken during the second year of enrolment in the Master of Science program after successful completion of the comprehensive oral examination. The research will be conducted under the supervision of a faculty member.

Astrophysics (ASP)

Two Bachelor of Science programs are available to students wishing to study astronomy and astrophysics. These are the major program and honors program in astrophysics. Because astronomy is founded and depends heavily on physics, the astrophysics programs emphasize physics as well as astronomy.

The major program is designed for students who want to obtain a solid introduction to astronomy and physics but who do not plan on continuing to graduate school in astronomy. The honors program is designed for students who intend to continue their education in astronomy at the graduate level. Students in the major program must complete seven (7.0) physics credits and three (3.0) astronomy credits, of which two (2.0) of the astronomy credits must come from astronomy courses at the 300 level or above, and the other astronomy credit (1.0) must be AST 202.0 (or equivalent). Students in the honors program must complete nine and one half (9.5) physics credits and three and one half (3.5) astronomy credits, of which two and one half (2.5) must come from astronomy courses at the 300 level or above, and the other astronomy credit (1.0) must be AST 202.0 (or equivalent). Those courses listed in the respective programs are required courses. Electives fill out both programs to the required twenty (20.0) credits. The astrophysics program 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.

a. Astrophysics Major
Year 1
1. AST 202.0
2. PHY 205.0
3. MAT 210.1(.2) and 211.1(.2)
4. EGL 201.1(.2) and 202.1(.2)
5. one (1.0) science elective (CHE 201.0 recommended)

Year 2
1. AST 312.1(.2) and 313.1(.2)
2. PHY 305.1(.2) and 306.1(.2)
3. PHY 316.1(.2) and 355.1(.2)
4. MAT 301.1(.2) (0.5 science elective) and PHY 326.1(.2)
5. MAT 310.1(.2) and 311.1(.2) [one (1.0) science elective]

Year 3
1. AST 412.1(.2) or 413.1(.2) and PHY 416.1(.2) or 426.1(.2)
2. PHY 405.1(.2) and 425.1(.2)
3. PHY 435.1(.2) and 436.1(.2)
4. one-half (0.5) elective or PHY 455.1(.2) and one half (0.5) elective
5. one (1.0) non-science elective

Year 4
1. AST 412.1(.2) or 413.1(.2) and 0.5 science elective
2. PHY 455.1(.2) or 0.5 elective and 0.5 elective
3. PHY 465.1(.2) and 0.5 elective
4. one (1.0) non-science elective
5. one (1.0) science elective

b. Honors Astrophysics Program
Year 1
1. AST 202.0
2. PHY 205.0
3. MAT 210.1(.2) and 211.1(.2)
4. EGL 201.1(.2) and 202.1(.2)
5. one (1.0) science elective (CHE 201.0 recommended)

Year 2
1. AST 312.1(.2) and 313.1(.2)
2. PHY 305.1(.2) and 306.1(.2)
3. PHY 316.1(.2) and 355.1(.2)
4. MAT 301.1(.2) (0.5 science elective) and PHY 326.1(.2)
5. MAT 310.1(.2) and 311.1(.2) [one (1.0) science elective]

Year 3
1. AST 412.1(.2) or 413.1(.2) and PHY 416.1(.2) or 426.1(.2)
2. PHY 405.1(.2) and 425.1(.2)
3. PHY 435.1(.2) and 436.1(.2)
4. one half (0.5) science elective and PHY 445.1(.2) or PHY 455.1(.2), 446.1(.2) and 456.1(.2)
5. one (1.0) non-science elective

Year 4
1. AST 412.1(.2) or 413.1(.2) and one half (0.5) AST at the 600 le
2. PHY 455.1(.2) and 456.1(.2) or a half credit (0.5) science elec and PHY 445.1(.2)
3. PHY 465.1(.2) and 466.1(.2)
4. PHY 500.0
5. one (1.0) non-science elective

Physics (PHY)

Physics forms the foundation for all other sciences. Considered to the most fundamental of the natural sciences, physics deals with t observation and modelling of phenomena on scales from the sub atomic to the cosmological. In the broadest sense, physicists seek enunciate physical laws and develop mathematical models of natu phenomena consistent with experimental evidence.

With their training in understanding complex phenomena, in apply analytical and computational methods, and especially in critically analyzing problems, students of physics are uniquely qualified to p sue careers or postgraduate studies in a wide variety of fields - pa ticularly in a high-technology society where basic and applied sci ence touch every aspect of human life. The aerospace, communica tions, energy and health care fields are all areas of employment fo physics graduates at all degree levels.

The Department of Astronomy and Physics offers programs desig to provide students with a thorough preparation in physics. Contingent on University and Faculty of Science degree requirements, three Bachelor of Science programs are available to stude wishing to study physics: the general program (physics concentration), the major program, and the honors program. The major program is designed for students who want to obtain a solid introduct to physics but who do not plan to continue their studies in physics a graduate program. The honors program is designed for students who do anticipate a continuation of their studies in physics at the graduate level. All students considering a degree program in physi must consult with the Chairperson or the Undergraduate Coordinat

a. Physics Concentration
Year 1
PHY 205.0
MAT 210.1(.2) and 211.1(.2)
EGL 201.1(.2) and 202.1(.2)
2.0 credits from science or humanities

Year 2 and 3
Any eight half-credit courses (4.0 credits) in physics (in accordance with science degree requirements and subject to prerequisites) fro

PHY 305.1(.2)	PHY 306.1(.2)
PHY 316.1(.2)	PHY 326.1(.2)
PHY 355.1(.2)	PHY 405.1(.2)
PHY 425.1(.2)	PHY 435.1(.2)
PHY 445.1(.2)	PHY 446.1(.2)
PHY 455.1(.2)	PHY 456.1(.2)
PHY 465.1(.2)	

Additional elective(s) from science and humanities must be chosen t complete the program.

Physics Major

Year 1
PHY 205.0
MAT 210.1(.2) and 211.1(.2)
EGL 201.1(.2) and 202.1(.2)
one (1.0) science elective (CHE 201.0 recommended)
one (1.0) elective

Year 2
PHY 305.1(.2) and 306.1(.2)
PHY 316.1(.2) and 355.1(.2)
PHY 326.1(.2) and one half credit (0.5) elective
MAT 310.1(.2) and 311.1(.2) [one (1.0) science elective]
MAT 320.1(.2) and 321.1(.2) [one (1.0) science elective]

Year 3
PHY 405.1(.2) and PHY 416.1(.2) or 426.1(.2)
PHY 435.1(.2) and 436.1(.2)
PHY 425.1(.2) and 445.1(.2)
PHY 455.1(.2) and one half (0.5) science elective or one (1.0) elective
one (1.0) non-science elective

Year 4
PHY 455.1(.2) or one half elective (0.5) and PHY 416.1(.2) or 426.1(.2)
PHY 465.1(.2) and one half (0.5) PHY credit at the 400 level or above
one (1.0) science elective
one (1.0) non-science elective
one (1.0) elective

Honors Physics Program

Year 1
PHY 205.0
MAT 210.1(.2) and 211.1(.2)
EGL 201.1(.2) and 202.1(.2)
one (1.0) science elective (CHE 201.0 recommended)
one (1.0) non-science elective

Year 2
PHY 305.1(.2) and 306.1(.2)
PHY 316.1(.2) and 355.1(.2)
PHY 326.1(.2) and one half (0.5) elective
MAT 310.1(.2) and 311.1(.2) (1.0 science elective)
MAT 320.1(.2) and MAT 321.1(.2) [one (1.0) science elective]

Year 3
PHY 405.1(.2) and PHY 416.1(.2) or 426.1(.2)
PHY 435.1(.2) and 436.1(.2)
PHY 425.1(.2) and PHY 445.1(.2)
PHY 455.1(.2) and PHY 456.1(.2) or one (1.0) elective
one (1.0) non-science elective

Year 4
PHY 455.1(.2) and 456.1(.2) or one (1.0) elective
PHY 465.1(.2) and 466.1(.2)
PHY 446.1(.2) and PHY 416.1(.2) or 426.1(.2)
PHY 500.0
one (1.0) science elective

Double Major in Mathematics and Physics

Year 1
MAT 210.1(.2) and 211.1(.2)
CSC 226.1(.2) and 227.1(.2)
PHY 205.0
EGL 201.1(.2) and 202.1(.2)
one (1.0) science elective (CHE 201.0 recommended)

Year 2
MAT 310.1(.2) and 311.1(.2)
MAT 320.1(.2) and 321.1(.2)
PHY 305.1(.2) and 306.1(.2)
PHY 316.1(.2) and 355.1(.2)
PHY 326.1(.2) and one half (0.5) science elective

Year 3
MAT 405.1(.2) and 0.5 elective
one half (0.5) science elective and MAT 436.1(.2) or 456.1(.2)
PHY 405.1(.2) and PHY 416.1(.2) or 426.1(.2)
PHY 425.1(.2) and one half (0.5) elective
one (1.0) non-science elective

Year 4
1. one (1.0) credit from MAT courses numbered 405 or above
2. PHY 455.1(.2) and 0.5 elective
3. PHY 465.1(.2) and 0.5 elective
4. one (1.0) non-science elective
5. one (1.0) elective

e. Honors Mathematics and Physics

Year 1
1. MAT 210.1(.2) and 211.1(.2)
2. CSC 226.1(.2) and 227.1(.2)
3. PHY 205.0
4. EGL 201.1(.2) and 202.1(.2)
5. one (1.0) science elective (CHE 201.0 recommended)

Year 2
1. MAT 310.1(.2) and 311.1(.2)
2. MAT 320.1(.2) and 321.1(.2)
3. PHY 305.1(.2) and 306.1(.2)
4. PHY 316.1(.2) and 355.1(.2)
5. PHY 326.1(.2) and one half (0.5) elective

Year 3
1. MAT 405.1(.2) and 406.1(.2)
2. MAT 436.1(.2) and 437.1(.2); or
   MAT 456.1(.2) and 457.1(.2)
3. PHY 405.1(.2) and PHY 416.1(.2) or 426.1(.2)
4. PHY 425.1(.2) and one half (0.5) elective
5. one (1.0) non-science elective

Year 4
1. one (1.0) credit from MAT courses numbered 405 or above
2. PHY 455.1(.2) and PHY 416.1(.2) or 426.1(.2)
3. PHY 465.1(.2) and PHY 456.1(.2) or 466.1(.2)
4. MAT 500.0 or PHY 500.0
5. one (1.0) non-science elective

f. Double Major in Chemistry and Physics

Students should be aware of the specific requirements for double majors in chemistry noted in the Chemistry section of the Calendar.

Year 1
1. CHE 201.0 or 202.0 or 203.0
2. PHY 205.0
3. MAT 210.1(.2) and 211.1(.2)
4. EGL 201.1(.2) and 202.1(.2)
5. one (1.0) non-science elective

Year 2
1. CHE 322.1(.2) and 323.1(.2); or
   CHE 332.1(.2) and 333.1(.2); or
   CHE 344.1(.2) and 345.1(.2); or
   CHE 373.1(.2) and 374.1(.2)
2. PHY 305.1(.2) and 326.1(.2)
3. PHY 316.1(.2) or CHE 312.1(.2) and PHY 306.1(.2) or CHE 313.1(.2)
4. PHY 355.1(.2); and MAT 301.1(.2) [one half (0.5) science elective]
5. MAT 310.1(.2) and 311.1(.2) [one (1.0) science elective]

Year 3
1. CHE 322.1(.2) and 323.1(.2); or
   CHE 332.1(.2) and 333.1(.2); or
   CHE 344.1(.2) and 345.1(.2);
   CHE 373.1(.2) and 374.1(.2)
2. PHY 405.1(.2) and CHE 412.1(.2) or PHY 425.1(.2)
3. PHY 435.1(.2) and CHE 414.1(.2) or PHY 416.1(.2) or PHY 426.1(.2)
4. PHY 436.1(.2) and PHY 455.1(.2) or one half (0.5) science elective
5. one (1.0) elective

Year 4
1. PHY 455.1(.2) or 0.5 science elective and 0.5 elective
2. PHY 465.1(.2) and 0.5 elective
3. one (1.0) CHE credit at the 400 level or above
4. one (1.0) CHE credit at the 400 level or above
5. one (1.0) non-science elective

g. Honors Chemistry and Physics

Students should be aware of the specific requirements for double honors in chemistry noted in the Chemistry section of the Calendar.

Year 1
1. CHE 201.0 or 202.0 or 203.0
2. PHY 205.0
3. MAT 210.1(.2) and 211.1(.2)
4. EGL 201.1(.2) and 202.1(.2)
5. one (1.0) non-science elective

Year 2
1. CHE 322.1(.2) and 323.1(.2); or CHE 332.1(.2) and 333.1(.2); or CHE 344.1(.2) and 345.1(.2)
2. PHY 305.1(.2) and 326.1(.2)
3. PHY 316.1(.2) or CHE 312.1(.2) and PHY 306.1(.2) or CHE 313.1(.2)
4. PHY 355.1(.2) and one half (0.5) non-science elective
5. MAT 310.1(.2) and 311.1(.2) [one (1.0) science elective]
6. MAT 301.1(.2) (suggested additional science elective)

Year 3
1. PHY 405.1(.2) and PHY 425.1(.2) or CHE 412.1(.2)
2. PHY 435.1(.2) and 436.1(.2)
3. PHY 455.1(.2) or one half (0.5) non-science elective and one of PHY 416.1(.2) or 426.2(.2) or CHE 413.1(.2) or 414.1(.2).
4. CHE 322.1(.2) and 323.1(.2) or 332.1(.2) and 333.1(.2) or 344.1(.2) and 345.1(.2)
5. one (1.0) CHE credit at the 400 level or above

Year 4
1. CHE 498.0
2. PHY 455.1(.2) or one half (0.5) non-science elective, and PHY 445.1(.2)
3. PHY 465.1(.2) and 456.1(.2) or 466.1(.2)
4. PHY 500.0 or CHE 500.0
5. one (1.0) CHE credit at the 400 level or above

Undergraduate Courses

Note: 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.

205.0 University Physics
Prerequisite: Nova Scotia Grade 12 PHY 441 or PHY 230.0 or equivalent; MAT 190.1(.2)/210.1(.2) or MAT 210.1(.2)/211.1(.2) (may be taken concurrently); or permission of instructor.

This calculus-based introductory physics course provides a complete and formal introduction to the equations of motion, Newton's Laws, thermodynamics, electrostatics, magnetism and special relativity. This course is a prerequisite for all 300 level physics courses.

Classes 3 hrs. and lab/tutorial 3 hrs. a week. 2 semesters.

230.0 Physics for Life Sciences
Prerequisite: Nova Scotia Grade 12 MAT 441 or MAT 010.1(.2)/011.1(.2) or equivalent and Nova Scotia Grade 11 physics (or equivalent); or permission of instructor.

This algebra-based introductory physics course is designed for pre-medical, pre-dental, biology, and other life science students. Topics of study include motion, the structure of the atom, electricity, light and optics, heat, radioactivity and sound. Applications of physics in the life sciences are emphasized throughout the course.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

Note: A grade of at least A in this course, combined with credit for MAT 210.1(.2) and 211.1(.2), is accepted as a prerequisite for advanced courses in physics.

305.1(.2) Newtonian Mechanics
Prerequisite: PHY 205.0, MAT 211.1(.2), and MAT 310.1(.2)/311.1(.2) (may be taken concurrently).

An introduction to the fundamental concepts behind our understanding of dynamical systems. Topics that will be covered include vectors, work and potential energy, stability, central force motion and orbits, rigid bodies in two dimensions.

306.1(.2) Waves and Optics
Prerequisite: PHY 205.1(.2) and MAT 211.1(.2).

An introduction to the concepts behind the production, propagation and manipulation of waves including light. Topics that will be discussed include: the simple harmonic oscillator, the wave equation, wave velocity and propagation, wave packets. These will lead to a discussion of the techniques of geometrical and physical optics.

Classes 3 hrs. a week and lab 3 hrs. a week. 1 semester.

316.1(.2) Thermodynamics
Prerequisite: PHY 205.0 and MAT 211.1(.2).

The laws of thermodynamics describe the behavior of the macroscopic world around us. This course will introduce the concepts behind this description of bulk systems, including temperature, energy, entropy, laws of thermodynamics, Maxwell relations, and phase transitions.

326.1(.2) Introduction to Modern Physics
Prerequisite: PHY 205.0 and MAT 211.1(.2).

An introduction to recent advances in physics. An introduction to quantum mechanics will include blackbody radiation, the photoelectric effect, the Compton effect, the concept of wave-particle duality and the Schrödinger equation (applied to one-dimensional examples). Topics covered may also include nuclear physics, atomic structure and spectra and the special theory of relativity.

355.1(.2) Electricity and Magnetism
Prerequisite: PHY 205.0 and MAT 211.1(.2).

Students will be introduced to basic concepts describing electric and magnetic fields, including Gauss' law, Ampère's law, Faraday's law, conductors and insulators, resistance, inductance, capacitance in circuits.

Classes 3 hrs. a week and lab 3 hrs. a week. 1 semester.

405.1(.2) Classical Mechanics
Prerequisite: PHY 305.1(.2), MAT 311.1(.2), and MAT 301.1(.2) or 321.1(.2).

This course will introduce the generalized Lagrangian and Hamiltonian formulations of dynamics and apply them to studies of central force problems, rigid bodies in three dimensions, the motion of tops and the effect of constraints.

416.1(.2) Statistical Mechanics
Prerequisite: PHY 316.1(.2) or both PHY 205.0 and CHE 313.1(.2).

The statistical study of large systems of particles. This course will introduce the concepts of the ensemble, canonical ensembles, grand canonical ensembles, distribution functions, kinetic theory, entropy and the laws of thermodynamics.

425.1(.2) Quantum Physics
Prerequisite: PHY 405.1(.2), PHY 326.1(.2) and one of PHY 435.1(.2) or MAT 405.1(.2).

A discussion of the foundations of quantum mechanics, including the quantization of light, the Bohr atom, wave mechanics, the Schrödinger equation.

426.1(.2) Topics in Classical Physics
Prerequisite: PHY 405.1(.2) and one of PHY 435.1(.2) or MAT 405.1(.2).

The tools and techniques of modern mechanics. Topics will include special relativity, non-linear dynamics, chaos.

435.1(.2) Mathematical Methods in Physics I
Prerequisite: PHY 305.1(.2), PHY 355.1(.2), MAT 311.1(.2), and MAT 301.1(.2) or 321.1(.2).

A discussion of the techniques used in theoretical physics to describe complex phenomena, including differential equations and special functions, complex analysis, Cauchy's theorem and the calculus of residues.

436.1(.2) Mathematical Methods in Physics II
Prerequisite: PHY 435.1(.2).

A discussion of more advanced methods in theoretical physics, including the application of statistical methods, Green's functions, integral equations, transform theory, numerical analysis.

445.1(.2) Advanced Laboratory I
Prerequisite: PHY 305.1(.2) and MAT 311.1(.2)

Laboratory experience in advanced topics of physics and/or astrophysics. Students will be responsible for assembling, performing and documenting the experiments. NOTE: While this is a half credit course, it will be taught over two semesters.

Lab 3 hrs. a week. 2 semesters.

Advanced Laboratory II
Prerequisite: PHY 445.1(.2).

Advanced topics in physics and astrophysics in the laboratory. Students will be responsible for setting up and performing the experiments, analyzing data, and writing computer programs. There will be a group project for this course, to be conceived and built by the students from equipment available in the lab. NOTE: While this is a half credit course, it will be taught over two semesters.

Lab 3 hrs. a week. 2 semesters.

Electromagnetic Theory I
Prerequisite: PHY 355.1(.2) and 435.1(.2) or MAT 405.1(.2)/436.1(.2); MAT 405.1(.2)/456.1(.2) (which may be taken concurrently); or permission of instructor.

This course introduces the equations for electric and magnetic fields in free space and in media. Techniques studied include the Laplace and Poisson equations, Maxwell's equations, and an introduction to electrodynamics in free space.

Electromagnetic Theory II
Prerequisite: PHY 455.1(.2) and PHY 436.1(.2) or MAT 406.1(.2)/437.1(.2) or MAT 406.1(.2)/457.1(.2) (which may be taken concurrently).

Advanced discussion of electrodynamics in dielectrics and conductors, behavior of electromagnetic waves at boundaries, dispersion, radiation and scattering.

465.1(.2) Quantum Mechanics I
Prerequisite: PHY 425.1(.2) or CHE 412.1(.2), PHY 436.1(.2) or MAT 406.1(.2)/437.1(.2), or MAT 406.1(.2)/457.1(.2), or permission of instructor.

The nature and description of quantum systems. The Heisenberg and Schrödinger representations, Dirac notation, oscillators, angular momentum, the hydrogen atom.

466.1(.2) Quantum Mechanics II
Prerequisite: PHY 465.1(.2).

Techniques in quantum mechanics, including the WKB approximation, time-independent and time-dependent perturbation theory, radiation, scattering, applications to atomic and nuclear physics.

500.0 Research Thesis
Prerequisite: honors standing.

Research project carried out by the student under the supervision of a member in the Department. The project should be in the area of astrophysics for students in the honors astrophysics program. The student will submit a thesis and defend it orally.

Directed study 3 hrs. a week. 2 semesters.

Atlantic Canada Studies (ACS)

Committee on Atlantic Canada Studies

Reid, Coordinator	History
Boneau	Political Science
Burrett	Sociology
Byrne	English
Chard	Management
Charles	Finance and Management Science
Christiansen-Ruffman	Sociology
Cline	Biology
Connelly	Sociology
Cooper	Sociology
Davis	Anthropology
Day	Geography
Day	Environmental Studies
Fleid	French
Harry	English
Howell	History
Klaassekamp	History
MacDonald	Economics
MacKinnon	English
McCalla	Geography
McGee	Anthropology
Millward	Geography
Morrison	History
Moulis	Political Science
O Siadhail	Irish Studies
Perrier	Sociology
Robinson	Geography
Sherman	English
Toomey	History
Vance	History
Wellmeyer	Sociology
Wildron	Geology
Whalen	English
Wiles	Biology
	graduate student representative
	undergraduate student representative

Atlantic Canada Studies is an interdisciplinary major, minor, and honours 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, or honors 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 honors.

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. The following are the regulations for the major, minor, and honors 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 concentration in Atlantic Canada Studies, a student must meet the usual University requirements for the Bachelor of Arts degree, and in particular, obtain eight (8.0) credits from the courses listed below. At least four (4.0) of the eight (8.0) credits must be at the 300 level or above. Students are required to select courses in accordance with the following criteria:

1. The courses must include at least one (1.0) credit from each of three of Groups A, B, C, D and E.
2. The courses must include at least one (1.0) credit from each of three different academic disciplines. Interdisciplinary ACS courses do not count as a discipline for this purpose.
3. ACS 400.0 must be one of the courses selected.
4. No more than three (3.0) credits 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 four (4.0) credits chosen from the courses listed below and completed with a quality point average of at least 2.00. At least two (2.0) credits must be at the 300 level or above, and the courses selected must include ACS 400.0. The courses must also include one (1.0) credit from each of three different academic disciplines, and no more than two (2.0) credits may be selected from Group E.

Honors
To complete an honors program in Atlantic Canada Studies, a student must meet the usual University requirements for the Bachelor of Arts (Honors) degree, and in particular, obtain ten (1.0) credits from the courses listed below. At least eight (8.0) of the ten (10.0) credits

must be at the 300 level or above. Students are required to select courses in accordance with the following criteria:

1. The courses must include at least one (1.0) credit from each of four of Groups A, B, C, D, and E.

2. The courses must include at least one (1.0) credit from each of three different academic disciplines. Interdisciplinary ACS courses do not count as a discipline for this purpose.

3. ACS 500.0 must be one of the courses selected.

4. No more than three (3.0) credits 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.

Group A: Interdisciplinary Courses in Atlantic Canada Studies
ACS 300.0; ACS 301.1(.2); ACS 302.1(.2); ACS 303.1(.2); ACS 305.1(.2); ACS 310.0; ACS 400.0; ACS 401.1(.2) to ACS 405.1(.2); ACS 500.0.

Group B: Culture and History
ANT 323.1(.2)/324.1(.2); EGL 312.1(.2); EGL 380.0; IRS 307.0; FRE 305.1(.2); FRE 405.1(.2); HIS 320.0; HIS 340.0; HIS 346.1(.2); HIS 372.1(.2); HIS 373.1(.2); HIS 535.0; HIS 560.0.

Group C: Social and Political Economy
ECO 324.1(.2); ECO 325.1(.2); SOC 320.0; SOC 327.0; SOC 332.0; SOC 420.0; SOC 453.0; SOC 468.1(.2).

Group D: Ecology and Environment
ECO 361.1(.2); GPY 304.1(.2); GPY 340.1(.2); GEO 204.0; GEO 205.0; SOC 310.1(.2).

Group E: Cognate Courses
ANT 221.1(.2); ANT 222.1(.2); ANT 321.0; ANT 323.1(.2); ANT 324.1(.2); ANT 329.1(.2); ANT 371.1(.2); ANT 372.1(.2); ANT 395.1(.2); BIO 203.0; BIO 324.1(.2); BIO 331.1(.2); BIO 510.0; ECO 306.1(.2); ECO 310.1(.2); ECO 315.1(.2); ECO 322.1(.2); ECO 349.1(.2); ECO 366.1(.2); ECO 406.1(.2); ECO 430.1(.2); EGL 371.1(.2); EGL 372.1(.2); EGL 375.1(.2); EGL 376.1(.2); EGL 432.0; EGL 463.1(.2); EGL 475.0; FRE 412.1(.2); FRE 419.0; FRE 434.1(.2); FRE 440.1(.2); GPY 311.1(.2); GPY 319.0; GPY 331.1(.2); GPY 339.0; GPY 364.1(.2); GPY 423.1(.2); GPY 439.1(.2); HIS 215.0; HIS 231.0; HIS 232.0; HIS 240.0; HIS 311.0; HIS 332.0; HIS 333.0; HIS 347.0; HIS 361.1(.2); HIS 362.1(.2); HIS 387.1(.2); HIS 523.0; HIS 525.0; IRS 308.0; IRS 525.0; POL 240.1(.2); POL 304.0; POL 310.0; POL 315.0; POL 317.0; POL 330.0; POL 440.0; POL 447.1(.2); POL 450.1(.2); POL 455.0; POL 534.0; PSY 418.1(.2); REL 347.1(.2); SOC 306.0; SOC 321.0; SOC 333.0; SOC 340.0; SOC 391.0; SOC 405.0; SOC 425.0; SOC 448.0; SOC 480.0; WMS 349.1(.2).

300.0 The Culture of Atlantic Canada
This course provides an introduction to the cultural traditions and institutions of the various regions and ethnic groups of the three Maritime Provinces and Newfoundland. Lectures will cover a wide variety of architectural, artistic, ecclesiastical, educational, ethnic, and linguistic topics. Students will engage in both individual and group projects and be required to write a final examination.

Note: While the same course description is applied to one-semester courses designated I and II, each course is in fact self-contained in content and entirely different each time it is offered. A student does not need to have passed I as a prerequisite to enrol in II.

301.1(.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.

302.1(.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.

303.1(.2) Higher Education in Atlantic Canada
This course will examine the role of higher education institutions in Atlantic Canada, from historical and contemporary perspectives, and will thus encourage informed assessment of the needs and responsibilities of higher education in the region.

305.1(.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.

310.0 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 on 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.

400.0 Atlantic Canada Seminar
Prerequisite: student must be a Year 3 ACS major.

This course, intended for majors in Atlantic Canada Studies, will provide an opportunity for students in the program to integrate their knowledge of the region 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. 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.

401.1(.2) to 405.1(.2) Directed Readings
Prerequisite: permission of ACS Coordinator.

These courses provide opportunities to study a particular subject in detail. They will normally require a considerable amount of independent, though supervised, study.

500.0 Honors Seminar
Prerequisite: enrolment in ACS honors program.

This course will provide an opportunity for honors students to integrate their knowledge in an interdisciplinary fashion.

Master of Arts in Atlantic Canada Studies

620.0 Culture of Atlantic Canada
Prerequisite: enrolment in the Master of Arts in ACS or permission of ACS Coordinator.

The course will deal with the historical, geographical and linguistic aspects of the culture of the Atlantic Region. This will include the tracing of the development of distinctive cultures within the region. The development of various literary forms within the region from folk-tale and folk-song to more sophisticated written literary materials will be emphasized. The course will also explore regional and federal policies.

630.0 Seminar on Atlantic Canada Ecology and Resources
Prerequisite: enrolment in the Master of Arts in ACS or permission of ACS Coordinator.

This seminar looks at the changing ways nature has been viewed and transformed in the Atlantic Region before and after European settlement. Topics covered include Indians and the land, patterns of animal extinction, Natural Theology and Darwinism, the conservation movement, "technological flaw", and the ways in which business, politicians and ordinary people have dealt with environmental concerns. A central question asked will be the relevance of ecological insights in an industrialized, yet underdeveloped, region.

640.0 Atlantic Canada Political Economy Seminar
Prerequisite: enrolment in the Master of Arts in ACS or permission of ACS Coordinator.

This course will involve an interdisciplinary perspective on the region's economic, political and social institutions and the problems associated with them. On the basis of both a historical and a structural analysis of the region's political economy, the seminars will focus on a broad range of problems including uneven industrial and urban development, rural decline, regional disparity, economic con-

and corporate power, the role of government in economic development, industrial relations and social conflict, extraction and the single-industry community.

Directed Reading
Prerequisite: enrolment in the Master of Arts in ACS or permission of ACS Coordinator.

courses will be organized by the instructor(s) involved. In each course will centre on 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.

History and Society: The Atlantic Provinces Seminar
Prerequisite: graduate standing or permission of instructor.

This course, intended for master's students in Atlantic Canada Studies and honors and master's 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 ACS 660.0 are not eligible to enrol in HIS 560.0.

Seminar 3 hrs. a week. 2 semesters.

690.0 Thesis Research
Prerequisite: enrolment in the Master of Arts in ACS or permission of ACS Coordinator.

Students will engage in the research for and writing of a thesis under supervision of a graduate committee. Credit for the course will be determined when the student satisfies the thesis advisor that thesis research and all other methodological and disciplinary preparation for the successful handling of the thesis topic have been completed. Supervisors may require a demonstration of language competence or extra course work as preparation for the treatment of certain thesis topics.

Biology (BIO)

Chairperson, Professor	D. Cone
Professors	D. Richardson, M. Wiles
Associate Professors	T. Rand, D. Strongman, L. Vasseur, M. White
Assistant Professor	Z. Dong
Adjunct Professors	G. Anderson, R. MacKay
Professor Emeriti	B. Kapoor, A. Rojo

The Biology Department offers programs to fulfil the requirements of the following degrees:

- general degree of Bachelor of Science with a concentration in biology,
- degree of Bachelor of Science with a major in biology,
- degree of Bachelor of Science with an honors in biology, and
- a double major or honors in biology and another science subject.

In addition to these traditional programs, the Department offers a Co-operative Education program in Biology (COEB). Students interested in the Co-op program should consult the Co-operative Education Office for details.

Students should consult the Science Faculty regulations outlined in Section 3 of this Calender. The core course for biology majors consists of BIO 200.0. Advanced courses (400-level) are intended for senior students (more than 3.0 biology credits) and majors must take at least 2.0 credits at the 400-level. Biology majors considering taking honors should take BIO 308.1(.2) in their 3rd year as this is a required course for acceptance into the honors program. All honors biology students are required to take BIO 500.0 (Thesis) and BIO 549.0 (Honors Seminar).

Students completing a general degree in biology should be capable of teaching or doing technical work in biological research, health sciences and environmentally-related fields after appropriate on-job training. Students finishing a major or honors degree in biology are qualified to further education at graduate and professional schools.

Students must pass the laboratory component of a course to pass the course.

One (1.0) credit from the following courses may be substituted for one (1.0) biology credit required for a Bachelor of Science degree in biology (e.g., Faculty of Science regulation 6d): ANT 470.0, CHE 451.1(.2), CHE 452.1(.2), GEO 320.1(.2), GEO 321.1(.2), GEO 325.1(.2), PSY 407.1(.2), and PSY 408.1(.2). This credit cannot be used to fulfil the biology requirement and the other requirements for a Bachelor of Science degree (e.g., regulation 6e).

Courses offered by the Department of Biology fall into three themes (Molecular, Organismal and Ecological) and students may opt for a course selection which enables specialization in one of the themes or exposure to one or more themes. The courses are listed below with respect to the themes.

Molecular: BIO 307.1(.2), 321.1(.2), 329.1(.2), 402.1(.2), 408.1(.2), 414.1(.2), 417.1(.2), 418.1(.2), 419.1(.2), 420.1(.2), 423.1(.2).

Organismal: BIO 303.1(.2), 307.1(.2), 322.1(.2), 323.1(.2), 325.1(.2), 326.1(.2), 327.1(.2), 328.1(.2), 329.1(.2), 399.1(.2), 402.1(.2), 408.1(.2), 411.1(.2), 413.1(.2), 416.1(.2), 418.1(.2), 421.1(.2), 423.1(.2), 424.1(.2), 426.1(.2), 427.1(.2), 429.1(.2).

Ecological: BIO 307.1(.2), 308.1(.2), 324.1(.2), 329.1(.2), 331.1(.2), 412.1(.2), 413.1(.2), 414.1(.2), 416.1(.2), 422.1(.2), 423.1(.2), 425.1(.2), 428.1(.2), 447.1(.2), 448.1(.2), 449.1(.2), 450.1(.2).

IMPORTANT NOTE: Major revisions to the biology curriculum took effect in the 1996-97 academic year resulting in many changes in the numbering of courses. **A student cannot enrol in, or receive credit for equivalent courses under different course numbers.**

200.0 Principles of Biology
Prerequisite: Nova Scotia Grade 12 BIO 441 or BIO 011.0 or equivalent.

An introductory study of the principles and organization of life, including molecular and cell biology, heredity, anatomy, form and function, physiology, life history, and ecology.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

203.0 Biology and the Human Environment (for non-science students)
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 course is restricted to non-science students for whom it constitutes a science elective. However, should a student change to a science degree program after taking the course, credit would be granted for the course as an elective (i.e., it does not count toward the biology courses for the major or as a science credit).

303.1(.2) Plant Biology
Prerequisite: BIO 200.0.

An introcuction to the study of vascular plants, including plant structure, function, life history, adaptation, and evolution.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

307.1(.2) Genetics
Prerequisite: BIO 200.0.

A study of the principles of inheritance in plants and animals by consideration of the genetic code, protein synthesis, mutations, polyploidy and Mendel's Laws.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

308.1(.2) Biostatistics
Prerequisite: BIO 200.0.

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 is a required course for those graduating with an honors degree and is recommended for biology majors.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

321.1(.2) Cell Biology I
Prerequisite: BIO 200.0.

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.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

322.1(.2) General Physiology I
Prerequisite: BIO 200.0.

An introduction to the essentials of vertebrate cellular physiology. Topics discussed will include metabolism, the nervous and endocrine systems, and muscles.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

323.1(.2) General Physiology II
Prerequisite: BIO 322.1(.2).

An introduction to the essential physiology of vertebrates including blood, circulation, respiration, water-electrolyte regulation and digestion.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

324.1(.2) Ecology
Prerequisite: BIO 200.0.

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.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

325.1(.2) Biology of Protists
Prerequisite: BIO 200.0.

An introduction to the protistan Phyla (protozoa and algae): protist morphology and diversity; physiology and reproduction; ecology and applied aspects; evolution and the origins of multicellularity.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

326.1(.2) Diversity of Non-vertebrate Animals
Prerequisite: BIO 200.0.

A study of free-living, non-vertebrate animals including the radiates, acoelomates, pseudocoelomates, crustaceans, arthropods and echinoderms. The laboratory exercises provide the student with the opportunity to experiment with certain living animals and to dissect and examine a variety of preserved specimens.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

327.1(.2) Anatomy and Functional Morphology of Vertebrates
Prerequisite: BIO 200.0.

The study of vertebrates, with consideration of structural modifications for particular life styles. Laboratory instruction involves dissection of representative animals.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

328.1(.2) Plant Taxonomy and Identification
Prerequisite: BIO 200.0.

An introduction to the principles of plant variation, origin, distribution, evolution and classification; major emphasis will be to identify and classify vascular plants of Nova Scotia.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

329.1(.2) Principles of Systematics
Prerequisite: BIO 200.0.

This course examines the fundamentals of animal and plant systematics including rules of nomenclature, the basis of classification, and the theory of phylogenetics.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

331.1(.2) Population and Ecosystem Health
Prerequisite: BIO 200.0.

Study of the distribution and biology of rare species and ecosystems in the world. An interdisciplinary approach is used to examine the causes and consequences of declining wild populations. This course covers a breadth of subjects including population ecology, evolution, genetics, management, palaeontology, history, philosophy, economics, anthropology, public policy and monitoring methods.

399.1(.2) Biology of Lower Plants
Prerequisite: BIO 200.0 or permisison of instructor.

An introduction to the thalloid and leafy non-vascular plants including mat and colony forming cyanobacteria, macro-seaweeds, stoneworts, liverworts, hornworts, mosses and lichens. The ecology of these plants, and their uses especially for environmental monitoring will be discussed as will their life cycles and structure. This course, together with BIO 325, 328, and 401 forms a suite of courses of value to biology students interested in ecology as well as those majoring in geography and environmental studies.

Classes 3 hrs.and lab 3hrs. a week. 1 semester.

402.1(.2) Population Genetics
Prerequisite: BIO 307.1(.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.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

408.1(.2) Vertebrate Embryology
Prerequisite: BIO 200.0.

Early developmental processes involved in the transformation of the fertilized egg into a new individual.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

411.1(.2) Animal Parasitology I
Prerequisite: BIO 200.0.

The relationship between parasites and their hosts, emphasizing the taxonomy and life history of protists and helminths of vertebrates including man. Laboratory work is on living and prepared materials, maintenance of life cycles and infectivity to vertebrates.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

412.1(.2) Animal Parasitology II
Prerequisite: BIO 411.1(.2) or permission of instructor.

This course in 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.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

413.1(.2) Introduction to Microbiology
Prerequisite: BIO 200.0 or permission of instructor.

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.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

414.1(.2) Environmental Microbiology
Prerequisite: BIO 307.1(.2), BIO 413.1(.2) or BIO 416.1(.2); or permission of instructor.

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).

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

416.1(.2) Mycology I
Prerequisite: BIO 200.0.

Introduction to the fungi. Students will become familiar with the

mbers of this diverse group of organisms by studying the morology and ecology of representatives from each of the major taxomic groups.

lasses 3 hrs. and lab 3 hrs. a week. 1 semester.

7.1(.2) Mycology II
rerequisite: BIO 416.1(.2) or permission of instructor.

he uniqueness of fungal ultrastructure, physiology and genetics will e explored and the human application of this information will be disussed under the heading of biotechnology.

lasses 3 hrs. and lab 3 hrs. a week. 1 semester.

8.1(.2) Plant Physiology
rerequisite: BIO 200.0 and 303.1(.2).

he physiology of higher plants. Topics include photosynthesis, ater and resource allocation, transpiration, photohormones, differntial growth, photomorphogenesis, photoperiodism, and flowering.

lasses 3 hrs. and lab 3 hrs. a week. 1 semester.

9.1(.2) Molecular Biology
rerequisite: BIO 307.1 and CHE 344.1(.2); or permission of instruc-

opics in molecular biology and molecular genetics. The biochemistry DNA, RNA and proteins will be discussed along with methods of udying these macromolecules. Using this information, the structure, nction and evolution of genes will be examined. An introduction to opulation genetics will be included.

lasses 3 hrs. and lab 3 hrs. a week. 1 semester.

0.1(.2) Cell Biology II
rerequisite: BIO 321.1(.2).

n investigation of specific functions of the eukaryotic cell, particularly those that are important in multicellular organisms. Topics include ell division, cell signaling, neurons, cells of the immune system, the xtracellular matrix, cellular differentiation and cancer.

lasses 3 hrs. and lab 3 hrs. a week. 1 semester.

1.1(.2) Biology of Domesticated Plants
rerequisite: BIO 200.0.

he study of economically important plants, their origin, domestication, botany, cultivation, uses, diseases, breeding and their role in odern world economy. Plants and plant products of industrial portance, medicinal plants, food plants and food adjuncts will be scussed.

lasses 3 hrs. and lab 3 hrs. a week. 1 semester.

2.1(.2) Applied Ecology
rerequisite: BIO 324.1(.2) or permission of instructor.

his course introduces how ecological principles can be applied to uman exploitation of natural resources. Topics include timber and sh management, pest control, effects of pollution on ecosystems, nd landscape ecology. The laboratory component exposes students o methods used in applied ecology.

lasses 3 hrs. and lab 3 hrs. a week. 1 semester.

3.1(.2) Evolution
rerequisite: BIO 200.0.

study of contemporary evolutionary biology. Subjects such as natral selection, modes of speciation, fossil record and the history of he earth are discussed.

lasses 3 hrs. and lab 3 hrs. a week. 1 semester.

4.1(.2) Life History of Fishes
rerequisite: BIO 200.0.

he study of fishes, their classification, life history and global distribution. The laboratory portion of the course familiarizes the students with representatives of world taxa and the fishes of Nova Scotia.

lasses 3 hrs. and lab 3 hrs. a week. 1 semester.

5.1(.2) Ecology of Fishes
rerequisite: BIO 200.0.

rowth and development, population biology, the role of fishes in quatic communities, and the influence of human activities on fish, re studied.

lasses 3 hrs. and lab 3 hrs. a week. 1 semester.

426.1(.2) Animal Tissues
Prerequisite: BIO 200.0.

An introduction to the structure and function of animal tissues. Laboratory work will involve the interpretation of histological preparations of representative vertebrate tissues.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

427.1(.2) Introductory Entomology
Prerequisite: BIO 200.0.

An introduction to the fascinating world of insects. The anatomy, physiology and taxonomy of this group will be examined. Lab work will include field trips for collection of insects and exposure to methods for preservation and presentation of insect collections.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

428.1(.2) Applied Entomology
Prerequisite: BIO 427.1(.2).

Insect ecology and the relationship of insects to humans. Topics covered will include: insect biodiversity, morphological and behavioral modifications for specific ecological roles and the impact of insects on human activities.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

429.1(.2) Quaternary Palynology and the History of Vegetation
Prerequisite: BIO 200.0 and GPY 203.1(.2) and 213.1(.2); or permission of instructor.

The study of pollen grains from peat deposits, lake sediments and moss polsters etc. enables the reconstruction of past vegetation and climates. This course will cover the techniques for pollen extraction, the identification of plants from their pollen and the reconstruction of plant communities from the discovered pollen. This will be related to climate change in the past. This course will be of special value to ecologists, geographers and also to entomologists (especially beekeepers), archaeologists, forensic medicine and environmental studies students.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

447.1(.2) Aquatic Biology in Bermuda
Prerequisite: BIO 200.0 and permission of instructor.

This course is an introduction to Bermudian environment with classroom and field emphasis on inland pond, shoreline, mangrove, seagrass, and conservation.

Classes 36 hrs., involving lecture and field work in Bermuda during a summer session. 1 semester.

448.1(.2) Biology Field Course
Prerequisite: BIO 200.0 and permission of instructor.

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.

Classes 36 hrs., including lecture and field work in Nova Scotia during a summer session.

Note: Enrolment in this course is limited.

449.1(.2) Aquatic Parasitology
Prerequisite: BIO 200.0 and permission of instructor.

A two-week, field course held in the summer at the Huntsman Marine Science Centre in St. Andrews, New Brunswick. Both marine and freshwater invertebrates and vertebrates are examined for their parasite fauna. Selected protozoan as well as metazoan parasites are examined live prior to appropriate processing for identification. 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.

Classes 36 hrs., including lectures, labs, and fieldwork during a summer session.

450.1(.2) Diversity in Forest Ecosystems
Prerequisite: BIO 200.0 and prior written permission of instructor.

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 bio-

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diversity. 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.

Classes 36 hrs., including lectures, labs, and fieldwork conducted outside Halifax.

500.0 Research Thesis
Prerequisite: honors 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.

501.0 Advanced Microbiology
Prerequisite: BIO 307.1(.2), BIO 414.1(.2) or BIO 417.1(.2); or permission of instructor.

Recent advances in microbiology will be explored through extensive reading in the current literature, discussions and laboratory projects.

Classes 2 hrs. plus tutorials and lab 3 hrs. a week. 2 semesters.

510.0 Theory of Ecosystems
Prerequisite: BIO 324.1(.2).

Ecosystems are arbitrary classes in the hierarchy of life. This course examines contemporary views on the structure of ecosystems, on the processes of succession, on the diversity-stability debate, and on the response of ecosystems to stress.

Seminar and tutorial 2 hrs. plus lab 3 hrs. a week. 2 semesters.

515.0 Histological and Microscopical Techniques
Prerequisite: BIO 426.1(.2).

An introduction to the principles and practice of biological material preparation for light microscopy and scanning and transmission electron microscopy.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

549.0 Honors Seminar
Prerequisite: honors standing.

Seminars followed by discussions based on recent advances in bio ogy. In consultation with the honors advisor, the honors students w select and prepare the topics for presentation to biology faculty an students.

550.0 Advanced Mycology
Prerequisite: BIO 414.1(.2) or BIO 417.1(.2); or permission of instruc tor.

The study of morphology, classification, genetics and ecology of main groups of land and water fungi, fungal relationships to humar animals and plants will be discussed.

Classes 2 hrs. plus tutorials and lab 3 hrs. a week. 2 semesters.

552.0 Cytogenetics
Prerequisite: BIO 321.1(.2) and BIO 420.1(.2).

Study of chromosome biology, experimental studies on the mitotic apparatus, karyotype and its evolution, sex chromosomes, control meiotic system, regulation of chromosome pairing, cytology in relation to taxonomy and cancer cytology.

Classes 2 hrs. plus tutorials and lab 3 hrs. a week. 2 semesters.

553.0 Marine Invertebrates
Prerequisite: BIO 326.1(.2).

Study of marine invertebrates with emphasis on commercial specie Taxonomy, morphology and physiology of the different groups will b the main topics covered. The life histories of representative species will be studied in the laboratory periods.

Classes 2 hrs. plus tutorials and lab 3 hrs. a week. 2 semesters.

555.0 Advanced Physiology
Prerequisite: BIO 322.1(.2) and BIO 323.1(.2).

A course dealing in some detail with advances in particular areas o animal physiology. Areas covered include metabolism of proteins, carbohydrates, lipids, and nucleic acids, intermediary metabolism, regulation and control of metabolic processes, bioenergetics, molec ular physiology of muscles and neurophysiology.

Classes 2 hrs. plus tutorials and lab projects. 2 semesters.

Chemistry (CHE)

Chairperson, Associate Professor	A. Piorko
Professors	C. Elson, K. Vaughan
Associate Professors	M. Lamoureux, R. Singer
Assistant Professors	H. Jenkins, K. Singfield
Adjunct Professor	M. Zaworotko
Professors Emeriti	J. Murphy, J. Young

The program of the Department of Chemistry is designed to satisfy two functions:

a. Fulfil requirements for the general degree of Bachelor of Science, the degree of Bachelor of Science with major, and the degree of Bachelor of Science (Honors).

These degrees will permit graduates to enter the work force or graduate school with a background at least equal to that provided by other universities in Canada and the United States.

b. Introduce students in other disciplines to the ideas of chemistry and provide them with the chemical skills necessary for their professional development.

All members of staff are engaged in active research projects, and undergraduates are expected and encouraged to contribute to these projects. Research jobs, both during the term and in the summer, are also available for undergraduates.

The core program for a major in chemistry consists of one of CHE 201.0, 202.0, or 203.0; and CHE 312.1(.2), 313.1(.2), 322.1(.2), 323.1(.2), 332.1(.2), 333.1(.2), 344.1(.2), 345.1(.2); and any two (2.0) 400-level credits in chemistry. Students may take two additional chemistry courses of their choice. Major students are also required to complete PHY 205.0 and this course should normally be taken in Year 1.

The core program for an honors degree in chemistry consists of on of CHE 201.0, 202.0, or 203.0; and CHE 312.1(.2), 313.1(.2), 322.1(323.1(.2), 332.1(.2), 333.1(.2), 344.1(.2), 345.1(.2), 412.1(.2), 413.1(.2 or 414.1(.2), 443.1(.2), 444.1(.2), 498.0, and 500.0. Students are required to take one (1.0) to three (3.0) additional chemistry courses of their choice. Honors students are also required to complete PHY 205.0 and this course should normally be taken in Year 1. Honors students and students taking a major in physical chemistry must ta MAT 310.1(.2) and 311.1(.2) in Year 2.

The core program for double majors consists of: one of CHE 201.0, 202.0, or 203.0; three (3.0) of CHE 312.1(.2), 313.1(.2), 322.1(.2), 323.1(.2), 332.1(.2), 333.1(.2), 344.1(.2), 345.1(.2), 373.1(.2), 374.1(.2 and two (2.0) 400-level credits.

The core program for double honors consists of: one (1.0) of CHE 201.0, 202.0 or 203.0; three (3.0) of CHE 312.1(.2), 313.1(.2), 322.1(.2), 323.1(.2), 332.1(.2), 333.1(.2), 344.1(.2), 345.1(.2); and two (2.0) 400 level credits. In addition, it is strongly recommended that students in both double majors and double honors complete MAT 210.1(.2)/211.1(.2) to fulfil the mathematics requirement, and PHY 205.0 as one of their science electives. Double honors students wh choose to do a research thesis in chemistry will also take CHE 498. and 500.0. If they choose to do a research thesis in the other subje they must take an additional (1.0) chemistry course.

Notes:
(i) Students who fail the laboratory component of a course will fail the course.

(ii) All of the following courses have a 3 hour per week lab compo nent unless otherwise noted, i.e., CHE 220.1(.2)/221.1(.2), and 498.

010.0 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.

221.0 General Chemistry for Physical Sciences
Prerequisite: Nova Scotia Grade 12 CHE 441 or CHE 010.0 or equivalent, and MAT 210.1(.2)/211.1(.2) to be taken concurrently.

An introduction to the chemistry of gases, liquids, and solids. Emphasis will be placed upon reaction stoichiometry, gas laws, chemical equilibrium and application of aqueous equilibria in the first semester. In the second semester, an introduction to chemical bonding, thermodynamics, chemical kinetics, electrochemistry and organic chemistry will be presented. This course is designed for students in the physical sciences.

222.0 General Chemistry for Life Sciences
Prerequisite: Nova Scotia Grade 12 CHE 441 or CHE 010.0 or equivalent, and MAT 210.1(.2)/211.1(.2) or CSC 226.1(.2)/227.1(.2) to be taken concurrently.

An introduction to the chemistry of gases, liquids and solids. Emphasis will be placed upon reaction stoichiometry, gas laws, chemical equilibrium and application of aqueous equilibria in the first semester. In the second semester, an introduction to chemical bonding, thermodynamics, organic chemistry and biochemistry will be presented. This course is designed for students in the life sciences.

223.0 General Chemistry for Engineers
Prerequisite: Nova Scotia Grade 12 CHE 441 or CHE 010.0 or equivalent, and MAT 210.1(.2)/211.1(.2) to be taken concurrently.

An introduction to the chemistry of gases, liquids and solids. Emphasis will be placed upon reaction stoichiometry, gas laws, chemical equilibrium and application of aqueous equilibria in the first semester. In the second semester, an introduction to chemical bonding, thermodynamics, reaction kinetics, and properties of solutions will be presented. This course is designed for students in engineering.

220.1(.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 will focus on the role and importance of chemistry in today's world. Topics may include chemistry and pollution, chemistry and the industrial world, or chemistry and material science.

Note: This course is for non-science students for whom it constitutes a science elective. Science students cannot use this course as a science elective.

Classes 3 hrs. a week. 1 semester.

221.1(.2) Chemistry of Life
This course is intended as an introduction to general chemistry for students who have little background in science and mathematics. The course will focus on the role and importance of chemistry in today's world. Topics may include chemistry and the environment, chemistry and the medical sciences, or chemistry and material science.

Note: This course is for non-science students for whom it constitutes a science elective. Science students cannot use this course as a science elective.

Classes 3 hrs. a week. 1 semester.

312.1(.2) Thermodynamics
Prerequisite: CHE 201.0 or 202.0 or 203.0, and MAT 210.1(.2)/211.1(.2).

In this introduction to Physical Chemistry, a study of the underlying physical principles that govern the properties and behavior 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.

313.1(.2) Chemical Reaction Kinetics
Prerequisite: CHE 312.1(.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.

322.1(.2) Inorganic Chemistry
Prerequisite: CHE 201.0 or 202.0 or 203.0.

An introduction to theoretical aspects of inorganic chemistry. Course will cover atomic structure, electron configuration and periodicity of element properties. Bond types and classification of compounds based on bond types. VSEPR and Hybridisation theory to explain geometry. Structure of ionic solids. Ligand types and introduction to coordination chemistry - CFT, LFT, MOT and their application to explain properties of compounds. Introduction to reaction types and experimental techniques in inorganic chemistry such as NMR, ESR, and Crystallography.

323.1(.2) Special Topics in Inorganic Chemistry
Prerequisite: CHE 322.1(.2).

An introduction to special topics in inorganic chemistry such as main group and transition metal organometallic chemistry, catalysis, bioinorganic chemistry and coordination chemistry. Emphasis will be on structure, reactivity and function of compounds.

332.1(.2) Introductory Analytical Chemistry: Wet Methods [GEO 332.1(.2)]
Prerequisite: CHE 201.0 or 202.0 or 203.0.

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.

333.1(.2) Introductory Analytical Chemistry: Instrumental Methods [GEO 333.1(.2)]
Prerequisite: CHE 201.0 or 202.0 or 203.0.

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.

344.1(.2) Organic Chemistry I
Prerequisite: CHE 201.0 or 202.0 or 203.0.

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 emphasises the mechanistic approach to the reactivity of organic compounds and provides a thorough introduction to stereochemistry and nuclear magnetic resonance.

345.1(.2) Organic Chemistry IIA
Prerequisite: CHE 344.1(.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.

346.1(.2) Organic Chemistry IIB
Prerequisite: CHE 344.1(.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 emphasises the mechanistic approach to functional group

Year 3
1. one (1.0) chemistry elective credit
2. one (1.0) chemistry elective credit
3. one (1.0) non-chemistry elective credit
4. one (1.0) non-chemistry elective credit
5. one (1.0) elective credit

Scheme B: Science Degree with a Major in Chemistry
Year 1
1. CHE 201.0
2. PHY 205.0
3. MAT 210.1(.2)/211.1(.2)
4. EGL 201.1(.2)/202.1(.2)
5. one (1.0) credit in the humanities

Year 2
1. CHE 312.1(.2)/313.1(.2)
2. CHE 344.1(.2)/345.1(.2)
3. CHE 322.1(.2)/323.1(.2) or CHE 332.1(.2)/333.1(.2)
4. one (1.0) non-chemistry science elective credit
5. one (1.0) elective credit

Years 3 and 4
1. CHE 322.1(.2)/323.1(.2) or CHE 332.1(.2)/333.1(.2)
2. 2.0 credits from:
   CHE 412.1(.2) CHE 443.1(.2)
   CHE 413.1(.2)
   CHE 414.1(.2) CHE 444.1(.2)
   CHE 421.1(.2) CHE 445.1(.2)
   CHE 432.1(.2) CHE 451.1(.2)
   CHE 433.1(.2) CHE 452.1(.2)
3. Electives in order to fulfil the requirements outlined in the Faculty of Science regulations, up to two (2.0) of which can be in chemistry (7.0)

Scheme C: Science Degree with Honors in Chemistry
Note: Year 1 is as in Scheme B.)
Year 2
1. CHE 312.1(.2)/313.1(.2)
2. CHE 344.1(.2)/345.1(.2)
3. CHE 322.1(.2)/323.1(.2) or
   CHE 332.1(.2)/333.1(.2)
4. MAT 310.1(.2)/311.1(.2)
5. one (1.0) credit in the humanities

Year 3
1. CHE 332.1(.2)/333.1(.2) or
   CHE 322.1(.2)/323.1(.2)
2. CHE 412.1(.2)/413.1(.2) or 414.1(.2)
3. CHE 443.1(.2)/444.1(.2)
4. one (1.0) credit from:
   CHE 421.1(.2) 445.1(.2)
   CHE 432.1(.2) 451.1(.2)
   CHE 433.1(.2) 452.1(.2)
5. one (1.0) non-chemistry elective (1.0)

Year 4
1. CHE 498.0
2. CHE 500.0
3. one (1.0) non-chemistry science elective credit
4. one (1.0) elective credit
5. one (1.0) elective credit

Scheme D: Co-operative Education in Chemistry (COEC)
Available at both the general and major/honors level, this program integrates on-the-job work experience and academic studies. Upon completion of one of the Co-operative Education programs, the student receives the Bachelor of Science degree in chemistry (with a major or honors) and with the added qualification of "Co-operative Education".

Further details can be found under the Faculty of Science Co-operative Education regulations in Section 3 of this Calendar.

Scheme E: Double Major and Double Honors in Chemistry and Physics

Detailed requirements for these programs are found above in the Department of Astronomy and Physics.

Commercial Law (CML)

These courses are administered by the Department of Accounting.

201.1(.2) Legal Aspects of Business - Part I
Prerequisite: ECO 201.1(.2) and 202.1(.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.

202.1(.2) Legal Aspects of Business - Part II
Prerequisite: CML 201.1(.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.

The following course is available only to students registered in the Master of Business Administration Program and with permission of the MBA Director to students registered in other master's programs.

601.1(.2) Commercial Law
Prerequisite: completion of all required 500-level MBA courses or permission of MBA Director.

A survey of the legal aspects of business such as contracts, corporate law, competition, sale of goods and consumer protection, negotiable instruments, employment, real estate, insurance and creditor rights. The workings of the legal system will also be explored.

Communications (COM)

These courses are administered by the Department of Marketing.

293.1(.2) Managerial Communications
Prerequisite: EGL 201.1(.2).

This course emphasizes business writing skills and prepares students to communicate effectively in a business environment. Students use word processors to write memoranda, letters, reports, resumes, and other business documents. The major focus of the course is on written communication skills and strategies.

Note: Students who have previously earned credit for EGL 250.1(.2) may not also earn credit for COM 293.1(.2).

394.1(.2) Oral Communications and Presentation Techniques
Prerequisite: COM 293.1(.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.

475.1(.2) Advanced Managerial Communications
Prerequisite: COM 293.1(.2).

This course will help you deal effectively with the complexities of workplace communications and to develop communication skills through case analysis, strategic planning, and problem-solving. In the course, you will engage in such activities as making oral presentations; conducting interviews; negotiating agreements; producing commercial messages; writing letters, memos, press releases and short reports; and using electronic media.

The following course is available only to students registered in the Master of Business Administration Program and with permission of the MBA Director to students registered in other master's programs.

675.1(.2) Advanced Managerial Communications
Prerequisite: completion of all required 500-level MBA courses and permission of MBA Director.

This course will help you deal effectively with the complexities of workplace communications and to develop communication skills through case analysis, strategic planning, and problem-solving. In the course, you will engage in such activities as making oral presentations; conducting interviews; negotiating agreements; producing commercial messages; writing letters, memos, press releases and short reports; and using electronic media.

Classes and lab 3 hrs. each a week, 1 semester.

Computing Science and Business Administration

Committee on Computing Science and Business Administration

W. Finden, Coordinator	Mathematics and Computing Science
J. Gregory	Finance and Management Science
S. Konstantinidis	Mathematics and Computing Science
P. Muir	Mathematics and Computing Science
D. Jutla	Finance and Management Science

Computing Science and Business Administration is an interdisciplinary four-year program that can be taken by students registered in either the Faculty of Commerce or the Faculty of Science. This program was developed to meet the increasing demand for people with a technical knowledge of computing science who could also understand the application of this technology to business problems.

Students primarily interested in the technical aspects of Computing Science are referred to the Computing Science degree offered in the Department of Mathematics and Computing Science.

Entrance Requirements

1. To be admitted to this program directly from high school, students must have five Grade 12 subjects including English 441, Mathematics 441, and three other academic subjects with an average of at least 80 percent. For those enroling in the Faculty of Science, two of the other academic subjects must be from the sciences.

2. To transfer into this program from another program within the University or from another university, the student must have completed at least five (5.0) university credits with a minimum cumulative quality point average of 3.00 and have the permission of the Program Coordinator.

Course Program

Students must meet the general requirements of the Faculty in which they are enroled.

Students must complete 20.0 credits as listed below according to the Faculty in which they are enroled.

All students	Commerce	Science
Year 1		
CSC 226* (0.5)	EGL 201 or 202 (0.5)	Science elective (1.0)
CSC 227* (0.5)	CML 201 (0.5)	
ECO 201* (0.5)		
ECO 202* (0.5)		
MAT 210* (0.5)		
MAT 211* (0.5)		
MGT 281* (0.5)		
EGL 201 or 202 (0.5)		
Year 2		
ACC 241* (0.5)	COM 293 (0.5)	EGL 201 or 202 (0.5)
ACC 242* (0.5)		
CSC 341* (0.5)		
CSC 342* (0.5)		
MAT 305* (0.5)		
MAT 320* (0.5)		
MKT 270* (0.5)		
MSC 324* (0.5)		
MSC 207* (0.5)		
Year 3		
ACC 332* (0.5)	Free elective (1.0)	Science elective (1.0)
CSC 327* (0.5)		
CSC 328* (0.5)		
FIN 360* (0.5)		
FIN 361* (0.5)		
MGT 383* (0.5)		
MGT 384* (0.5)		
MSC 301* (0.5)		
Year 4		
ACC 323* (0.5)	Commerce elective (1.0)	Arts and/or ECO elective (1.0)
MSC 425* (0.5)	ECO elective (1.0)	Arts and/or ECO elective (1.0)
CSC 461* (0.5)	Free elective (0.5)	Free elective (0.5)
CSC 462* (0.5)		
MGT 489* (0.5)		

Notes:

1. Both EGL 201.1(.2) and EGL 202.1(.2) must be completed.
2. All electives are to be at the 200 level or above.
3. The Economics electives may not include ECO 317.1(.2) or ECO 322.1(.2).
4. The Arts and/or Economics electives are to be selected in accordance with Faculty of Science regulation 3c.
5. Students who already have a credit for EGL 250.1(.2) may use this instead of COM 293.1(.2). EGL 250.1(.2) is not currently being offered at the University.
6. Credit will not be given for CSC 101.1(.2) or any other introductory computing course if taken subsequent to CSC 226.1(.2).
7. No more than one (1.0) credit of elective courses can be selected from MSC 225.1(.2), MSC 326.1(.2), MSC 424.1(.2), EGN 204.1(.2) or other programming courses.
8. Credit will not be given for MAT 190.1(.2), MSC 205.1(.2)/206.1(.2) or other preparatory or introductory mathematics courses if taken subsequent to, or concurrent with, MAT 210.1(.2)/211.1(.2).
9. Further information on particular courses, including required prerequisites, can be found in the section of the Calendar for the appropriate department.
10. Courses marked with an asterisk are considered as major courses for the purpose of regulation 9 of the Faculty of Science.
11. Canada Science Scholars should take ACC 323.1(.2) in Year 3 and replace one humanities elective with another science elective to fulfil the science requirement of the scholarship. For each such student, this program change must be authorized by the Dean of Science.
12. For students in this program, MAT 211.1(.2) can replace MSC 205.1(.2) or MSC 206.1(.2) as a prerequisite for other commerce courses.
13. For students in this program, normally CSC 227.1(.2) can replace MSC 225.1(.2) as a prerequisite for other commerce courses. However, a knowledge of the topics covered in MSC 225.1(.2) will be assumed in other courses.

Co-operative Education Program

This program has a Co-op option. Students taking the Co-op option must meet all the requirements of the Computing Science and Business Administration Program. As for other majors programs, four work terms must be successfully completed. Additional requirements can be found in the Faculty of Science section of the Calendar. At the end of their first semester, interested students should see the Co-operative Education Coordinator for the program.

Economics (ECO)

Chairperson, Professor S. Amirkhalkhali
Professors P. Arya, A. Dar, E. Doak, A. Harvey, M. MacDonald, A. Mukhopadhyay
Associate Professors A. Akbari, S. Novkovic
Assistant Professors P. Crowley, N. Sharif, J. Taheri
Adjunct Professor J. Kah

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 more courses at the 200 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: ECO 307.1(.2), 407.1(.2)
Public Finance: ECO 318.1(.2), 319.1(.2)
International: ECO 365.1(.2), 413.1(.2), 414.1(.2)
Quantitative: ECO 302.1(.2), 303.1(.2), 403.1(.2), 409.1(.2)
Urban-Regional: ECO 324.1(.2), 325.1(.2), 430.1(.2), 450.1(.2)
Natural Resources and Environment: ECO 361.1(.2), 362.1(.2), 363.1(.2)
Comparative Systems: ECO 315.1(.2), 323.1(.2)
Cost-Benefit Analysis and Health: ECO 364.1(.2), 366.1(.2)
History and Development: ECO 306.1(.2), 310.1(.2), 317.1(.2), 406.1(.2), 410.1(.2)
Labour: ECO 339.1(.2), 340.1(.2)
Industrial Organization: ECO 316.1(.2)
Other theory courses: ECO 312.1(.2), 400.1(.2), 401.1(.2), 404.1(.2), 405.1(.2), 412.1(.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.

The former requires a total of fifteen (15.0) credits. The latter requires a minimum of twenty (20.0) credits. See Faculty of Arts and Faculty of Commerce, Section 3 of this Calendar, for the basic requirements for these degrees.

Regardless of the degree sought, the Department of Economics requires that the program of study leading to a major in economics include the following:

1. Nova Scotia Grade 12 MAT 441 or 442.
2. EGL 201.1(.2) and 202.1(.2).
3. One (1.0) credit in university mathematics beyond the level of difficulty of Nova Scotia Grade 12 Mathematics or equivalent. [MSC/ECO 205.1(.2) and MSC 225.1(.2), which are required of all Bachelor of Commerce students, and recommended for all Bachelor of Arts majors in economics, satisfy this requirement.]
4. One (1.0) credit 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: ECO 306.1(.2); 312.1(.2); 315.1(.2); 323.1(.2); 406.1(.2); and 412.1(.2). Philosophy 200.0 does not satisfy this requirement.
5. One (1.0) credit from the social sciences other than economics.
6. The following economics courses:
   - ECO 201.1(.2) Principles of Economics: Micro
   - ECO 202.1(.2) Principles of Economics: Macro
   - ECO 206.1(.2) Introduction to Quantitative Methods for Economists II
     or
     MSC 206.1(.2) Introduction to Quantitative Methods for Commerce II
   - ECO 207.1(.2) Introductory Statistics for Economics or MSC 207.1(.2) Introductory Statistics for Commerce
   - ECO 300.1(.2) Intermediate Microeconomic Theory
   - ECO 301.1(.2) Intermediate Macroeconomic Theory
   - ECO 400.1(.2) Advanced Microeconomic Theory or ECO 401.1(.2) Advanced Macroeconomic Theory
   - One of: ECO 306.1(.2), ECO 310.1(.2), ECO 312.1(.2), ECO 315.1(.2), ECO 323.1(.2), ECO 406.1(.2), or ECO 412.1(.2)
   - 4 additional half-credit economics electives (2.0 credits). In total, students must complete two half courses, (1.0 credit) at the 400-level, including ECO 400.1(.2) or 401.1(.2)

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.

Suggested Courses Leading to a Bachelor of Arts Degree with a Major in Economics

Year 1
1. ECO 201.1(.2) and 202.1(.2)
2. Mathematics and/or computing science (see note 2 below) (1.0 credit)
3. EGL 201.1(.2) and 202.1(.2)
4. Social science other than economics (e.g., political science, anthropology, sociology, geography, or psychology) (1.0 credit)
5. Humanities or language [e.g., classics, history, English or modern languages, philosophy (not PHI 200.0), religious studies] (1.0 credit)

Year 2
1. ECO/MSC 206.1(.2) and ECO/MSC 207.1(.2)
2. ECO 300.1(.2) and ECO 301.1(.2)
3. One of: ECO 306.1(.2), ECO 310.1(.2), ECO 312.1(.2), ECO 315.1(.2), ECO 323.1(.2), ECO 406.1(.2), ECO 412.1(.2)
4. Electives (2.5 credits)

Year 3
1. ECO 400.1(.2) or ECO 401.1(.2)
2. ECO electives (2.0 credits)
3. Electives (2.5 credits)

Notes:

(i) Students are reminded that the electives should be chosen in such a way as to fulfil the Faculty of Arts requirements. (See Section 3 of this Calendar.)

(ii) Students taking ECO/MSC 205.1(.2) and MSC 225.1(.2) to satisfy requirement c above, should take ECO/MSC 205.1(.2) and 206.1(.2) in Year 1 and ECO/MSC 207.1(.2) and MSC 225.1(.2) in Year 2.

For suggested courses for a Bachelor of Commerce degree with a major in economics, see the Faculty of Commerce Section of this Calendar.

Year 4: Honors

The Department of Economics offers honors programs to students enroled in either the Faculty of Arts or the Faculty of Commerce. Descriptions of the general requirements for the degrees of Bachelor of Arts (Honors) and of Bachelor of Commerce (Honors) are contained in Section 3. In addition to these general requirements, for graduation with honors 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 ten (10.0) credits in economics presented for honors must include:

(i) ECO 201.1(.2), ECO 202.1(.2), ECO/MSC 206.1(.2), and ECO/MSC 207.1(.2), or equivalent;

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(ii) ECO 300.1(.2) and ECO 400.1(.2);
(iii) ECO 301.1(.2) and ECO 401.1(.2);
(iv) ECO 302.1(.2), ECO 303.1(.2), and ECO 403.1(.2), or one and a half (1.5) credits from the Mathematics and Computing Science Department with the approval of the Chairperson of the Economics Department;
(v) ECO 498.1(.2);
(vi) ECO 499.1(.2) or another advanced economics half credit course (0.5) approved by the Chairperson of the Department;
(vii) either ECO 306.1(.2), ECO 310.1(.2), ECO 312.1(.2), ECO 315.1(.2), ECO 323.1(.2), ECO 406.1(.2), ECO 412.1(.2), or another economics half-credit course (0.5) approved by the Chairperson;
(viii) ECO 404.1(.2) or ECO 405.1(.2).

c. With the approval of the Chairperson of the Economics Department, a student may be permitted to substitute up to two (2.0) credits from a related subject area as part of the ten (10.0) credits in economics presented for honors.

d. Commerce students doing honors in economics are permitted to count one (1.0) economics credit at the 300 level or above as a non-commerce elective.

e. The recommended course selection and sequence for the degree of Bachelor of Commerce (Honors: Economics) can be found in the Bachelor of Commerce section of this Calendar.

201.1(.2) Principles of Economics: Micro
General price theory, theory of the firm, market structure, production, cost, revenue and profit maximization, theory of distribution.

202.1(.2) Principles of Economics: Macro
National income determination, national accounting, business fluctuations, money and banking, international economics, economic growth.

205.1(.2) Introduction to Quantitative Methods for Economists I
Prerequisite: Nova Scotia Grade 12 MAT 441 or 442; or MAT 050.1(.2)/051.1(.2); or equivalent.

This course illustrates applications of basic mathematical techniques in break-even analysis, data manipulation, aggregate planning and financial planning. Topics include linear functions, linear inequalities, the simplex method, compound interest, annuities and depreciation.

Note: This is the same course as MSC 205.1(.2).

206.1(.2) Introduction to Quantitative Methods for Economists II
Prerequisite: Nova Scotia Grade 12 MAT 441 or 442; or MAT 050.1(.2)/051.1(.2); or equivalent.

The purpose of this course is to provide a basic understanding of the dynamics of non-linear functions as they relate to the use of scarce resources for profit maximization. Students will be exposed to the basic methods of calculus and the basic concepts of probability as they relate to decision making in an uncertain environment.

Note: This is the same course as MSC 206.1(.2).

207.1(.2) Introductory Statistics for Economists
Prerequisite: ECO 206.1(.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 accounting, economics, marketing, management, finance and production.

Note: This is the same course as MSC 207.1(.2).

300.1(.2) Intermediate Microeconomic Theory
Prerequisite: ECO 201.1(.2) and either ECO 206.1(.2) or permission of instructor.

Theory of consumer behavior and demand, theory of production and cost, behavior of the firm, theory of price and output under different market structures, and the theory of factor markets.

301.1(.2) Intermediate Macroeconomic Theory
Prerequisite: ECO 202.1(.2) and either ECO 206.1(.2) or permission of instructor.

Measurement of macroeconomic variables; models of aggregate income and price determination; unemployment and inflation; macroeconomic policy debates.

302.1(.2) Mathematical Economics
Prerequisite: ECO 201.1(.2) and 202.1(.2); and ECO 206.1(.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.

303.1(.2) Intermediate Economic Statistics
Prerequisite: ECO 207.1(.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.

Note: This is the same course as MSC 303.1(.2).

306.1(.2) North American Economic History
Prerequisite: ECO 202.1(.2) and 300.1(.2); or ECO 201.1(.2) and 202.1(.2) and permission of the instructor; or 1.5 credits in history and permission of instructor.

This course surveys growth, fluctuation and structural change in the North American economy, from the Revolution Era to the Great Depression. Topics such as slavery, the Civil War, industrialization, railroads and the capital market will be included.

307.1(.2) Money and Banking
Prerequisite: ECO 201.1(.2) and 202.1(.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.

310.1(.2) Development Economics
Prerequisite: ECO 201.1(.2) and 202.1(.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.

312.1(.2) History of Economic Thought
Prerequisite: ECO 201.1(.2) and 202.1(.2).

This course traces the development of economic ideas from the middle ages to the middle of the 19th century (Karl Marx). Students will be introduced to the contributions of economic ideas of these times to contemporary thinking.

315.1(.2) Comparative Economic Systems
Prerequisite: ECO 201.1(.2) and 202.1(.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.

316.1(.2) Industrial Organization
Prerequisite: ECO 201.1(.2) and 202.1(.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 behavior of firms, and efficiency in resource allocation.

317.1(.2) The Economic History of Europe
An examination of the economic evolution of Modern Europe, with major concentration on the period from 1750 to the present. The course does not deal with the chronological development but rather emphasizes those aspects of history which are reflected in contemporary institutions, practices and policies.

Note: This course is not open to Commerce students nor does it count as an elective for a major in economics.

318.1(.2) Public Finance: Expenditure
Prerequisite: ECO 201.1(.2) and 202.1(.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.

319.1(.2) Public Finance: Taxation
Prerequisite: ECO 201.1(.2) and 202.1(.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.

322.1(.2) Canadian Economic Issues
Prerequisite: ECO 201.1(.2) and 202.1(.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.

323.1(.2) Economies in Transition
Prerequisite: ECO 201.1(.2) and 202.1(.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.

324.1(.2) The Atlantic Economy
Prerequisite: ECO 201.1(.2) and 202.1(.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.

325.1(.2) Atlantic Economy Seminar
Prerequisite: ECO 201.1(.2) and 202.1(.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.

339.1(.2) Introduction to Labour Economics
Prerequisite: ECO 201.1(.2) and 202.1(.2).

This course introduces the student to the study of labour markets - supply and demand for labour, and wage and employment determination in different types of markets. Emphasis is on the economic analysis of wage differentials, including the importance of human capital, unionization, internal labour markets, discrimination and segmented labour markets.

340.1(.2) Human Resource Economics
Prerequisite: ECO 201.1(.2) and 202.1(.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.

349.1(.2) Women and the Economy
[WMS 349.1(.2)]
Prerequisite: ECO 339.1(.2) or permission of instructor.

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.

361.1(.2) Fisheries Economics
Prerequisite: ECO 201.1(.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.

362.1(.2) Natural Resource Economics
Prerequisite: ECO 201.1(.2) and 202.1(.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.

Note: Students with credit for ECO 360.1(.2) will not be given credit for this course.

363.1(.2) Environmental Economics
Prerequisite: ECO 201.1(.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.

Note: Students with credit for ECO 360.1(.2) will not be given credit for this course.

364.1(.2) Cost-Benefit Analysis
Prerequisite: ECO 201.1(.2) and 202.1(.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.

365.1(.2) International Economic Issues
Prerequisite: ECO 201.1(.2) and 202.1(.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.

366.1(.2) Health Economics
Prerequisite: ECO 201.1(.2) and ECO 202.1(.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.

400.1(.2) Advanced Microeconomic Theory
Prerequisite: ECO 206.1(.2) or equivalent and ECO 300.1(.2).

Advanced treatment of the theories of consumer behavior and the firm with special emphasis on duality theory; general equilibrium theory; welfare economics. Other topics may include choice under uncertainty and game theory.

Note: Students who have received a credit for ECO 440.1(.2) will not be permitted to retake this course and receive an additional credit.

401.1(.2) Advanced Macroeconomic Theory
Prerequisite: ECO 206.1(.2) or equivalent and ECO 301.1(.2).

Microeconomic foundations of macroeconomics; inflation; interest rates; exchange rates; labour markets and unemployment; investment and real business cycles; economic growth.

Note: Students who have received a credit for ECO 441.1(.2) will not be permitted to retake this course and receive an additional credit.

403.1(.2) Econometrics
Prerequisite: ECO 303.1(.2) or permission of instructor.

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.

404.1(.2) Special Topics in Microeconomics
Prerequisite: ECO 400.1(.2).

Selected topics in microeconomics chosen for rigorous, in-depth study from the following areas: input markets; general equilibrium; welfare economics; intertemporal choice; information theory. Topics may vary depending on the interests of the students and the instructor.

405.1(.2) Special Topics in Macroeconomics
Prerequisite: ECO 401.1(.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.

406.1(.2) Canadian Economic History in an International Context
Prerequisite: ECO 306.1(.2) or permission of instructor.

This course provides an intensive examination of selected issues in the economic history of North America with an emphasis on the Canadian economy in an international context. Topics such as the wheat boom, National Policy, manufacturing finance, and Staple Theories will be included.

Classes 1 1/2 hrs. a week. Seminars 1 1/2 hrs. a week. 1 semester.

407.1(.2) Monetary Economics
Prerequisite: ECO 201.1(.2), 202.1(.2), 300.1(.2) and 301.1(.2) or permission of instructor.

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.

409.1(.2) Econometric Modelling and Forecasting
Prerequisite: ECO 403.1(.2).

Theory and application for econometric models and their estimation. Emphasis will be placed on the techniques of econometric model-building and forecasting. Topics such as simultaneous equation models, time series models and forecasting will be included.

410.1(.2) Issues in Economic Development
Prerequisite: ECO 300.1(.2) and 310.1(.2).

Specific problems in economic development; emphasis on government policies, foreign aid, foreign trade and their impact on underdeveloped countries.

412.1(.2) History of Modern Economic Thought
Prerequisite: ECO 300.1(.2) and 301.1(.2).

The course traces the development of economic thought from the late 19th century (Marginalism) to the present and includes Keynesianism, Monetarism and Institutional Economics. Particular attention is paid to common themes and sources of divergence among economic doctrines.

413.1(.2) International Macroeconomics and Finance
Prerequisite: ECO 201.1(.2) and 301.1(.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.

Note: Students who have received a credit for this course when it was offered as ECO 313.1(.2) will not be permitted to retake this course and receive an additional credit.

414.1(.2) International Trade
Prerequisite: ECO 300.1(.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.

Note: Students who received a credit for this course when it was offered at the 300 level will not be permitted to retake the course and receive an additional credit.

430.1(.2) Regional Economics
Prerequisite: ECO 301.1(.2) or permission of instructor if ECO 300.1(.2) has been completed.

An examination of the theoretical basis of interregional growth and disparities, methods of regional analysis and evaluation of policies and programs affecting regions. Topics include the nature and measurement of regional disparities, regional growth theory, interregional trade and mobility theory, regional economic analysis and regional economic policy.

Note: Students who received a credit for this course when it was offered at the 300 level will not be permitted to retake the course and receive an additional credit.

450.1(.2) Urban Economics
Prerequisite: ECO 300.1(.2).

Economics of an urban economy: why it grows and how it copes with growth. Urban policies for transportation, housing, labour markets and public services are examined. Theories of location, city formation and urban spatial structure are examined.

Note: Students who received a credit for this course when it was offered at the 300 level will not be permitted to retake the course and receive an additional credit.

460.1(.2) Issues in Economic Development
This course analyzes selected aspects of economic development. Issues related to debt, foreign direct investment, foreign aid, technology, late industrialisation, poverty and agricultural development may be covered. The course may take a specific regional focus.

475.1(.2) Business Consultancy
Prerequisite: ECO 300.1(.2) and permission of the Chairperson.

This course allows students to gain business experience by working for clients of the Saint Mary's University Business Development Centre.

Under the Centre's supervision, groups of students undertake market research or develop a business plan for a client of the Centre. Groups may include students from different disciplines, as the needs of the project require. Students will gain a deeper understanding of the relationships between marketing, accounting, finance and management by using skills learned in their other business courses. Each group prepares and presents its findings and recommendations to the client in an oral presentation and written report.

Work groups may schedule their preferred meeting times but must meet at least three hours each week. For more information see www.stmarys.ca/smubdc.

Internship. 1 semester.

490.1(.2) Seminar in Economics
Prerequisite: ECO 300.1(.2) and 301.1(.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.

492.1(.2) Directed Study
Prerequisite: ECO 201.1(.2) and 202.1(.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.

498.1(.2) Research Seminar in Economics
Prerequisite: ECO 300.1(.2) and ECO 301.1(.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.

499.1(.2) Honors Project in Economics
Prerequisite/corequisite: admission to the honors program (thesis option) and completion of ECO 498.1(.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.

The following courses are available only to students registered in the Master of Business Administration Program and with permission of the MBA Director to students registered in other master's programs.

601.1(.2) Economics of Enterprise Environment
The course studies the determinants of and changes in the level of national income, monetary and fiscal theory, and international trade and finance theory and policy.

620.1(.2) Issues in Industrial Economics
Prerequisite: completion of all required 500-level MBA courses or permission of MBA Director.

This course deals with such topics as competition policy, technological change in industry, behavior under uncertainty, and the economics of regulation. It draws on theories of industry structure, conduct and performance, and emphasizes applications in the Canadian context.

629.1(.2) Business Forecasting
Prerequisite: completion of all required 500-level MBA courses or permission of MBA Director.

Business decision making relies heavily on information, and forecasting is an important tool in the provision and analysis of information. Recent advances in forecasting methodology and computer technology have opened new and challenging avenues for modeling and forecasting in the business area. This course aims to provide students with a working knowledge of forecasting models and methods (with particular emphasis on newer developments) that they may usefully be applied in a real-world setting.

641.1(.2) Sustainable Resource Management
Prerequisite: completion of all 500-level MBA courses or permission of MBA Director.

This course examines the structure and dynamics of natural resource industries and their biological, economic, social, administrative and technological components. The course will cover such topics as: the role of natural resources in society; objectives of integrated natural resource development; the nature of sustainable development and environment-economy interactions in the resource sector; options for management of resources and resource industries; economics of sustainable resource use; methods for analysing resource use choices; case studies. This will be an interdisciplinary course, drawing on elements of economics, management and management science. It will give the student a grounding in natural resource management, with emphasis on the theoretical and practical application of 'sustainable development' to the resource sector.

Classes and Seminars 3 hrs. a week. 1 semester.

620.1(.2) Issues in Public Finance and Fiscal Policy
Prerequisite: completion of all required 500-level MBA courses or permission of MBA Director.

This course deals with selected aspects of public policy. Issues related to public goods, externalities, fiscal federalism, tax incidence theory, direct taxation, indirect taxes, public debt and stabilization policy may be covered.

622.1(.2) Managerial Economics and Public Policy Issues
Prerequisite: completion of all required 500-level MBA courses or permission of MBA Director.

This course deals with business and public policy issues. Topics may include the market mechanism, market structures, regulation of industry and competition policy, aggregate economic activity, business cycles, stabilization policy, public debt, and other issues of current interest.

663.1(.2) Economics of Environment Management
Prerequisite: completion of all required 500-level MBA courses or permission of MBA Director.

This course focuses on the use of economic principles to understand the environmental impacts of business and household activity. The issues discussed include: causes of air and water pollution; endangered species; and the environmental impacts of human activity in fisheries, forestry and mining industries. Methods of environmental management, with special emphasis on the potential role of economic institutions and instruments, are discussed. Some discussion of current Canadian policy isues is also undertaken.

665.1(.2) International Economics
Prerequisite: completion of all required 500-level MBA courses or permission of MBA Director.

An overview of the central themes in international trade and finance, with presentation of current policy issues and debates. Topics include: gains from trade; regional integration; multilateral trade liberalization; scale economies and trade; foreign exchange rate determination; exchange rate regimes; foreign exchange intervention and stabilization policy.

690.1(.2) Fiscal and Financial Studies Seminar
Prerequisite: completion of all required 500-level MBA courses or permission of MBA Director.

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.

692.1(.2) Directed Study
Prerequisite: completion of all 500-level MBA courses or permission of MBA Director, Department Chairperson, and instructor.

This course supplements and provides an alternative to the regular economics courses in order to meet the special needs and interests of students. It also provides an opportunity to study a particular subject in detail and requires from the student some measure of independence and initiative.

Independent study.

699.0 Research Project in Economics
Prerequisite: permission of MBA Director.

Each student is required to complete a project involving the practical application of the research concepts and techniques used in economics, under the direct supervision of a faculty member. Interdisciplinary projects are acceptable.

Independent study.

Education (EDU)

Acting Dean	Dr. Michael J. Larsen
Associate Professor	B. Davis
Assistant Professor	B. Hanrahan

For the 1999-2000 academic year Saint Mary's University will not be admitting students to any of its programs in the Faculty of Education. Students who have already been enrolled and are currently pursuing their studies will continue to follow the rules and regulations delineated in the Academic Calendar in existence when they began their program of study.

The following courses are electives available to undergraduates who are interested in exploring aspects of education.

301.0 Philosophy of Education
Prerequisite: at least 1.0 credit in Philosophy or at least 5.0 university credits or permission of instructor.

This course examines education as a range of possibilities in goals, curriculum, teaching strategies, and relationships, from which selections create distinctly different patterns of education. Examples of current practice will be analyzed to determine what theory they embody and how they meet the needs of students.

305.1(.2) Perspectives on Schooling
Prerequisite: at least 5.0 university credits or permission of instructor.

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.

306.1(.2) Schooling and Society
Prerequisite: EDU 305.1(.2).

This course continues the examination of the role of the teacher in the school and the school in society begun in EDU 305.1(.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.

308.0 Philosophical Issues in Education
Prerequisite: at least 1.0 credit in Philosophy or at least 5.0 university credits or permission of instructor.

An examination of controversial issues in education through debate informed by a philosophic analysis of concepts. Topics covered in this seminar course will include the nature of knowledge and belief, teaching and indoctrination, theory and practice, multiculturalism and nationalism, the rights and interests of children, their parents, and the state.

Engineering (EGN)

Director, Associate Professor	A. Seaman
Professors	P. Boyle, V. Sastry, D. Swingler, V. Tarnawski
Associate Professor	D. Van Dyer

Details of the programming requirements for Engineering are delineated in Section 3 of this Calendar.

203.1(.2) Engineering Mechanics (Statics)
Prerequisite: MAT 210.1(.2)/211.1(.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.

204.1(.2) Computer Methods for Engineers
Prerequisite: Nova Scotia Grade 12 MAT 441 or MAT 010.1(.2)/011.1(.2) and Nova Scotia Grade 12 PHY 441 or PHY 011.0, or equivalents.

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.

206.1(.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.

209.1(.2) Engineering Economics
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.

301.1(.2) Dynamics
Prerequisite: MAT 303.1(.2)/311.1(.2) (concurrently), EGN 203.1(.2), and EGN 204.1(.2).

Rectilinear and curvilinear kinematics using cartesian, normal-tangential, and polar cylindrical labels: projectile motion with zero and non-zero drag. Newtonian analysis of bodies in translation, rotation about a fixed axis, and plane general motion. Continuous and discrete forms of the second law: work-energy, conservation of energy, impulse-momentum. Planar mechanisms with pin joints, sliding connections, and gears. Laboratory activities include using the Euler method and other numerical techniques, computer animation, also graphical and complete-cycle for mechanism.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

303.1(.2) Fluid Mechanics
Prerequisite: MAT 303.1(.2)/311.1(.2) (concurrently), EGN 203.1(.2), and EGN 204.1(.2).

Fluid properties, fluid statics and stability. Lagrangian and Eulerian methods of analysis. Application of the control volume of continuity, energy and momentum. Euler's equation of motion, Bernoulli's equation and applications. Linear momentum equation and applications. Dimensional analysis and dynamic similitude. Viscous effects in pipe flow. Introduction to boundary layers and drag on immersed bodies. Flow measurement techniques.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

304.1(.2) Mechanics of Deformable Bodies
Prerequisite: MAT 303.1(.2)/311.1(.2) (concurrently) and EGN 203.1(.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.

205.1(.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.

206.1(.2) Engineering Thermodynamics
Prerequisite: PHY 205.0, MAT 311.1(.2) (concurrently).

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.

207.1(.2) Engineering Design II
Prerequisite: EGN 206.1(.2) and 204.1(.2).

The work of EGN 206.1(.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.

208.1(.2) Electric Circuits
Prerequisite: PHY 205.0, MAT 303.1(.2)/311.1(.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: Kirchoff'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.

309.1(.2) Probability and Statistics for Engineers
Prerequisite: MAT 210.1(.2) and 212.1(.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.

310.1(.2) Technical Communications
Prerequisite: none

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.

English (EGL)

Chairperson, Associate Professor — M. Harry
Professors — C. Byrne, W. Katz, M. Larsen, R. MacDonald, K. MacKinnon, G. Thomas, T. Whalen
Associate Professors — J. Baker, B. Bartlett, R. Perkin, D. Pigot, A. Searnan
Assistant Professors — E. Asp, U. Esonwanne, T. Heffernan, J. Hill, R. Hulan, D. Kennedy
Professor Emeritus — K. Tudor

Introductory English
EGL 201.1(.2), English Composition, and EGL 202.1(.2), An Introduction to Literature, are designed to meet the various needs of students entering the University from junior or senior matriculation. They satisfy the requirement for an English course stipulated by the Faculties of Arts, Commerce and Science. Composition courses are divided into many sections to ensure as much individual attention to each student as possible. Classes meet three hours per week.

Advanced Courses
The standard prerequisites for entrance to courses above the 200 level are a pass in EGL 201.1(.2) and 202.1(.2) or permission of the Department. For additional prerequisites in some courses, see the individual course descriptions.

All advanced courses meet three hours per week.

The Major Program
All English major and honors students will be assigned members of faculty as advisors with whom they can consult on all matters relating to their degree programs. Students who declare a major in English, or a double major in English and another subject area, should select their courses in consultation with the departmental advisors.

Students wishing to major in English must complete, in addition to EGL 201.1(.2), Composition, and EGL 202.1(.2), Introduction to Literature, six (6.0) additional credits. In the second year, they must complete the equivalent of three (3.0) credits at the 300 level, at least two (2.0) credits of which must be chosen from among the following courses:

- EGL 307.0 Literary Traditions in English
- either EGL 308.1(.2) Development of English Prose Style, or EGL 311.1(.2) Modern English Language;
- either EGL 323.1(.2) Practical Criticism, or EGL 324.1(.2) Introduction to Theory;
- either EGL 341.1(.2) Introduction to Drama I, or EGL 342.1(.2) Introduction to Drama II;
- EGL 391.1(.2) Study of Short Fiction, or EGL 392.1(.2) Study of the Novel;
- EGL 393.1(.2) Study of Poetry.

What this means is that the student will complete four half-credit courses (2.0 credits) within the areas of linguistics, poetics, drama, narrative fiction, and literary traditions and one (1.0) credit in any other area available at the 300 level. A student must complete the sequence with an average grade of C or better in order to continue in the major program.

In the third year, students will complete a further three (3.0) credits at the 400 level.

The Minor Program
A minor in English consists of at least four (4.0) credits in English, at least 2.0 of which must be at the 300 level or above. Students may also minor in creative writing or linguistics.

Students who declare a minor in creative writing must take at least two (2.0) credits in creative writing in at least two of the four genres offered (fiction, poetry, drama and non-fiction). Students are also required to take two (2.0) more English credits beyond the 200 level.

Students who wish to major in English and minor in creative writing must take 8.0 English courses above the 200 level and fulfil the requirements of both programs. Dr. Brian Bartlett is the Creative Writing Coordinator.

The Honors Program
All prospective honors students should refer to the section of this Calendar pertaining to honors degrees. Students should apply to the Registrar for admission to the honors program after having taken at least three (3.0) credits in English or at the end of their second university year.

While students are encouraged to enrol formally in honors as early as possible, those who apply later will be considered if they have the requisite minimum 3.00 cumulative quality point average.

Honors students must complete the requirements listed below. A slight adjustment in the honors English requirements will be made for those in a double honors program.

Honors in English consists of ten (10.0) credits. Students who seek admission to the honors program must satisfy:

a. the general requirements set out by the Faculty of Arts;

b. EGL 201.1(.2), Composition, and EGL 202.1(.2), Introduction to Literature;

c. three (3.0) credits at the 300 level. These should include two (2.0) credits from the following list of core courses:
(i) EGL 307.0, Literary Traditions in English;
(ii) either EGL 308.1(.2), Development of English Prose Style, or EGL 311.1(.2), Modern English Language;
(iii) either EGL 323.1(.2), Practical Criticism, or EGL 324.1(.2), Introduction to Theory;
(iv) either EGL 341.1(.2), Introduction to Drama I, or EGL 342.1(.2), Introduction to Drama II;
(v) either EGL 391.1(.2), Study of Short Fiction, or EGL 392.1(.2), Study of the Novel;
(vi) EGL 393.1(.2), Study of Poetry;

d. plus one (1.0) more credit at the 300 level; and

e. a further six (6.0) credits at the 400 level or above. In choosing their 400-level courses, students must satisfy the following area requirements:
(i) Medieval and Renaissance: either EGL 404.0 or EGL 406.0;
(ii) Shakespeare: any combination of two (2) of EGL 444.1(.2), EGL 445.1(.2), EGL 446.1(.2), EGL 447.1(.2);
(iii) 18th Century and Romantics: at least one of EGL 408.1(.2), EGL 412.0, EGL 414.0, EGL 416.0;
(iv) 19th Century: at least one of EGL 409.1(.2), EGL 418.0, EGL 420.0, EGL 430.0, EGL 448.1(.2)/449.1(.2);
(v) 20th Century: at least one of EGL 424.0, EGL 426.0, EGL 428.0, EGL 432.0, EGL 440.0, EGL 450.1(.2)/451.1(.2), EGL 460.0;
(vi) EGL 550.0, Special Author; EGL 551.0, Special Subject; or EGL 552.0, Honors Seminar, or any 2 of EGL 553.1(.2)/554.1(.2) Special Author, Special Subject, and EGL 555.1(.2)/556.1(.2) Honors Seminar.

Prospective honors students must consult with the Chairperson about admission to the program. Students must maintain a minimum cumulative quality point average of 3.00 (B) in their English courses.

Notes:
(i) EGL 201.1(.2) and EGL 202.1(.2) are the normal prerequisites for all upper-level English courses.

(ii) In the cases where courses have been renumbered or where a full-credit course has been split into two half-credit courses, a student who received a credit for the original course is not entitled to repeat the course in its new format for an additional credit. Students who received credit for EGL 400.0 are not entitled to receive credit for EGL 393.1(.2).

201.1(.2) English Composition
A composition course designed to provide a thorough review of the basic principles of effective writing. The focus is on issues of grammar, rhetoric and logic in student writing and in examples from established practice. Some sections of this course are computer assisted.

202.1(.2) An Introduction to Literature
This course examines a variety of literary forms through the study of selected essays, fiction, drama, and poetry.

300.1(.2) - 303.1(2); 305.0 Selected Topics
The subject matter of particular courses will be announced from time to time. These courses are designed to treat at an intermediate level authors and topics not dealt with in the other 300-level courses.

306.0 Cross-listed as CLA 306.0 The Epic

307.0 Literary Traditions in English
Prerequisite: At least one (1.0) credit in English at the 200 level or above.

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.

308.1(.2) Development of English Prose Style [LIN 308.1(.2)]
The course offers a close study of 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.

311.1(.2) Modern English Language [LIN 311.1(.2)]
The course will examine the nature of modern English with reference to its syntax, grammar and vocabulary. Traditional grammar will be reviewed, and modern approaches to grammar and lexicography will be discussed.

312.1(.2) Modern English Language in Canada [LIN 312.1(.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.

313.0 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.

315.1(.2) Masterpieces of Western Literature (Pre-Renaissance)
An historical survey of the major works of Western civilization from classical Greece to the Renaissance.

316.1(.2) Masterpieces of Western Literature (Post-Renaissance)
An historical survey of the major works of Western civilization from the Renaissance to the 20th century.

317.0 Writing by Women [WMS 317.0]
A course designed to examine some of the theoretical and practical concerns presented by women's writing. Both the nature of a 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.

318.1(.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.

319.1(.2) The Literature of Everyday Life
Our everyday life is extensively mediated by newspapers and advertising as well as by publicity and propaganda of various kinds. Many people's imaginative lives are shaped and their opinions formed by a literature designed to reach those with minimal reading skills. This course will apply the tools of literary analysis to the forms of literature which surround most of us for most of the time and will examine the cultural place of reading in the late 20th century.

321.1(.2) Advanced Composition
A course in the writing and analyzing of expository prose. Emphasis will be placed on the use and understanding of the principal varieties of rhetorical modes and devices. This course is intended for those who are seriously interested in improving their writing.

Note: Students who have previously earned credit for EGL 321.1(.2) may not also earn credit for EGL 322.0 and vice versa.

322.0 Advanced Composition (Computer Assisted)
Additional prerequisite: typing skills.

The course introduces students to microcomputer word processing as a basic tool of composing and editing. Its purpose is to improve writing skills through the critical analysis and sensitive editing of the writing of peers and published authors. Emphasis is placed on the understanding and use of the principal varieties of rhetorical modes and devices.

Note: Students who have previously earned credit for EGL 322.0 may not also earn credit for EGL 321.1(.2) and vice versa.

323.1(.2) Introduction to the Practice of Criticism
This course provides an introduction to the discipline of literary criticism through extensive exercises in the practical criticism of selected extracts of poetry and prose.

324.1(.2) Introduction to the Theory of Criticism
This course provides an introduction to the major issues and theoretical approaches in the discipline of literary criticism. The main emphasis will be on reading selected critical texts from Plato to the present day.

326.1(.2) Language and Gender
[WMS 326.1(.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.

327.1(.2) The Bible and English Literature
[REL 376.1(.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.

328.1(.2) The Catholic Tradition in Modern Literature in English
[REL 375.1(.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.

331.1(.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.

334.0 The Literature of Modern Ireland
[IRS 334.0]
A study of the contradictions and fissures in modern Ireland as these are seen through the imagination of her writers. The writers studied will include W. B. Yeats, J. M. Synge, G. B. Shaw, Sean O'Casey, Maurice O'Sullivan, Liam O'Flaherty, James Joyce, Patrick Kavanagh, Padraic Colum, Sean O'Faolain, James Stephens, J. B. Keane and Brian Friel.

341.1(.2) Introduction to Drama I
This course is a survey of representative plays from ancient Greece to 1700.

342.1(.2) Introduction to Drama II
This course is a survey of representative plays from 1700 to the present.

351.1(.2) Contemporary American Fiction
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.

356.1(.2) The Development of Science Fiction to the Golden Age
The course will explore visionary and speculative literature ranging from early nineteenth century speculative fictions up to and including the so-called "Golden Age" of Science Fiction. Authors such as the following will be read: M. Shelley, Poe, Wells, Stapledon, Huxley, Orwell, Bradbury, Clarke, Heinlein, Asimov, Vonnegut and Reynolds.

357.1(.2) Recent Science Fiction
This course will look at the recent expansion of the genre through experiments with form and subject matter, and the influence of such movements as New Wave and Cyberpunk. Authors to be studied will include such writers as Aldiss, Ballard, Brunner, Delaney, Ellison, Gibson, Haldeman, Herbert, LeGuin, Spinrad, Sterling, and Tiptree.

361.1(.2) World Literature in English: Selected Focus
This course will focus on the development of English-language literature within the confines of a single country or geographically-proximate countries other than England, Canada and the U.S.

365.0 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.

371.1(.2) Contemporary Canadian Fiction
This course offers a study of Canadian prose fiction of the period from 1965 to the present.

372.1(.2) Contemporary Canadian Poetry
This course offers a study of Canadian poetry of the period from 1965 to the present.

375.1(.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.

376.1(.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.

380.0 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.

381.0 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.

382.0 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.

383.1(.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.

391.1(.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 judgement.

392.1(.2) The Study of the Novel
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 judgement.

393.1(.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.

395.0 An Introduction to Shakespeare
This course is designed primarily for non-English majors with an

interest in Shakespeare. It studies in detail representative selections from the comedies, histories, tragedies, problem plays and last plays.

Note: English majors and honors students cannot count both EGL 395.0 and the 400-level Shakespeare I, II, and III courses as credits toward their major and honors programs, but they can count both as credits toward their university degrees.

401.1(.2) Special Author, Special Subject
This special half-credit course provides the opportunity to study a particular author or subject in depth and detail. It is designated to examine at an advanced level authors and topics not dealt with in other 400-level courses or to allow for a different approach to the study of authors and/or topics already covered in other countries.

402.0 History of the English Language
(LIN 402.0)
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 syntax, grammar and vocabulary.

404.0 Chaucer and the 14th Century
A course dealing primarily with the poetry of Chaucer which is studied in the original Middle English. Students are required to do outside reading on literary influences and on life in 14th century England.

406.0 The Poetry and Prose of the English Renaissance
This course is concerned with the development of English prose and poetry between the years 1550 and 1620.

408.1(.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.

409.1(.2) Drama and Society in the 19th Century
The study of drama and theatre in the Romantic era in relation to changing political and social conditions. The study includes melodrama, the influence of the actor-managers and the move towards realism. Also studied is the impact of European drama, particularly by Ibsen, on Shaw, Pinero and other British dramatists.

412.0 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.

414.0 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.

416.0 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.

417.1(.2) Feminist Literary Theory
[WMS 417.1(.2)]
Prerequisite: EGL 201.1(.2) and 202.1(.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.

418.0 The 19th Century Novel
A study of the English novel in the social and historical context of the 19th century. Attention will be given to technical and stylistic developments, recurrent themes, major conventions, and various other concerns shared by novelists such as Austen, the Brontes, Thackeray, Dickens, Eliot, Hardy and James.

420.0 Victorian Poetry and Prose
This course is devoted to a critical study of the work of such representative poets as Elizabeth Barrett Browning, Alfred Lord Tennyson, Robert Browning, Matthew Arnold, and Christina Rosetti, and writers of prose such as Thomas Carlyle, John Henry Newman, John Stuart Mill, and Matthew Arnold. The writers will be studied in the context of the literary, social, and cultural history of Victorian England.

424.0 20th Century American Literature
A study of significant practitioners of 20th century American fiction and poetry. Important intellectual and cultural trends will be considered as they emerge from a close study of the texts.

426.0 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.

427.1(.2) Language, Gender and Power
[WMS 427.1(.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 discoursal strategies. It examines dialect and generic features used in constructing and maintaining social identities and differences.

428.0 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.

430.0 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.

432.0 The Development of English Canadian Literature
This course deals with the literature of Canada preceding the contemporary period (1965 to the present). A variety of novelists and poets influential in the formation of Canadian literary tradition are examined.

433.1(.2) Biography
A course focusing on the special features and problems of biographical writing such as subjectivity, bias, historical perspective and the problems of evidence.

434.1(.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.

435.1(.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.

437.1(.2) Canadian Drama
This course traces the beginnings and follows the development of drama and theatre in Canada. It includes the study of works by Davies, Coulter, Reaney, Ryga, French and by Gelinas and Tremblay in translation.

438.1(.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.

440.0 Theory and Practice of Criticism
A general survey of the intellectual background and development of postmodernism as it emerges in literary and cultural criticism and theory. The main areas of investigation involve such dominant postmodernist problematics as literary and philosophical deconstruction, the critique of ideology, Lacanian psychoanalysis and the construction of subject, allegory and the sublime.

441.1(.2) The Irish Short Story
[IRS 441.1(.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.

442.1(.2) Irish Drama
[WMS 442.1(.2)]
Irish dramatists from Farquhar and Sheridan to Shaw, O'Casey and Beckett will be studied from the point of view both of their contribution to theatre in the English-speaking world and of their special Anglo-Irish or native Irish cultural background.

443.1(.2) Irish Poetry
[WMS 443.1(.2)]
Irish poets and poetry from ancient to modern times will be the subject matter of this course. Special emphasis will be placed on poets of the modern period from Yeats to Heaney, and the course will concentrate on the interaction of the patterns of Irish Gaelic sounds and images with those drawn from English language and culture.

444.1(.2) Shakespeare I
The subject of this course is Shakespeare's comedies and romances.

See note above for EGL 395.0.

445.1(.2) Shakespeare II
The subject of this course is Shakespeare's history plays and problem plays.

See note above for EGL 395.0.

446.1(.2) Shakespeare III
The subject of this course is Shakespeare's tragedies.

See note above for EGL 395.0.

447.1(.2) Shakespeare's Contemporaries
This course studies selected plays by such writers as Kyd, Marlowe, Decker, Jonson, Beaumont and Fletcher and Webster.

448.1(.2) Nineteenth Century American Literature from Emerson to Melville
This course is a survey of the major authors and works of American literature during the first half of the nineteenth century. Special emphasis will be given to Emerson, Thoreau, Hawthorne and Melville. Some attempt will be made to examine the historical and cultural influences exerted on the literature by the American Revolution and the Puritan sensibility.

449.1(.2) Nineteenth Century American Literature from Whitman to James
This course is a survey of the major authors and works of American literature during the second half of the nineteenth century. Special emphasis will be given to Whitman, Dickinson, Twain and James. It will attempt to give the student a sense of the developing voices of the post-Civil War culture.

450.1(.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, Milligan, Eliot and Fry.

451.1(.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.

453.0 Special Author

454.0 Special Subject
These special 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 400-level courses or to allow for a different approach to the study of authors and/or topics already covered in other courses.

460.0 Postcolonial Literature: An Overview
This course is designed to introduce students to postcolonial literature. Works of fiction to be studied will be from the Caribbean, Africa, New Zealand, India, Australia, and elsewhere, examining them within their political, historical and cultural contexts.

Classes 2 hrs. and group presentations 1 hr. a week. 2 semesters.

461.1(.2) Polemical Writing by Women
[WMS 461.1(.2)]
Women writers were involved in public discourse and debate for at least two centuries before winning the right to formal political participation. The course will examine the literary texts (e.g., Harriet Beecher Stowe's Uncle Tom's Cabin; Virginia Woolf's Three Guineas) generated by women about such issues as slavery, imperialism, women's suffrage, feminism, militarism and ecology.

463.1(.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.

475.0 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 EGL 375.1(.2) or 376.1(.2) will be asked to submit a sample portfolio of their work before registration.

490.0 Discourse Analysis
Prerequisite: At least one (1.0) credit in this Department's language or literature courses at the 300 level or above.

Linguistic, structural and semiotic approaches to discourse analysis are addressed. The course emphasizes the application of analytical techniques to a variety of text types.

550.0 Special Author
[WMS 550.0]
Additional prerequisite: enrolment in the English honors program or special recommendation of the Department.

This course 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.

551.0 Special Subject
Additional prerequisite: enrolment in the English honors program or special recommendation of the Department.

This course provides the opportunity to study a particular subject or period in considerable depth and detail, and will require some measure of independence and initiative in the student.

Tutorials by arrangement with supervisor. 2 semesters.

552.0; 555.1(.2)/556.1(.2) Honors 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.

553.1(.2) - 554.1(.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.

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English As A Second Language (ESL)

Course descriptions for this subject area are found in the Modern Languages and Classics Department section of this Calendar.

Environmental Studies (ENV)

Director Dr. Terence Day

General Information

The program of study leading to a Bachelor of Science in Environmental Studies is a rigorous multidisciplinary program combining basic sciences, management, social sciences and humanities, which will provide students with the necessary academic preparation to understand environmental and resource-oriented issues and to prepare them to contribute positively to an environmentally sound future. Graduates of the honors program may be qualified for admission to graduate programs in Environmental Studies. Graduate programs in other areas of science may require a different background than that offered by the Bachelor of Science in Environmental Studies.

Students pursuing the program leading to the Bachelor of Science in Environmental Studies may choose the honors option described below. Students may enrol in the Co-operative Education option provided the minimum requirements specified in the Co-operative Education section of this Calendar are met. To satisfy the Co-operative Education option, the student must complete a minimum of four work terms interspersed with the academic semesters.

Program of Study

1. Subject to the regulations set forth in this Calendar, students must complete the equivalent of twenty (20.0) credits and attain a grade of at least C (2.00 quality points) in all Environmental Studies courses and also in all courses selected from Groups B and C below.

2. The twenty (20.0) credits of the four-year (five years if co-op option) program of study consist of:

a. ten (10.0) required credits (Group A);

b. three (3.0) credits selected from a list of recommended arts, social science and commerce courses (Group B); and

c. five (5.0) credits selected from a list of recommended science courses (Group C).

The remaining two (2.0) credits may be selected from any discipline.

3. The choice of courses will be made in consultation with the Program Director (or designate) who will approve the student's proposed program.

4. For the Bachelor of Science (Honors) degree in Environmental Studies, students must obtain a grade of at least C (2.00 quality points) in all Environmental Studies courses and in all courses selected from Groups B and C; and a cumulative quality point average of at least 3.00. At least two (2.0) of the Group C courses must be at the 400 level or above. Students must also complete an original research project (ENV 599.0).

5. Students electing the co-op option within the program will make formal written reports on the completion of each work term and satisfy all normal co-op requirements.

6. The program works closely with the Environmental Science program at Acadia University. Students are encouraged to look at Acadia's calendar and timetable for other courses which may be appropriate in the program at Saint Mary's University.

7. With the approval of the department involved, students may pursue a double major program in Environmental Studies and any one of the following science subjects: Biology, Chemistry, Geology or Geology/Geography. In addition to satisfying the requirements for the Bachelor of Science in Environmental Studies (see Calendar), students must complete a minimum of six (6.0) credits in the chosen subject.

8. Group A: Basic required courses to be taken, if possible, in the first 2 years of the program.

BIO 200.0	Principles of Biology
CHE 202.0	General Chemistry for Life Sciences
ECO 201.1(.2)	Principles of Economics: Micro
ECO 363.1(.2)	Environmental Economics
EGL 201.1(.2)	English Composition
EGL 202.1(.2)	An Introduction to Literature
ENV 300.1(.2)	Introduction to Environmental Science
ENV 499.0	Seminar in Environmental Science
GEO 200.0	Introduction to Earth Science
GPY 203.1(.2)	Physical Geography: Global Patterns
GPY 213.1(.2)	Physical Geography: Local and Regional Patterns

One half (0.5) credit from the following:

MAT 207.1(.2)	Survey of Statistics
GPY 326.1(.2)	Statistical Methods for Geographers
MSC 207.1(.2)	Introductory Statistics for Commerce
BIO 308.1(.2)	Biostatistics

One (1.0) credit in the following:

CSC 226.1(.2)	Introduction to Computer Programming
CSC 227.1(.2)	Introduction to Computer Programming
or	
MAT 210.1(.2)	Introductory Calculus I
MAT 315.1(.2)	Introduction to Probability Theory

(see regulation in MAT section below concerning MAT 207 and 315)

or

MAT 210.1(.2)	Introductory Calculus I
MAT 211.1(.2)	Introductory Calculus II

One (1.0) from the following:

POL 305.0	International Relations
POL 321.1(.2)/322.1(.2)	International Organization and International Trade
POL 330.0	Introduction to Public Administration
POL 445.0	Introduction to Public Policy

Students who elect to take MAT 210.1(.2)/315.1(.2) or MAT 210.1(.2)/211.1(.2) will be required to take MSC 225.1(.2) (Introduction to Computers) as one of the Group C courses.

Students are required to take ENV 499.0: Seminar in Environmental Science after the completion of their other Group A courses.

Credit cannot be given twice for the same course in Group A and Group C.

Honors students must also complete an original research project (ENV 599.0 Honors Research Project) under the supervision of a member of the Environmental Studies Program. Each proposed project will be approved by the Program. On completion of the project, the student will be required to submit a thesis and to present the work orally.

9. Group B: Students must take at least three (3.0) credits from the following list. In special circumstances, courses not listed may be substituted with the prior, formal permission of the Program Director. The courses have been divided into environmental core courses, and background/techniques courses, for the convenience of students.

Environmental core courses:

ANT 221.1(.2)	Native Peoples of Canada
ANT 475.1(.2)	Seminar
ECO 361.1(.2)	Fisheries Economics
ECO 362.1(.2)	Natural Resource Economics
EGL 318.1(.2)	The Writer and Nature
GPY 204.1(.2)	Demographics and Culture
GPY 214.1(.2)	Environment and Livelihood
GPY 319.0	Cultural Ecology
GPY 331.1(.2)	Geography of Natural Resources and Energy
HIS 348.0	History of the Environmental Sciences
IDS 470.1(.2)	Environment and Development
MGT 388.1(.2)	Business and Its Environment
PHI 305.1(.2)	Environmental Ethics
PSY 414.1(.2)	Environmental Cognition
PSY 418.1(.2)	Environmental Psychology
REL 347.1(.2)	Ecology and Religion
REL 348.1(.2)	Religion and Ecological Issues in the Developing World
SOC 310.1(.2)	Society and the Environment
SOC 419.0	Sociology of the Environment
SOC 453.0	Citizen Participation in Community Planning

Background and techniques courses:

COM 293.1(.2)	Managerial Communication
COM 394.1(.2)	Oral Communication and Presentation Techniques
COM 475.1(.2)	Advanced Managerial Communication
ECO 202.1(.2)	Principles of Economics: Macro
HIS 307.0	Science in the West Since 1500 A.D.
MGT 392.1(.2)	Occupational Health & Safety
MSC 301.1(.2)	Operations Research

PHI 302.0	Ethics
PHI 448.1(.2)	Philosophy of Science
PSY 250.1(.2)	Social Behavior
PSY 309.1(.2)	Human Factors
PSY 497.1(.2)	Community Psychology
REL 349.1(.2)	Science & Religion
SOC 372.1(.2)	Social Impact Analysis
SOC 387.1(.2)	Women & Development

any languages courses, up to 1.0 credit

Group C: Students must take at least five (5.0) credits from the following list. Students in the honors program must take at least four (4.0) credits from the following list plus ENV 599.0: Honors Research Project. In special circumstances, courses not listed may be substituted with permission of the Program Director.

BIO 324.1(.2)	Ecology
BIO 331.1(.2)	Population and Ecosystem Health
BIO 411.1(.2)	Animal Parasitology I
BIO 412.1(.2)	Animal Parasitology II
BIO 413.1(.2)	Introduction to Microbiology
BIO 414.1(.2)	Environmental Microbiology
BIO 416.1(.2)	Mycology I
BIO 417.1(.2)	Mycology II
BIO 421.1(.2)	Biology of domesticated plants
BIO 422.1(.2)	Applied Ecology
BIO 425.1(.2)	Ecology of Fishes
BIO 427.1(.2)	Introductory Entomology
BIO 428.1(.2)	Applied Entomology
BIO 448.1(.2)	Biology Field Course
BIO 449.1(.2)	Aquatic Parasitology
BIO 450.1(.2)	Diversity in Forest Ecosystems
BIO 510.0	The Theory of Ecosystems
CHE 332.1(.2)	Introductory Analytical Chemistry: Wet Methods
CHE 333.1(.2)	Introductory Analytical Chemistry: Instrumental Methods
CHE 344.1(.2)	Organic Chemistry I
CHE 346.1(.2)	Organic Chemistry IIB (or IIA if double major in Chemistry)
CHE 373.1(.2)	Introduction to Environmental Chemistry I
CHE 374.1(.2)	Introduction to Environmental Chemistry II
CHE 432.1(.2)	Instrumental Analysis I
CHE 433.1(.2)	Instrumental Analysis II
CHE 451.1(.2)	Introductory Biochemistry
CHE 452.1(.2)	Biochemistry: Metabolism and Molecular Biology
ENV 310.2(.2)	Field Course in Environmental Studies
ENV 410.1(.2)	Environmental Impact Assessment
ENV 420.1(.2)	Environmental Monitoring and Auditing
ENV 430.1(.2)	Directed Research
GEO 300.1(.2)	Field Methods
GEO 325.1(.2)	Sediments and Depositional Environments [GPY 325.1(.2)]
GEO 340.1(.2)	Surface and Groundwater Hydrology
GEO 350.1(.2)	Environmental Geoscience Issues
GEO 400.0	International Field Camp
GEO 414.1(.2)	Global Geology
GEO 441.1(.2)	Mineral Resources
GEO 442.1(.2)	Industrial Mineral Deposits
GEO 453.1(.2)	Principles of Geochemistry
GEO 454.1(.2)	Applied Geochemistry
GEO 465.1(.2)	Sedimentology [GPY 465.1(.2)]
GEO 466.1(.2)	Petroleum Geology
GPY 304.1(.2)	Environmental Management
GPY 313.1(.2)	Geomorphology [GEO 373.1(.2)]
GPY 314.0	The Oceans: A Physical Geography
GPY 316.1(.2)	Map and Air Photo Interpretation
GPY 324.0	Ocean Use and Management
GPY 333.1(.2)	Biogeography
GPY 336.1(.2)	Principles of Cartography
GPY 366.1(.2)	Field Techniques and Research Methods
GPY 343.1(.2)	Weather & Climate
GPY 413.1(.2)	Coastal Geomorphology
GPY 414.1(.2)	Coastal Management
GPY 423.1(.2)	Glacial Geomorphology [GEO 475.1(.2)]
GPY 446.1(.2)	Geographical Information Systems (Rastor)
GPY 456.1(.2)	Remote Sensing of the Environment
GPY 478.1(.2)	Geographical Information Systems (Vector)
GPY 496.1(.2)	Applications in GIS
MAT 210.1(.2)	Introductory Calculus I
MAT 211.1(.2)	Introductory Calculus II
MSC 225.1(.2)	Introduction to Computers
PHY 230.0	Physics for Life Sciences

11. Program Structure. With the exception of ENV 499.0 (Seminar in Environmental Studies), students are expected to complete most of the Group A courses within the first two years of the program.

Alternative program structures are possible, subject to the approval of the Program Director.

300.1(.2) Introduction to Environmental Science
Prerequisite: officially declared major/honors in Environmental Studies.

This course describes the application of physical, life and social sciences to an understanding of the environment. The course will include a survey of environmental problems, solutions and strategies for sustainable development.

310.2(.2) Field Course in Environmental Studies
Prerequisite: ENV 300.1(.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.

410.1(.2) Environmental Impact Assessment
Prerequisite: ENV 300.1(.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.

420.1(.2) Environmental Monitoring and Auditing
Prerequisite: ENV 300.1(.2) and one of MAT 207.1(.2) or GPY 326.1(.2) or MSC 207.1(.2) or BIO 308.1(.2).

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.

430.1(.2) Directed Research
Prerequisite: ENV 300.1(.2)

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.

499.0 Seminar in Environmental Science
Prerequisite: ENV 300.1(.2).

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.

599.0 Honors Research Project
Prerequisite: honors standing in Environmental Studies.

Honors 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.

Executive Master of Business Administration (EMB)

Director — Dr. Hermann Schwind
Adjunct Professors — Dr. Timothy O'Neill, Dr. Robin Stuart-Kotze

A complete description of this graduate program is found in Section 3 of this Calendar.

The following courses are available only to students registered in the Executive Master of Business Administration Program.

Year 1: Fall Semester
EMB 511.1; 512.1; 514.1; and 522.1.

Winter Semester
EMB 513.2; 521.2; 523.2; and 524.2.

511.1(.2) Managerial and Financial Accounting
This course is designed to improve students' decision-making abilities as managers using accounting information within organizations, and as managers interpreting and using externally published financial statements from other organizations. The use of accounting systems for planning of activities and control of operations with emphasis on the human behavioral aspects will be studied. The course will also develop and further the student's knowledge of accounting techniques and principles and their understanding of accounting data.

512.1(.2) Organizational Behavior and Theory
This course is concerned with the behavior and attitudes of individuals and groups in organizations and with how organizations are structured to achieve their goals. The course relies heavily on the contributions of psychology, sociology and anthropology, and strong emphasis is placed in those management decisions that contribute to organizational effectiveness. Topics to be covered typically include leadership, motivation, job design reward systems, control systems, group-dynamics, communication and decision-making, designing jobs and reward systems, evaluating organizational effectiveness, conflict management, organizational culture, and change.

513.1(.2) Marketing Management
The purpose of the course is to provide a systematic coverage of the marketing management, locally, nationally and globally - its major concepts, methods and models. In addition, the perspective of the course extends from the marketing concepts to marketing strategy: marketing's strategic role is emphasized, and the perspectives of the marketing mix are analyzed from a strategic angle. The course will, through case studies and class exercises, encourage familiarity with a range of concepts and techniques which can be used to develop effective strategies and plans.

514.1(.2) Business Research Methods
This course covers the basic topics related to the collection, analysis and presentation of data for business decision-making. Topics include elementary notions of research and theory construction and statistical inferential, sample design, regression and correlation, model building, time series and index, and forecasting. The use of primary and secondary data sources will be addressed. The presentation of research results will emphasize the fundamentals of both written and oral communication techniques for effective presentation of business data/research results.

521.1(.2) Corporate Finance
The objective of the course is to provide an integrated view of the financing and investment decision of the firm by focusing on how the value of a company is affected by the trade-offs between the returns and risks inherent in all financial decisions. Topics include agency theory signalling and financial compensation schemes and their impact on financial decision making. Students should complete the course having an in-depth appreciation of the nature of the financial markets within which the firm operates together with a solid working knowledge of a wide variety of financial decision techniques.

522.1(.2) Managerial Economics
This course is designed to provide a foundation of economic understanding for use in managerial decision-making. The major microeconomic topics covered include demand, supply and pricing strategy under different market structures. The theory of demand and the concept of elasticity are developed with emphasis placed on interpreting the empirical estimates of these concepts. Production and cost in both the short run and long run are discussed, and the importance of these factors for managerial decision-making is carefully considered. The appropriate firm pricing policy under perfect competition, monopoly, monopolistic competition and oligopoly is covered as well.

523.1(.2) Operations Management
This course provides the student with a foundation in the concepts and techniques of operations management, especially the methods used for the planning, organizing and scheduling of operations in both manufacturing and other institutional settings. Students will be introduced to analytic decision making through such techniques as linear programming, decision analysis and simulation. Applications include inventory control, project management, production scheduling and resource allocation.

524.1(.2) Human Resource Management
This course is about hiring and managing individuals at work. In broad terms, this course exposes a student to the theory and practice of procuring, developing, and utilizing the human resources of an organization. It will help that student to identify several individual, organizational, and environmental factors that influence people at work and which have a decisive influence on an organization's human resource policies. Specific topics dealt with will include: human resource planning, job analysis, recruitment and selection, orientation, training and development, performance appraisal, compensation management, elements of industrial relations, and quality of work-life improvement strategies.

Year 2: Fall and Winter Semester

631.1(.2) Management Information Systems
Information Systems play a critical role in the success of most enterprises. Managing the corporate information systems function has become very challenging, with rapidly changing issues and approaches, and greater requirement for information systems strategy to be aligned with business strategy. This course addresses the major management topics associated with managing the MIS function. Topics include user satisfaction and demand for information, managing service quality of MIS, the successful management of technology, the relationship between automation and productivity, data security, and justification of the MIS budget. Management issues in emerging topics such as office systems and microcomputers are also discussed.

632.1(.2) International Capital Markets
The objective of this course is to understand the global nature of financial markets and the role of international banking. The course commences with a recapitulation of the make-up of a developed market financial system. Particular attention will be focused on the foreign exchange market. The interrelationships within the domestic system and its interdependence with the "world" system are illustrated and the apparent robustness of the system to withstand shocks is assessed, as well as its ability to innovate in the financial claims it can offer and the financial centres that have developed.

633.1(.2) Policy I - Business Strategy
Course objectives: This course is designed to develop a general management perspective within the context of current strategic management concepts and techniques. The concept of strategy will be used as the theme to develop this course, and to assist in the integration of materials covered in other parts of the EMBA course activities. The primary teaching vehicle in this course will be the case method. Although some lectures will be given, concept development will take place through case discussions, readings and presentations. Background material will be provided by the instructor.

634.1(.2) Business Research Project I
The object of this research project course is to give the group the opportunity to examine a particular problem in depth. The individual student's work will be supervised by a faculty member. Students will be required to present the findings of the project in the continuing Business Research Project II course, EMB 646.1(.2).

641.1(.2) International Business
This course focuses on some critical issues facing the manager in the international business arena. Introductory sessions examine

...es of international trade and foreign market penetration strate-...s such as exporting, licensing and joint ventures. The multina-...al enterprise and organizational problems in international oper-...ons are also discussed, including the management of foreign ...change rate risk. After discussing issues of strategy and struc-...e in the multinational enterprises, students will examine issues ...ling with the nation-state, both in the developed world and in ... less developed regions.

...2.1(.2) Policy II - Public Policy in Business
...s course examines the operation of the macroeconomy and dis-...ses the fiscal and monetary tools available to the central ...horities to affect overall economic activity. The traditional ...nesian model is developed and the debate between the mone-...sts and the Keynesians is discussed. The purpose and the ...ct of government regulations of the business environment will ... examined as well.

...3.1(.2) Industrial Relations (Elective)
...s course will cover the analysis of structure, functions, and gov-...ment of the Canadian union movement; application of theoreti-... models to contemporary problems in labour and industrial rela-...s in Canada; a study of the impact of environmental factors on ...ion management relations. Emphasis will be placed on Institu-...al and behavioral aspects of Industrial relations. An attempt will ... made to identify the objectives, values and motivations of the ...ious parties involved in collective bargaining and the role of ...ustrial conflict and industrial harmony will be examined in the ...text of collective bargaining goals.

...4.1(.2) Financial Innovations (Elective)
...s course will examine the pace of innovation, deregulation and ...ulting structural transformations that have occurred in financial ...kets. Attention will focus on new financial instruments, particu-...y those that are of an off-balance sheet commitment form. Note ...urance Facilities (NIFs), currency and interest rate swaps, cur-rency and interest rate options, Forward Rate Agreements (FRAs), option strategies and index futures will be covered, and future trends in innovations will be addressed.

645.1(.2) International Marketing (Elective)
This course is designed to provide students with insights into the nature and environmental perspectives of marketing across national boundaries and with those within foreign countries. Emphasis is placed on the analytical processes in international marketing decisions, as well as knowledge of tools and practices for structuring and controlling marketing programs related to international business. Case studies will be used extensively.

646.1(.2) Business Research Project II
Business research requires the scientific development, planning, execution and reporting of a business research project. The research will be conducted and reported under the guidance of a faculty advisor. The project must be well grounded in the current literature, and the report should include a delineation of the problem, method, results, and conclusions. In this course, students will be required to present their research projects to the EMBA students and faculty.

690.1(.2) Seminar in Business Studies
Prerequisite: completion of all required 500-level EMBA courses.

The course deals with selected topics in business. The topics to be covered will vary depending on the interest of the students and instructors.

691.1(.2) Directed Study
Prerequisite: completion of all required 500-level EMBA courses and permission of EMBA Director, Departmental Chairperson, and instructor.

Intended to supplement or provide an alternative to the electives in order to meet the special needs and interests of students.Film Studies (FST)

Film Studies (FST)

5

...mmencing with the 1998-99 academic year, a new minor, in Film ...dies, was introduced and made available to undergraduate stu-...nts in all three faculties.

...is minor offers students an opportunity to become familiar with ...e history of filmmaking, the language employed in discourse ...out film, and styles of artistic and social commentary about film. ...e courses pertaining to particular national or regional cinema ...ow for an understanding of the role of film in creating/expressing ...cial identity, other courses pertain to the creation of gender iden-...y, and yet others are concerned with film production. This is an ...er-university program which allows students to obtain credit ...m any of the four participating institutions - Saint Mary's, ...lhousie, Mount Saint Vincent Universities, and the Nova Scotia ...llege of Art and Design.

...equirements: 4.0 credits (2.0 required credits and 2.0 elective credits).

...equired courses (2.0)

...) either (1.0 from NSCAD)

...300.03L: Film History and Criticism, 1890-1940, and

...300.03L: Film History and Criticism, 1940-1990
or (1.0 from Dalhousie)
2300.6: Film Study; and

...) also (1.0 from Mount Saint Vincent)
...293: Introduction to Film Language, and
...295: Aesthetics and Film

...ective courses (2.0) currently available from the four cooperating ...stitutions.

Saint Mary's University

ACS 305.1(.2):	Moving Images of Atlantic Canada
ASN 302.1(.2):	Japan in Film and Literature
ASN 310.1(.2):	Chinese Film and Literature
ASN 311.1(.2):	Southeast Asian Popular Culture
CLA 307.0:	Ancient Rome in Film, Fiction, Fact
EGL 313.0:	Narrative in Fiction and Film
HIS 450.1(.2):	Film and History

Dalhousie University

Eng 2213 (.5 credit)	Contemporary Films
Eng 3095 (.5 credit)	Narrative and Cinema
Hist 3116 (.5 credit)	Culture and Society
Mus 2015 (1 credit)	Music and Drama
Span 3800 (.5 credit)	Latin America Cinema (In Spanish)
His 2082 (.5 credit)	20th Century Europe

Mount Saint Vincent University
FINE/WOMS 3330 (.5 credit) Canadian Women Film Directors
FINE/WOMS 3333 (.5 credit) International Women Film Directors

Nova Scotia College of Art and Design
3850 (.5 credit) History and Criticism of Documentary Film
4800 (.5 credit) 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 Associate Dean of Arts, c/o Department of Political Science.

The regular "Declaration of Major/Minor/Concentration" form is to be used to declare a minor. Students must fulfil 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 and Management Science (FIN and MSC)

Chairperson, Associate Professor	M. Chew
Professors	T. Charles, J.C. Dodds, E. Lee
Associate Professors	S. Amirkhalkhali, F. Boabang, P. Dixon, J. Gregory, H. Millar, M. Mohd, M. Wang
Assistant Professors	S. Cleary, D. Jutla, K. Kimery, G. MacKinnon, H. Nemiroff
Adjunct Professors	M. Kah, S. Lockyer, A. Surovell, D. Welch, T. Whalen

The Department of Finance and Management Science offers a variety of courses that may be classified as follows:

a. those that deal directly with three of the primary functions of business - finance, information management, and operations management; and

b. those whose aim is to develop skills in management science - quantitative methods, computing, and statistics, which indirectly relate to all of the primary functions of business.

In addition to the core courses in quantitative methods [MSC 205.1(.2), MSC 206.1(.2), MSC 207.1(.2)], computing [MSC 225.1(.2)], and finance [FIN 360.1(.2), FIN 361.1(.2)] which are required for the Bachelor of Commerce degree, the Department offers a number of advanced courses. In particular, those students pursuing a Bachelor of Commerce may elect to major in finance or computing and information systems. These two programs are outlined in Section 3 of the Calendar.

In addition to the computing and information systems program cited above, information on other computer-related degree programs may be found in Section 3 of this Calendar.

At the graduate level, the Department offers the core courses [MSC 506.1(.2), MSC 521.1(.2) and FIN 561.1(.2)] required of all students in Year 1 of the MBA Program, as well as a number of elective courses available at the 600 level in Year 2 of the MBA Program.

Finance (FIN)

260.1(.2) Personal Finance
A survey course designed to enable the student to better understand the considerations involved in the management of personal income savings, investments, mortgage analysis and tax planning.

Note: This course may not be taken for credit in the Bachelor of Commerce degree program.

360.1(.2) Business Finance I
Prerequisite: MSC 207.1(.2) and ACC 242.1(.2), the latter of which may be taken concurrently.

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.

361.1(.2) Business Finance II
Prerequisite: FIN 360.1(.2).

A continuation from FIN 360.1(.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.

362.1(.2) Principles of Real Estate and Appraisal
Prerequisite: CML 201.1(.2), and (or concurrently) FIN 361.1(.2).

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.

363.1(.2) Principles of Insurance
Prerequisite: CML 201.1(.2), and (or concurrently) FIN 361.1(.2).

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.

462.1(.2) Real Estate Investment Decisions
Prerequisite: FIN 361.1(.2) and 362.1(.2).

This course examines selected advanced problems and issues in the area of real estate investment analysis. Topics include an analysis of real estate investment markets, forms of ownership, the impact of financing on equity returns, measurement and management of risk and return on individual properties, financing new development, and analyzing real estate in the context of mixed-asset portfolios. The course involves a mixture of case studies and lectures. Students will work in groups of 2-3 to complete a number of case studies that apply the theories taught in lectures. Each student will undertake an individual research/case project.

Classes 1 1/2 hrs. and seminar 1 1/2 hrs. a week. 1 semester.

463.1(.2) Financial Management
Prerequisite: FIN 361.1(.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.

464.1(.2) Issues in Corporate Finance
Prerequisite: FIN 463.1(.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 environment. 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, spreadsheet and some financial analysis software will be used in this course.

465.1(.2) Mergers, Restructuring and Corporate Control
Prerequisite: FIN 361.1(.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.

466.1(.2) Investments
Prerequisite: FIN 361.1(.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.

467.1(.2) Portfolio Management
Prerequisite: FIN 466.1(.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.

468.1(.2) Financial Innovations
Prerequisite: FIN 466.1(.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

...ured include stock and index option strategies, currency options, ...interest rate options; commodity futures; currency, interest rate, ...commodity swaps. Applications to hedging strategies will be ...hasized.

...1(.2) Risk Management
...requisite: FIN 466.1(.2).

...course provides a comprehensive analysis of the many different ...s of risk exposure in the financial marketplace. It deals with risk ...surement and control, from both the investor's and manager's ...pective. Topics include risk and return measurement in the ...y, bond, equity, mortgage, futures, options and swaps markets, ...diversification within domestic and global markets; hedging ...rsified portfolios using futures and options instruments; manage... of interest rate risk using caps, floors, and collars and swaps; ...agement of foreign exchange rate risk; management of bank ...tion gap; and personal risk management.

...1(.2) Fixed Income Securities
...requisite: FIN 466.1(.2).

...course provides a detailed analysis of the bond market and the ...ments available therein. Although the emphasis is on North ...rican securities, global portfolios are also examined. Bond valua... and bond portfolio strategies are covered in depth. Treasury ...rities, corporate bonds, municipal bonds, mortgages, mortgage ...ked securities, CMO's and interest rate options are addressed.

...1(.2) Financial Institutions
...requisite: FIN 361.1(.2).

...course will deal with the structure and function of Canadian ...ncial institutions such as: banks, brokers and investment banks, ...rance companies and mutual funds. The role of each type of ...tution in the economy will be discussed as well as regulation of ...industry. The main emphasis of the course will be on the institu... as businesses; their profit and risk structure.

...1(.2) International Financial Management
...requisite: FIN 361.1(.2).

...course is divided into three major parts. The first part provides a ...ic understanding of the forces that determine the relative values ...currencies in the foreign exchange markets. Parts two and three ...us on the firm with the financing of international operations and ...ital budgeting decisions.

...1(.2) Seminar in Finance
...requisite: permission of Chairperson or instructor.

...course deals with selected topics in finance. It is offered when in ...icient demand, and specific topics covered may vary depending ...the interests of students and instructor.

...1.1(.2) Small Business Consultancy
...requisite: permission of instructor.

...conjunction with students from other business disciplines, this ...urse provides the opportunity for students to acquire hands-on ...erience by working with clients of the Saint Mary's University ...siness Development Centre.

...rnship.

...2.1(.2) Directed Study
...requisite: permission of Chairperson and instructor.

...ended to supplement or provide an alternative to the regular ...nance courses in order to meet the special needs and interests of ...dents, the course provides an opportunity to study a particular ...ject in detail and requires from the student some measure of inde...ndence and initiative. Prior to undertaking registration for this ...urse, students must have a detailed course proposal approved by ...e appropriate instructor. Proof of this approval must be submitted ...the time of registration for the course. Students are encouraged to ...tain this approval prior to leaving campus in the Spring.

...torial and independent study. 1 semester.

The following courses are available only to students registered in the Master of Business Administration Program and with permission of the MBA Director to students registered in other master's programs.

561.1(.2) Business Finance
Prerequisite: ECO 500.1(.2) or 501.1(.2); MSC 506.1(.2) or 507.1(.2); ACC 540.1(.2) or 548.1(.2); or permission of MBA Director.

An introduction to financial management and the role of finance, both within the organization and the economy as a whole with emphasis on financial decision-making. The topics considered include investment decisions and subsequent financing, the costs of capital, the management of assets, and dividend policy.

662.1(.2) Seminar In Real Estate Investment
Prerequisite: FIN 561.1(.2).

Problems in real estate analysis are considered with emphasis given to the application of economic and financial models to the purchase of existing properties, development of new properties, and financing acquisition and ownership. Topics include an overview of the investment process, the efficiency of real estate markets, discounted cash flow techniques, appraisal methods, risk analysis, taxation, forms of ownership, and the performance of real estate in mixed-asset portfolios. The course involves a mixture of case studies and lectures. Students will work in groups of 2-3 to complete a number of case studies that apply the theories taught in lectures.

Classes 1 1/2 hrs. and seminar 1 1/2 hrs. a week. 1 semester.

663.1(.2) Financial Management
Prerequisite: completion of all required 500-level MBA courses or permission of MBA Director.

Managerial in emphasis, this course examines financial planning and analysis, working capital management, capital budgeting techniques, and theories of cost of capital and valuation of the firm.

664.1(.2) Corporate Finance
Prerequisite: FIN 663.1(.2) or equivalent.

This course is also managerial in emphasis and covers material related to financing both the short and long term assets of the firm: bank borrowings, bonds, preferred stock, common stock, as well as mergers and consolidation.

665.1(.2) Mergers and Restructuring
Prerequisite: FIN 561.1(.2).

The course examines financial and economic aspects of corporate mergers, acquisitions, joint ventures, restructuring, and other corporate control transactions. Relations between corporate control transactions and performance are explored. This course will expose students to key corporate finance literature.

666.1(.2) Capital Markets
Prerequisite: completion of all required 500-level MBA courses or permission of MBA Director.

The purpose of this course is to discuss the management of investments. Although a strong theoretical treatment is adopted, the course is developed in the context of Canadian financial markets and available empirical work will be reviewed. Recent advances in option and bond markets will be developed and computer applications stressed. In addition, the asset-liability management of financial institutions - banks, mutual funds, Insurance companies and public funds - will be reviewed.

667.1(.2) Options, Futures and Swap Markets
Prerequisite: FIN 668.1(.2).

This course is intended to help students understand activities of the financial institutions in the market place and the types of financial innovations taking place in the market place. Topics covered include contemporary issues in the options and futures markets and applications: stock options, stock index options, foreign currency options, curb options, commodity futures, foreign exchange futures, interest rate futures, stock index futures and interest rate swaps. Applications to hedging strategies are also emphasized.

668.1(.2) Investments and Portfolio Management
Prerequisite: FIN 561.1(.2).

This course presents an overview of the Canadian investment environment focusing on various securities that trade in the money, bonds, and equity markets. Both qualitative and quantitative treatments of risks and returns associated with investments in these markets are discussed. Applications to managed (active) and unmanaged (naive) portfolios, performance evaluation and interest rate risk management from the perspective of financial institutions. Topics covered include market transactions, portfolio theory and analysis, asset pricing models and market efficiency, security analysis, equity and fixed-income portfolio management and performance appraisal.

670.1(.2) Fixed Income Securities
Prerequisite: FIN 668.1(.2)

This course provides a detailed analysis of the bond market and the

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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, mortgage backed securities, CMO's and interest rate options are addressed.

671.1(.2) Financial Institutions
Prerequisite: FIN 561.1(.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.

676.1(.2) International Business Finance and Banking
Prerequisite: completion of all required 500-level MBA courses or permission of MBA Director.

This course is organized around two themes - (i) the concept of the multinational firm and the financial management decisions it takes in a multi-currency world - and (ii) the challenges faced in the international banking system of asset/liability management, offshore financial centres, external debt and rescheduling and increased regulatory and supervisory measures.

690.1(.2) Seminar In Finance
Prerequisite: completion of all required 500-level MBA courses or permission of MBA Director.

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. In the past these have included real estate, investment and portfolio management, and international banking.

692.1(.2) Directed Study
Prerequisite: completion of all required 500-level MBA courses and permission of MBA Director, Departmental Chairperson, and instructor.

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.

699.1(.2) Research Project in Finance
Co-requisite: FIN 698.1(.2) plus one and one-half (1.5) 600-level Finance courses (may be taken concurrently).

Each student is required to complete a project involving the practical application of the research concepts and techniques used in finance, under the direct supervision of a faculty member. Interdisciplinary projects are acceptable.

Management Science (MSC)

205.1(.2) Introduction to Quantitative Methods for Commerce I
Prerequisite: Nova Scotia Grade 12 MAT 441 or 442; or MAT 050.1(.2)/051.1(.2); or equivalent.

This course illustrates applications of basic mathematical techniques in break-even analysis, data manipulation, aggregate planning and financial planning. Topics include linear functions, linear inequalities, the simplex method, compound interest, annuities and depreciation.

Note: This is the same course as ECO 205.1(.2).

206.1(.2) Introduction to Quantitative Methods for Commerce II
Prerequisite: Nova Scotia Grade 12 MAT 441 or 442; or MAT 050.1(.2)/051.1(.2); or equivalent.

Note: No credit will be given for MSC 206.1(.2) if taken subsequently to or concurrently with MAT 210.1(.2).

The purpose of this course is to provide a basic understanding of the dynamics of non-linear functions as they relate to the use of scarce resources for profit maximization. Students will be exposed to the basic methods of calculus and the basic concepts of probability as they relate to decision making in an uncertain environment.

Note: This is the same course as ECO 206.1(.2).

207.1(.2) Introductory Statistics for Commerce
Prerequisite: MSC 206.1(.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 accounting, economics, marketing, management finance and production.

Note: This is the same course as ECO 207.1(.2). Additional credit will not be given for MAT 207.1(.2); MAT 315.1(.2); or BIO 308.1(.2).

225.1(.2) Introduction to Computers
This course is an introduction to computers and their use in a business environment. The emphasis of the course is learning the use of common business software packages and programming. Other topics will include computer hardware and software, data processing and information systems.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

301.1(.2) Operations Research
Prerequisite: MSC 207.1(.2), and MSC 225.1(.2).

This course provides a survey of various operational research models available to management decision-makers. Emphasis is placed on the selection and formulation of appropriate models, as well as the analysis and interpretation of their computer-generated solutions. Topics covered include: resource allocation, inventory management and transportation and other network problems.

303.1(.2) Statistical Analysis for Business and Economics
Prerequisite: MSC 207.1(.2).

This course provides a further study of the statistical concepts introduced in MSC 207.1(.2). It develops a working knowledge of such statistical tools as chi-square tests on contingency tables, multiple regression analysis, time series, and analysis of variance as applied to a variety of business and economic problems with the aid of computerized data analysis.

Note: This is the same course as ECO 303.1(.2).

316.1(.2) Management of Service Operations
Prerequisite: MGT 281.1(.2), MSC 205.1(.2) and MSC 207.1(.2).

This course is designed to provide an overview of problems arising in provision of services in such areas as health care, banking, hospitality industries, transportation, etc. Topics covered include forecasting, location analysis, layout design, capacity planning, workshift scheduling, vehicle routing, quality control and inventory control.

317.1(.2) Management of Manufacturing Operations
Prerequisite: MGT 281.1(.2), MSC 205.1(.2) and MSC 207.1(.2).

This course is designed to provide an overview of problems arising from the production and supply of goods and services. Problem areas include: forecasting, distribution, plant layout, inventory management, quality management, planning of large projects and scheduling. Emphasis will be on problem identification and the evaluation of alternative solution strategies.

316.1(.2) Total Quality Management
Prerequisite: MSC 207.1(.2).

Quality is an important competitive weapon in modern business strategy. Students will understand the principal role of total quality in improving the competitiveness of the firm in both local and global business environments. Topics include: total quality management (TQM) philosophies, dimensions of product and service quality, modern statistical improvement tools, and the design of quality strategies.

320.1(.2) Business Applications Programming
Prerequisite: MSC 205.1(.2) and 225.1(.2).

This is a foundation programming language course that presents fundamental principles used in writing business applications. Primitive data types, basic data structure, flow control constructs, reusable modules, and debugging techniques are covered. Further topics include parameter-passing methods, application programming interfaces (APIs) and dynamic link libraries (DLLs). The Implementation language, such as Visual Basic, will utilize object-oriented concepts. Labs are required. This course is a foundation course for the CIS program.

Classes 3 hrs. and lab 75 minutes a week. 1 semester.

225.1(.2) The Use of COBOL in Data Processing
Prerequisite: MSC 225.1(.2) or CSC 226.1(.2).

COBOL program organization, file organization, description and processing, edit, sort, file maintenance and report writing programs, nested data, integration concepts, multi-programming concepts.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

320.1(.2) Database Programming
Prerequisite: MSC 320.1(.2).

This course covers programming business applications in a current database language. Also covered is a survey of data structures used in business applications and how they are implemented in common software packages.

325.1(.2) Decision Support Applications
Prerequisite: MSC 320.1(.2).

This course is a continuation of MSC 225.1(.2) and provides an in-depth understanding of the integration of computer software to support business decision-making. Core content will include advanced use of spreadsheets, word processing and operating system macros. Other computer packages such as presentation graphics, accounting systems, decision support systems and expert systems may be utilized. This course will be taught as a series of decision problem cases.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

402.1(.2) Operations Research Methods and Applications
Prerequisite: MSC 301.1(.2).

The model-building techniques and optimization methods introduced in MSC 301.1(.2) are discussed in detail, and utilized in realistic management science case studies. Methods considered will include dynamic programming, non-linear programming, Monte Carlo simulation and stochastic optimization. An emphasis will be placed on comparing the relative advantages of each operations research method, and selecting appropriate techniques for a given management problem.

425.1(.2) System Analysis and Design
Prerequisite: ACC 323.1(.2) and MSC 324.1(.2).

The intent of this course is to provide the student with the necessary skills to conduct successfully an analysis of computerized information systems. These skills include, but are not limited to, fact finding techniques, data flow modelling techniques, data dictionary syntax, Information system development methodologies, and project management skills and techniques. Students will work together in groups of 4-5 to complete a comprehensive case applying the tools and techniques learned in class. A computerized development tool will be used to implement the case.

Classes 3 hrs. and lab 1 hr. a week. 1 semester.

426.1(.2) Computer Configurations
Prerequisite: MSC 326.1(.2), MSC 335.1(.2), and ACC 323.1(.2).

In this course the student gains a basic knowledge of computer hardware and software needed to run standard business applications. The hardware topics provide the background needed for making management decisions with respect to small business computer requirements. The software topics emphasize ways to maximize the efficient use of computers in small business.

436.1(.2) Data Communications
Prerequisite: MSC 426.1(.2).

This course is an introduction to data communications and networks from a business application perspective. Topics covered include fundamental concepts of communications, types of communication links, information coding, and wide-area and local-area networks.

490.1(.2) Seminar in Management Science
Prerequisite: permission of Chairperson or instructor.

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.

491.1(.2) Small Business Consultancy
Prerequisite: permission of instructor.

In conjunction with students from other business disciplines, this course provides the opportunity for students to acquire hands-on experience by working with clients of the Saint Mary's University Business Development Centre.

Internship.

492.1(.2) Directed Study
Prerequisite: permission of Chairperson and instructor.

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.

Tutorial and independent study. 1 semester.

The following courses are available only to students registered in the Master of Business Administration Program and with permission of the MBA Director to students registered in other master's programs.

506.1(.2) Statistics for Managers
Emphasis in this course will be on developing the conceptual foundations and an in-depth understanding of the most useful statistical techniques used in marketing and management studies, in financial and economic analysis, and in accounting work. Topics include descriptive and inferential statistics, multiple regression, forecasting and quality control. The focus will be on statistical analysis of real business problems in their full complexity. Extensive use will be made of a computer package such as Excel for exploring sets of data, for testing hypotheses, and for testing assumptions.

521.1(.2) Managing Information and Technology
This course focuses on developing an in-depth understanding of information technology in the workplace (e.g., hardware, software, and networks), organizational implications of information systems, and building and managing information systems. Instructional methods will include class discussions, case analyses, and practical projects for actual businesses.

603.1(.2) Statistical Applications in Management Science I
Prerequisite: completion of all required 500-level MBA courses or permission of MBA Director.

This course brings together many of the theories and skills which the student has learned and uses them in designing, conducting, analyzing, and reporting the results of research designs. Statistical techniques used are: chi-square, analysis of variance, and multiple regression. Extensive use is made of computer-oriented statistical packages.

604.1(.2) Statistical Applications in Management Science II
Prerequisite: MSC 603.1(.2).

This course is a further study of the application of research design, statistical techniques, and reporting procedures to actual research problems. Statistical techniques used are: multivariate analysis of variance, factor analysis, discriminant analysis, and cluster analysis.

615.1(.2) Operations Management
Prerequisite: completion of all required 500-level MBA courses or permission of MBA Director.

A foundation in the concepts and techniques of operations/production management, dealing with methods used for the planning, organizing and scheduling of operations in both industry and other institutional settings.

618.1(.2) Total Quality Management
Prerequisite: MSC 506.1(.2) and 507.1(.2).

This course introduces the student to the concepts of total quality management, quality improvement, and statistical quality control as key ingredients of a quality strategy. The role of a quality strategy in improving the competitiveness of the firm in both local and international markets is emphasized. Using a case-oriented approach, students will be introduced to the philosophies of Deming, Juran and Crosby, the dimensions of product and service quality, modern statistical improvement tools, and the relationship between quality strategy and the functional areas of the firm.

624.1(.2) Database Systems
Prerequisite: MSC 521.1(.2).

Students will examine the design, implementation and management issues associated with database systems. The problems which arise through incorrectly designed databases are identified and their resolutions discussed. Topics on transaction processing and databases on the WWW are also covered. Labs based on an RDBMS package are given to provide a vehicle for practical implementation.

Classes 1 1/2 hr. and labs 1 1/2 hr. a week. 1 semester. Note: One month of labs only; then lab times are reassigned as class time.

625.1(.2) Electronic Commerce
Prerequisite: MSC 521.1(.2).

This course uses a multi-disciplinary approach to describe issues in Electronic Commerce. E-commerce business models and supporting technologies are described. Deployment platforms, server farms, complementary business strategies for e-commerce adoption and human resource investment in e-commerce are covered. Security issues, payment systems and legal aspects of e-commerce will be detailed. Emerging issues will be discussed.

Classes 3 hrs. and lab 75 minutes a week. 1 semester

636.1(.2) Decision Support Systems
Prerequisite: completion of all required 500-level MBA courses or permission of MBA Director.

This course will introduce students to the specialized use of computer systems for supporting and enhancing managerial decision-making. Students will be introduced to the basic architecture of DSS, as well as issues involving design and implementation of various types of DSS. The course includes instruction in advanced features of Microsoft Excel. An application project will be completed either in teams or individually during the semester.

690.1(.2) Seminar in Management Science
Prerequisite: completion of all required 500-level MBA courses or permission of MBA Director.

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.

692.1(.2) Directed Study
Prerequisite: completion of all 500-level MBA courses and permission of MBA Director, Departmental Chairperson, and Instructor.

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.

699.1(.2) Research Project in Management Science
Prerequisite: MSC 696.1(.2), completion of a MSC 600-level course or permission of MBA Director.

Each student is required to complete a project involving the practical application of the research concepts and techniques used in management science, under the direct supervision of a faculty member. Interdisciplinary projects are acceptable.

Geography (GPY)

Chairperson, Professor	R. McCalla
Professors	D. Day, H. Millward
Associate Professor	B. Robinson
Assistant Professor	P. Giles
Adjunct Professor	S. Jallow

General Information

In its broadest sense geography studies the relationship between people and their surroundings. It derives much of its educational value from its interdisciplinary approach to such relationships. At the same time, it is a subject of practical importance in such fields as urban and regional planning, resource development, industrial location, marketing research, and environmental management. The Geography Department has developed five major programs. The first is a general major which will be of particular interest to teachers and prospective geography teachers. The second structured major is for people interested in the field of urban and regional development. The third major is in coastal and marine studies while the fourth is in environmental studies, and the fifth is in physical geography.

Departmental Policy

1. The Department regards 200 level courses as both service courses for the university in general and basic introductory courses for geography majors. Higher level courses are designed primarily to serve the interest of geography majors but may be of interest to students in cognate areas. In some cases, the Department may allow a student from a cognate area to take the course without the stated prerequisite; for example, economics students may be admitted to GPY 321.1(.2) or 331.1(.2). History majors may be allowed to take GPY 429.0.

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 300 and 400-level courses are not open to students in their first year at university.

5. Students may enter courses without the stated prerequisites, providing they have permission of instructors.

6. 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.

7. Majors and honors students must normally complete GPY 316.1(.2) and GPY 336.1(.2) before the end of the first semester of their second year or, in the case of part-time students, before proceeding to other upper level courses.

General Requirements for Majors

1. To obtain a major in geography a student must complete the equivalent of seven (7.0) university credits in geography.

2. The following courses are required for the major:

   a. three of GPY 203.1(.2), 204.1(.2), 213.1(.2), and 214.1(.2).

   b. GPY 316.1(.2), 336.1(.2), and one of GPY 326.1(.2), 366.1(.2), 386.1(.2), 456.1(.2), and 496.1(.2).

   c. one and a half (1.5) credits at the 400 level.

   d. two and one half (2.5) other credits in geography.

3. In order to graduate with a major in geography, a student must obtain a quality point average of at least 2.00 in geography courses counting towards the major.

4. All majors must follow a program of study established in conjunction with, and approved by, a member of the Department of Geography and must have the program approved by the Department at the beginning of each year.

5. For more complete information on the geography program, the student should obtain a copy of Notes and Guidelines for Geography Students from the Departmental Secretary.

A Geography Major with a Minor in Geology

1. A 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. Courses that are cross-listed between geography and geology may only count towards the geology minor if they are taken as geology credits. (If they are taken as geography credits they can only apply to the geography major.)

3. Students accepted into the geology minor program will be allowed to count four (4.0) geology credits towards their Arts degree requirements.

Honors Program

1. To be admitted to the honors program, a student normally must have a B standing in geography courses. The student must 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.

2. To complete the program students must complete a total of twelve (12.0) geography credits, including:

   a. three of GPY 203.1(.2), 204.1(.2), 213.1(.2), and 214.1(.2).

   b. GPY 316.1(.2), 326.1(.2), 336.1(.2), and one of GPY 366.1(.2), 386.1(.2), 456.1(.2), and 496.1(.2).

c. GPY 406.1(.2) and 416.1(.2).

d. GPY 526.0.

3. Each year a student's program, including electives, must be approved by the Chairperson, and each year at least a B average in Geography courses must be maintained.

4. Students admitted to the program are responsible for finding a member of the department to act as their thesis supervisor.

5. Complete details regarding the program and honors research project are contained in Notes and Guidelines for Geography Students and Regulations for Presentation, Submission and Marking of the Honors Research Project.

6. In addition, students must meet the general Faculty of Arts requirements for honors students.

Minor Program in Geography

To earn a minor in geography, students must complete the following requirements:

1. A minimum of 4.0 credits in geography, with an average of C (2.0) or higher in geography courses;

2. three of GPY 203.1(.2), 204.1(.2), 213.1(.2), and 214.1(.2); and

3. at least 2.5 other geography credits.

Minor in Environmental Planning for Geography Students from Saint Mary's University (SMU)

Saint Mary's geography majors and honors graduates may be granted the additional distinction of Minor in Environmental Planning by passing approved courses offered in the Environmental Planning program at the Nova Scotia College of Art and Design.

Students must follow a schedule of courses approved by the EP faculty and meet the following conditions:

a. a total of 24 NSCAD credits (4.0 SMU credits) with an average of at least C (2.00) in EP courses;

b. a minimum of 6 course-hour credits in EP studio courses; and

c. a minimum of 12 course-hour credits from a list of other recommended EP courses.

Note:

i) SMU students may not gain EP credit for ENVI 2200 (Landscape Processes)

ii) SMU students may not gain credit for both ENVI 2310 (Environmental Issues) and GPY 304.1(.2) (Environmental Management), nor for both ENVI 3701 (EP Seminar: Land Use Planning) and GPY 442.1(.2) (Urban Planning)

Geology/Geography Combined Program

This degree program offers Bachelor of Science and Bachelor of Science (Honors) degrees, under the general requirements of the Faculty of Science. For full details, please consult the Department of Geology section of this Calendar.

Minor in Geography for all Nova Scotia College of Art and Design (NSCAD) Degree Programs

NSCAD students may be granted the additional distinction of a Minor in Geography by passing approved courses offered in the Department of Geography at Saint Mary's University.

Students must follow a schedule of courses approved by the Geography chairperson and meet the following conditions:

a. a total of 4.0 SMU credits (24 NSCAD credits) with an average of at least C (2.00) in geography courses;

b. three of GPY 203.1(.2), 204.1(.2), 213.1(.2), or 214.1(.2); and

c. at least 2.5 other geography credits (15 NSCAD credits). It is recommended that these credits be drawn from GPY 300.0, 302.0, 316.1(.2), and 340.1(.2) for students wishing geography as a second teachable subject.

203.1(.2) Physical Geography: Global Patterns
An introduction to physical geography by studying global patterns of Earth's natural environment. Spatial and temporal patterns are emphasized and explained by describing underlying processes. Topics include: the Earth-sun system, oceans, global heat circulation, climate, biogeographical realms, soils, and plate tectonics. A complement to introductory courses in human geography and a preparation for studying physical geography at local to regional scales in GPY 213.1(.2).

204.1(.2) Demographics and Culture
An introduction to the study of human geography. The course describes and explains geographical patterns of the customs, social forms and material traits of human groups. Topics for discussion are: population, migration, language, religion, social beliefs and political organization. Consideration of topics is at the global, regional and local scale.

206.1(.2) Computers & G.I.S. in Geography
The course serves as an introduction to the use of computers to gather, display and analyze geographical information. Topics for discussion include: basic geographical concepts (location, scale, projections), gathering geographical information on the World Wide Web, digital mapping, digital image processing and geographical information systems (GIS). Capabilities and limitations of computers in geography are also discussed.

Classes 2 hrs. and lab 2 hrs. a week. 1 semester.

213.1(.2) Physical Geography: Local and Regional Patterns
Prerequisite: GPY 203.1(.2).

A continuation to the introduction of physical geography that focuses on patterns and processes occurring at local and regional scales. Phenomena to be covered include: weather, tides and waves, landforms, effects of environmental changes, natural hazards, the influence of topography on physical patterns, and human impacts on landscapes. There will be introductions to reading topographic maps and to the methods of remote sensing and aerial photography interpretation.

Classes 2 hrs. and lab 2 hrs. a week. 1 semester.

214.1(.2) Environment and Livelihood
Prerequisite: GPY 204.1(.2).

A continuation from GPY 204.1(.2). This course describes and explains geographical patterns of resource exploitation, Earth use and abuse. Topics for discussion include economic development, food production, industry, rural settlement, urbanization and resource management. Consideration of topics is at the global, regional and local scale.

Classes 2 hrs. and lab/tutorial 2 hrs. a week. 1 semester.

300.0 Geography of Canada
Prerequisite: at least 5.0 credits.

Canada as a geographical entity in a physical, cultural, political and economic context is discussed. Topics for discussion include: the concept of region, the physical environment and its influence on human activity, resources and their distribution, the location and functions of Canadian settlements, and regional disparities. Case studies are taken from various regions of the country.

302.0 The Geography of World Affairs
Prerequisite: at least 5.0 credits.

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.

304.1(.2) Environmental Management
Prerequisite: GPY 213.1(.2).

This course examines modern policy approaches to the management of environmental resources and landscapes. Specific environments and selected management issues focusing on the natural environment (such as soil erosion, water pollution, and natural hazards) will be examined, together with methods of environmental planning and impact assessment.

311.1(.2) Rural Geography
Prerequisite: GPY 214.1(.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.

312.1(.2) Urban Land Use
Prerequisite: GPY 214.1(.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.

313.1(.2) Geomorphology
[GEO 373.1(.2)]
Prerequisite: GPY 213.1(.2) or GEO 200.0.

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.

314.0 The Oceans: A Physical Geography
Prerequisite: GPY 213.1(.2).

This course begins with a study of the role of the oceans in the global environment. It considers the origin, nature, and distribution of ocean relief features, the principles and patterns of water circulation, and factors affecting the distribution and abundance of marine life. The implications of global climatic changes such as the Greenhouse effect on the oceanic environment will be considered, as well as the effects of the physical geography on human use of the oceans.

316.1(.2) Map and Air Photo Interpretation
Prerequisite: GPY 203.1(.2) and 204.1(.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 airphoto interpretation.

Classes 2 hrs. and lab 2 hrs. a week. 1 semester.

319.0 Cultural Ecology
Prerequisite: GPY 204.1(.2).

Introduction to the study of the relationship between people and their environment, ranging from hunting and gathering societies to the industrial revolution.

321.1(.2) Geography of Manufacturing
Prerequisite: GPY 214.1(.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.

322.1(.2) Systems of Cities
Prerequisite: GPY 214.1(.2).

Examines cities as nodes in a system, which interact both with each other and with the regions surrounding them. Emphasis is placed on changes in the function and importance of cities, and on implications for regional planning. Topics include urban functions, central place theory, the urban hierarchy, urban system development, transport and communication linkages, urban growth rates, metropolitan dominance, commuting zones, and the planning of city systems.

324.0 Ocean Use and Management
Prerequisite: at least 5.0 credits.

A geographical study of the present and future uses of the oceans. Examination of the development and spread of new and traditional oceanic uses will focus attention on management issues. Course will include mineral and energy exploitation, fish production, fish "ranching" and mariculture, shipping, recreational uses, military uses, and ocean dumping. Regional case studies will be used to illustrate evolving concepts of oceanic management, including the use of computerized information systems.

325.1(.2) Cross-listed as GEO 325.1(.2) Sediments and Depositional Environments
Prerequisite: GPY 213.1(.2) or GEO 200.0.

326.1(.2) Statistical Methods for Geographers
Prerequisite: GPY 213.1(.2) or 214.1(.2).

This course introduces students to methods and problems in the collection, description, and analysis of geographic data. 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. 1 semester.

330.0 Geography of China
Prerequisite: at least 5.0 credits.

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.

331.1(.2) Geography of Natural Resources and Energy
Prerequisite: GPY 214.1(.2) or ECO 201.1(.2).

The course begins by defining natural resources and discussing their geographical distribution on a world scale. It also considers their influence on economic development, settlement patterns, and world trade flows. Aspects of resource conservation and resource management are discussed. Particular emphasis is placed on energy: its distribution, influence and use.

332.1(.2) Geography of Transportation
Prerequisite: GPY 214.1(.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 modelling of transportation flows. All transport modes are considered but emphasis is placed on land and air transport.

333.1(.2) Biogeography
Prerequisite: GPY 213.1(.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 change over space and time are described by covering evolution, migration, succession, and extinction. Examples are drawn from Atlantic Canada where possible.

336.1(.2) Principles of Cartography
Prerequisite: GPY 203.1(.2) and 204.1(.2).

An introduction to the design, compilation, and construction of maps and diagrams. Topics include map projections, scale change and generalization, lettering, symbolization, graphs, and colour. The major types of thematic mapping (proportional symbols, isopleths and choropleths) are studied.

Classes 2 hrs. and lab 2 hrs. a week. 1 semester.

339.0 Cultural Geographies
Prerequisite: GPY 204.1(.2).

Cultural themes include globalization, local diversity, tourism, home, place, and representations of all of the above in the media, the tourist industry, and by cultural producers in general. The emphasis on the course is on doing cultural geography in projects rather than on consuming culture as a content or body of knowledge. Special emphasis is placed on understanding the local cultural environment (e.g., Halifax) in the context of wider issues (e.g., tourism, globalization, and media representations).

340.1(.2) Geography of Nova Scotia
Prerequisite: at least 5.0 credits.

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.

343.1(.2) Weather and Climate
Prerequisite: GPY 213.1(.2).

An investigation of weather and climate systems on Earth across a wide range of spatial and temporal scales. Topics include: the

sphere, energy balances, microclimates, regional weather, and bal climate processes. The focus is on describing and explaining rent weather and climates, but past Earth climates will also be mined.

.1(.2) Geography of Japan
requisite: at least 5.0 credits.

s course stresses relationships between Japan's diverse physical ronments and patterns of human occupance and land use. A tion on the physical setting is followed by discussion of rural set- ment, cultural patterns, urban development, and industrial geogra- . Current issues of land use planning and environmental manage- nt are addressed.

.1(.2) Geography of Shipping
requisite: GPY 214.1(.2).

e course considers the spatial dynamics of the world shipping ustry. Topics for discussion include: theories of international trade, anic shipping's importance to world trade, bulk trade patterns, eral cargo trade patterns, the changing time-space relationships ociated with increasing ship size and new types of ships and the portance and development of the world's merchant fleet with par- ular emphasis on Canada.

.1(.2) Field Techniques and Research Methods
requisite: GPY 213.1(.2) or 214.1(.2).

pics include: the nature of geographic problems, formulating a search plan, locating and measuring field phenomena, spatial sam- g designs, and questionnaire designs. Students will learn basic thods of field surveying, including triangulation and levelling.

lasses 2 hrs. and lab 2 hrs. a week. 1 semester.

4.1(.2) Geography of Ports
requisite: GPY 214.1(.2).

e course considers the seaport as a modern transport node. pics for discussion include: locational characteristics of ports; the "gateway" function vs. the terminal function of port cities; the rocess of hinterland penetration and foreland development; and port mpetition and planning.

9.1(.2) Cross-listed as IRS 379.1(.2) Irish Material Culture

6.1(.2) [686.1(.2)] Concepts in Geographical Information ystems (GIS)
rerequlsite: GPY 206.1(.2).

he course continues the introduction to GIS begun in GPY 205.1(.2). urther consideration is given to GIS data structures, data input, stor- ge and editing, spatial analysis, and output. The course stresses ster-based GIS, but vector-based GIS are also considered.

lasses 2 hrs. and lab 2 hrs. a week. 1 semester.

0.1(.2) Geography of Ireland
[IRS 391.1(.2)]
rerequisite: at least 5.0 credits.

n examination of the physical, social, cultural, economic, and politi- al geography. Special emphasis will be given to the nature of past nd present internal population movements and emigration patterns, egional variations in economic development, and the effects of membership in the European Union.

6.1(.2) Seminar in Theoretical Geography
rerequisite: Year 3 and Year 4 students in geography.

tudents will be made familiar with major advances in theoretical and hilosophical aspects of geography.

3.1(.2) Coastal Geomorphology
[GEO 476.1(.2)]
Prerequisite: GPY 313.1(.2).

The course discusses both the physical processes which operate in the coastal zone and the resulting forms of these processes. Particular emphasis is placed on the action of waves and tides in the formation of coastal features. The effects of wind and people acting as geomorphological agents and the classification of coasts are considered.

Classes 3 hrs. a week, including lab and practical work. 1 semester. Some field work may be required.

414.1(.2) [614.1(.2)] Coastal Zone Planning
Prerequisite: GPY 304.1(.2) and either GPY 314.0 or 324.0.

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. 1 semester.

416.1(.2) Seminar in Applied Geography
Prerequisite: Year 3 and Year 4 students in geography.

Role of the geographer and geographical studies in fields such as environmental, regional and urban planning; resource management; mapping and surveys; and marketing.

423.1(.2) Glacial Geomorphology
[GEO 475.1(.2)]
Prerequisite: GPY 313.1(.2) or GEO 373.1(.2).

The study of geomorphological processes and landforms in glaciated environments. Emphasis will be placed on explanations and descriptions of glacial processes and glacial landform development in various physical environments. Glacial history will form a minor component of the course.

Classes 3 hrs. a week including lab and practical work. 1 semester.

429.0 (629.0) Urban Historical Geography
Prerequisite: one (1.0) 300-level geography credit.

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.

432.1(.2) [632.1(.2)] Social Geography of the City
Prerequisite: GPY 312.1(.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 conflicts over noxious facilities.

434.1(.2) Canadian Seas: Their Use and Management
Prerequisite: GPY 324.0.

A brief introduction to the physical environment of the Canadian 200 mile zone and adjacent seas provides the background for an analysis of regional variations in the intensity and patterns of sea use between the Pacific, Arctic, and Atlantic coastal areas. The geographic patterns of major sea uses such as fishing, transportation, offshore mineral production, ocean dumping/pollution are discussed in the context of Canadian management policies.

442.1(.2) [642.1(.2)] Urban Planning
Prerequisite: GPY 312.1(.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.

452.1(.2) [652.1(.2)] The Geography of Urban Transportation
Prerequisite: one of GPY 312.1(.2), 332.1(.2), or 364.1(.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.

456.1(.2) [656.1(.2)] Remote Sensing of the Environment
Prerequisite: GPY 316.1(.2) and 336.1(.2).

This course is an advanced study of the sensing, storage, and analysis of remotely sensed digital imagery. Particular emphasis will be placed on the application of remote sensing to land use management, environmental management, and marine studies.

Classes 2 hrs. and lab 2 hrs. a week. 1 semester.

465.1(.2) Cross-listed as GEO 465.1(.2) Sedimentology
Prerequisite: GPY 325.1(.2) or GEO 325.1(.2).

466.1(.2) and 467.0 Directed Study
Prerequisite: permission of Chairperson.

An instructor will guide a student in topics of special interest that have been decided upon after consultation between student and instructor.

496.1(.2) [696.1(.2)] Applications in Geographical Information Systems
Prerequisite: GPY 386.1(.2).

This course allows students to develop further their understanding of GIS and its applications. Emphasis is placed on vector-based GIS with a review of raster GIS. Students are expected to apply either vector or raster GIS to a major research project.

Classes 2 hrs. and lab 2 hrs. a week. 1 semester.

526.0 Honors Research Project
Prerequisite: honors standing in geography.

Honors 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.

Although the Department of Geography does not offer a graduate program, a number of graduate level courses are available. These are:

GPY 602.0	Directed Studies in Urban/Regional Geography
GPY 603.0	Directed Studies in Environmental Geography
GPY 604.0	Directed Studies in Marine Geography
GPY 605.0	Directed Studies (General)
GPY 612.1(.2)	Directed Studies in Urban/Regional Geography
GPY 613.1(.2)	Directed Studies in Environmental Geography
GPY 614.1(.2)	Coastal Zone Planning
GPY 615.1(.2)	Directed Studies (General)
GPY 624.1(.2)	Directed Studies in Marine Geography
GPY 629.1(.2)	Urban Historical Geography
GPY 632.1(.2)	Social Geography of The City
GPY 642.1(.2)	Urban Planning
GPY 652.1(.2)	The Geography of Urban Transportation
GPY 656.1(.2)	Remote Sensing of the Environment
GPY 686.1(.2)	Concepts in GIS
GPY 696.1(.2)	Applications in GIS

For further information, please consult the Chairperson of the Department of Geography.

Geology (GEO)

Chairperson, Associate Professor	V. Owen
Professors	J. Dostal, G. Pe-Piper, Q. Siddiqui, J. Waldron
Adjunct Professor	T. Day

The Department of Geology offers programs of study for students enrolled in the degree of Bachelor of Science with concentration in geology and for those registered in the degree of Bachelor of Science with major and honors in geology. In addition, a combined geology/geography program emphasizes environmental aspects of geology.

The courses of the core program for a student majoring in geology are: GEO 200.0, 301.1(.2), 302.1(.2), 312.1(.2), 313.1(.2), 320.1(.2), 321.1(.2), 325.1(.2), 326.1(.2), 413.1(.2), 441.1(.2) and 442.1(.2). Students are required to take at least one half (0.5) additional geology credit for a minimum total of seven (7.0) credits in the Department.

The honors program requires GEO 550.0 in addition to the core courses for majors, supplemented by sufficient geology courses for a minimum of ten (10.0) credits.

Science students interested in geology, including those who are entering the major and honors programs in geology, would normally take GEO 200.0. GEO 204.0 and GEO 205.0 are designed chiefly for students in Commerce, Education, and Arts, including Atlantic Canada Studies. Two courses, GEO 200.0 and 204.0, give a broad survey of the discipline. In exceptional cases where a student has taken GEO 204.0 with high standing, that course may, with the permission of the Department, be accepted in the geology program in lieu of GEO 200.0. Under special circumstances, some prerequisites for 300, 400 and 500-level courses may be waived with the permission of the Department. It is strongly recommended that all geology major and honors students take GEO 300.1(.2).

Students 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.

Recommended Program (Geology Major/Honors)

The following first and second year course selections are recommended for students in the major and honors programs in geology:

Year 1
1. GEO 200.0
2. MAT 210.1(.2)/211.1(.2)
3. non-geology science elective (1.0)
4. EGL 201.1(.2)/202.1(.2)
5. non-science elective (1.0)

Year 2
1. GEO 301.1(.2)/302.1(.2)
2. GEO 320.1(.2)/321.1(.2)
3. GEO 325.1(.2) and an additional 0.5 geology credit
4. non-geology science elective (1.0)
5. non-science elective (1.0)

For subsequent years, students should consult the Departmental Chairperson.

Geology/Geography Combined Program
This program offers Bachelor of Science and Bachelor of Science (Honors) degrees, emphasizing environmental Earth Science, under the general requirements of the Faculty of Science. The geology/geography major program requires a minimum grade of C in all geology and geography courses. The geology/geography honors program requires (a) a minimum grade of C in all geology and geography courses; and (b) a minimum quality point average of 3.00 in these same courses.

1. Geology/Geography Major (Bachelor of Science)

a. Geology Department Requirements
At least 6.0 credits from:
GEO 200.0 Introduction to Earth Science
GEO 301.1(.2) Mineralogy
GEO 302.1(.2) Optical Mineralogy
GEO 312.1(.2) Igneous Petrology
GEO 313.1(.2) Metamorphic Petrology
GEO 320.1(.2) History of Life
GEO 321.1(.2) Palaeontology
GEO 325.1(.2) Sediments and Depositional Environments
GEO 326.1(.2) Sedimentary Petrology and Stratigraphy
GEO 340.1(.2) Surface and Groundwater Hydrology
GEO 350.1(.2) Environmental Geoscience Issues
GEO 413.1(.2) Structural Geology
GEO 414.1(.2) Global Geology
GEO 441.1(.2) Mineral Resources
GEO 442.1(.2) Economic Mineral Deposits
GEO 453.1(.2) Principles of Geochemistry
GEO 454.1(.2) Applied Geochemistry
GEO 465.1(.2) Sedimentology
GEO 466.1(.2) Petroleum Geology

b. Geography Department Requirements
(i) At least six (6.0) credits including:
GPY 203.1(.2) Physical Geography: Global Patterns
GPY 213.1(.2) Physical Geography: Local and Regional Patterns
GPY 204.1(.2) Demographics and Culture
GPY 313.1(.2) Geomorphology

GPY 316.1(.2) Map and Air Photo Interpretation
GPY 336.1(.2) Principles of Cartography

(ii) At least 2.0 credits from:
GPY 304.1(.2) Environmental Management
GPY 314.0 The Oceans: A Physical Geography
GPY 333.1(.2) Biogeography
GPY 413.1(.2) Coastal Geomorphology
GPY 423.1(.2) Glacial Geomorphology

(iii) one additional credit: any geography course(s).

2. Geology/Geography Honors Program (Bachelor of Science: Honors)

In addition to the above requirements, honors students must complete:

a. GEO 550.0 Honors Project or GPY 526.0 Honors Research Project;

b. one (1.0) additional credit from the list in 1(a) above; and

c. GPY 406.1(.2) Seminar in Theoretical Geography and GPY 416.1(.2) Seminar in Applied Geography.

The honors Bachelor of Science geology/geography program, topics for honors theses should be approved by both Departments and may be carried out in either Department.

The Department of Geology and the Faculty of Commerce offer a double major/honors science degree combining major/honors program in geology with a major program of studies in the Faculty of Commerce.

Description of Program

This program offers Bachelor of Science major and Bachelor of Science honors degrees, under the general requirements of the Faculty of Science. For a combined major degree, students will be required to take a minimum of seven (7.0) credits in the Faculty of Commerce in addition to at least six (6.0) Geology credits. In the honors program, a thesis on a field interrelating the two disciplines will be required. Students enrolled in the combined commerce/geology major/honors 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 commerce/geology major program requires a minimum grade of C in all geology and commerce courses while the commerce/geology honors 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.

Requirements

1. **Commerce/Geology Major (B.Sc.)**

a. Commerce Faculty Requirements (total 7.0 credits)
ACC 241.1(.2) Introductory Accounting I
ACC 242.1(.2) Introductory Accounting II
ACC 332.1(.2) Planning and Control
CML 201.1(.2) Legal Aspects of Business - Part I
COM 293.1(.2) Managerial Communications
ECO 201.1(.2) Principles of Economics: Micro
ECO 202.1(.2) Principles of Economics: Macro
FIN 360.1(.2) Business Finance I
FIN 361.1(.2) Business Finance II
MGT 261.1(.2) Introduction to Business Management
MGT 383.1(.2) Organizational Behaviour I
MGT 384.1(.2) Organizational Behaviour II
MGT 469.1(.2) Strategic Management
MKT 270.1(.2) Introduction to Marketing

b. Geology Department Requirements (at least 6.0 credits)
GEO 200.0 Introduction to Earth Science
GEO 205.0 Environmental Geology
GEO 300.1(.2) Field Methods
GEO 301.1(.2) Mineralogy
GEO 312.1(.2) Igneous Petrology
GEO 320.1(.2) History of Life
GEO 325.1(.2) Stratigraphy and Sedimentation
GEO 340.1(.2) Surface and Groundwater Hydrology
GEO 350.1(.2) Advanced Environmental Geology
GEO 373.1(.2) Geomorphology
GEO 413.1(.2) Structural Geology
GEO 414.1(.2) Global Geology
GEO 441.1(.2) Mineral Resources
GEO 442.1(.2) Industrial Mineral Deposits
GEO 453.1(.2) Principles of Geochemistry
GEO 454.1(.2) Applied Geochemistry
GEO 466.1(.2) Petroleum Geology

c. Other Requirements
i. EGL 201.1(.2) and 202.1(.2).
ii. MAT 210.1(.2) and 211.1(.2) or 212.1(.2) or 315.1(.2).
iii. two (2.0) science elective credits other than Geology, e.g., Biology, Psychology, Chemistry, Physics, and Mathematics excluding MAT 207.1(.2), and BIO 308.1(.2).
iv. one half (0.5) elective credit in statistics that covers probability theory including MAT 207.1(.2), MSC 207.1(.2), GPY 326.1(.2), BIO 308.1(.2) and ECO 303.1(.2).
v. one (1.0) credit from Faculty of Arts' offering including GPY 326.1(.2) and ECO 303.1(.2).
vi. one and one half (1.5) elective credits from any faculty.

2. Commerce/Geology Honors Program (Bachelor of Science Honors)

In addition to the above requirements, honors students must complete GEO 550.0 Honors Project as one of the Geology requirements.

Notes:

1. Students must take FIN 361.1(.2), MKT 270.1(.2) and MGT 384.1(.2) before registering for MGT 469.1(.2). The other prerequisites for this course are waived for students in this combined program.

2. 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.

Co-operative Education in Geology

This program, which is available at both the major and honors 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 honors 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 Section 3 of this Calendar.

Combined Co-operative Education in Geology/Geography

The students enrolled in the combined geology/geography major/honors 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 Section 3 of this Calendar.

Combined Science Degree in General Business Studies and Geology

This program is offered in both Bachelor of Science major and Bachelor of Science honors degrees. The general business studies/geology major program requires a minimum grade of C in all geology and general business studies courses while the general business studies/geology honors program requires (a) a minimum grade of C in all geology and general business studies courses; and (b) a minimum quality point average of 3.00 in these same courses.

Requirements

1. General Business Studies/Geology Major (B.Sc.)

a. Requirements from the Faculty of Commerce (total 7.0 credits)
MGT 261.1(.2) Introduction to Business Management
MGT 383.1(.2) Organizational Behavior I
MGT 384.1(.2) Organizational Behavior II
MGT 469.1(.2) Strategic Management
ECO 201.1(.2) Principles of Economics: Micro
ECO 202.1(.2) Principles of Economics: Macro
ACC 241.1(.2) Introductory Accounting - Part I
ACC 242.1(.2) Introductory Accounting - Part II
ACC 332.1(.2) Planning and Control
MKT 270.1(.2) Introduction to Marketing
CML 201.1(.2) Legal Aspects of Business - Part I
COM 293.1(.2) Managerial Communications
FIN 360.1(.2) Business Finance I
FIN 361.1(.2) Business Finance II

b. Requirements from the Department of Geology (a minimum of 6.0 credits)
GEO 200.0 Introduction to Earth Science
GEO 205.0 Environmental Geology
GEO 300.1(.2) Field Methods

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GEO 301.1(.2) Mineralogy
GEO 312.1(.2) Igneous Petrology
GEO 320.1(.2) History of Life
GEO 325.1(.2) Sediments and Depositional Environments
GEO 340.1(.2) Surface and Groundwater Hydrology
GEO 350.1(.2) Environmental Geoscience Issues
GEO 373.1(.2) Geomorphology
GEO 413.1(.2) Structural Geology
GEO 414.1(.2) Global Geology
GEO 441.1(.2) Mineral Resources
GEO 442.1(.2) Industrial Mineral Deposits
GEO 453.1(.2) Principles of Geochemistry
GEO 454.1(.2) Applied Geochemistry
GEO 466.1(.2) Petroleum Geology

c. Other Requirements
(i) EGL 201.1(.2) and 202.1(.2);
(ii) MAT 210.1(.2) and 211.1(.2);
(iii) two (2.0) science electives other than geology, e.g., biology, psychology, chemistry, physics and mathematics including MAT 207.1(.2) and BIO 308.1(.2);
(iv) one elective (0.5) in statistics that covers probability theory including MAT 207.1(.2), MSC 207.1(.2), GPY 326.1(.2), BIO 308.1(.2), and ECO 303.1(.2);
(v) one (1.0) credit offered in the Faculty of Arts; and
(vi) other elective (1.5) credits from any faculty.

2. General Business Studies/Geology Honors Program (B.Sc. Hons.)
In addition to the above requirements, honors students must complete the GEO 550.0 Honors Project as one of the geology requirements.

Notes:
(i) Students must take FIN 361.1(.2), MKT 270.1(.2), and MGT 384.1(.2) before registering for MGT 489.1(.2). The other prerequisites for this course are waived for students in this combined program.

(ii) No later than the beginning of Year 2, students must register in the Science program and will be under the general requirements of the Faculty of Science.

Combined Co-operative Education Program in General Business Studies/Geology
The students enrolled in the combined general business studies/geology major/honors may 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/honors programs.

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 five (5.0) credits, including GEO 200.0 or GEO 204.0; no more than two (2.0) credits below the 300-level can be counted toward the minor in Geology.

200.0 Introduction to Earth Science
The Earth as a dynamically evolving planet and how we study it; its rocks and minerals; surface processes of erosion and deposition by water, wind and glacial ice; the fossil record and measurement of time; internal processes active within the Earth that give rise to volcanoes, earthquakes, continental drift, and the generation of new ocean floors. Geological evolution of North America.

Laboratories include field trips, geological maps and mapping, and recognition of minerals and rocks.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

204.0 The Earth: Atlantic Canada Perspective
Towards an understanding of the Earth around us and the processes which affect it, using examples drawn from the geology of Atlantic Canada. Earth history as traced through rock and fossil records. Plate tectonics and how it has affected the Atlantic region through geologic time. Recognition and interpretation of surface features of the Earth, and the materials of which it is made. Economic mineral resources and environmental changes affecting Atlantic Canada. This course is intended mainly for non-science students including those in Atlantic Canada Studies.

Note: No Credit will be given for this course subsequent to GEO 200.0.

205.0 Environmental Geology: Atlantic Canada Perspective
This course examines the geological principles that apply to environmental problems, and will focus on current issues of concern in the Atlantic Provinces. Topics covered may include: global environmental cycles, the greenhouse effect and sea-level change; constraints on resource exploitation, including tidal power, offshore petroleum and mining; impact of pollution and waste disposal on groundwater; health effects of bedrock geology including arsenic and radon; and the role of geology in community planning.

206.1(.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.

207.1(.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.

300.1(.2) Field Methods
Prerequisite: GEO 200.0 and attendance at field camp.

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.

301.1(.2) Mineralogy
Prerequisite: GEO 200.0 (which may be taken concurrently).

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.

302.1(.2) Optical Mineralogy
Prerequisite: GEO 301.1(.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.

305.1(.2) Geophysics
Prerequisite: PHY 205.0 or equivalent.

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.

312.1(.2) Igneous Petrology
Prerequisite: GEO 302.1(.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.

313.1(.2) Metamorphic Petrology
Prerequisite: GEO 302.1(.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

volves the study of metamorphic rocks in hand sample and thin ction.

lasses 3 hrs. and lab 3 hrs. a week. 1 semester.

0.1(.2) History of Life
rerequisite: one of GEO 200.0, GEO 204.0, GEO 205.0; or BIO 0.0; or GPY 213.1(.2).

n account of the 3500 million-year history of life on Earth, including ories of the origin of life, and modes of preservation of organisms fossils. It also covers the phenomenon of evolution and some jor patterns and crises in the history of life.

lasses 3 hrs. and lab 3 hrs. a week. 1 semester.

1.1(.2) Palaeontology
rerequisite: GEO 320.1(.2).

e morphology, classification and stratigraphic ranges of the main oups of invertebrate fossils. Emphasis is placed on the uses of fos- s in elucidating stratigraphy, the environment under which strata cumulated, and world geography in those times.

lasses 3 hrs. and lab 3 hrs. a week. 1 semester.

5.1(.2) Sediments and Depositional Environments [GPY 325.1(.2)]
rerequisite: GEO 200.0 or GPY 213.1(.2).

eathering and the origin of sedimentary materials. Introduction to diments and sedimentary rocks. Processes of sedimentation and e origin of sedimentary structures. Interpretation of clastic and car- nate sedimentary rocks in the light of comparison with modern vironments in non-marine, marginal marine, and marine settings.

lasses 3 hrs. and lab 3 hrs. a week. 1 semester.

6.1(.2) Sedimentary Petrology and Stratigraphy
rerequisite: GEO 302.1(.2) and 325.1(.2) (which may be taken con- rrently).

mposition, provenance, and diagenesis of clastic sedimentary cks, including conglomerates, sandstones and shales. Components nd diagenesis of the main classes of non-clastic sedimentary rocks luding carbonates, evaporites, siliceous and iron-rich sediments. ratigraphy: correlation and the definition of stratigraphic units in tcrop and in the subsurface. Unconformities, sequences, sea-level ange, and the interpretation of the stratigraphic record.

lasses 3 hrs. and lab 3 hrs. a week. 1 semester.

0.1(.2) Introduction to Micropalaeontology
rerequisite: GEO 321.1(.2).

chniques for the collection, preparation and identification of micro- sils. Major groups of microfossils and their industrial use, especial- y in the petroleum industry.

lasses 3 hrs. and lab 3 hrs. a week. 1 semester.

2.1(.2) Cross-listed as CHE 332.1(.2) Introductory Analytical Chemistry: Wet Methods

3.1(.2) Cross-listed as CHE 333.1(.2) Introductory Analytical Chemistry: Instrumental Methods

5.1(.2) Paleobotany
rerequisite: GEO 200.0 or BIO 200.0.

he course will trace the two billion year fossil record of plant evolu- on in the context of adaptation to Earth's changing geography and mate through geologic time. Particular attention will be paid to the velopment of terrestrial ecosystems in the Paleozoic and to the orld class fossil sites of Nova Scotia, including the paleobotany of oal. Ontogeny and paleoecology will be linked as will taphonomy nd paleoenvironments. Laboratories will acquaint the student with he taxonomy of fossil floras, their modes of preservation and practi- al problems in the interpretation of their record.

lasses 3 hrs. and lab 3 hrs. a week. Field trips. 1 semester.

0.1(.2) Surface and Groundwater Hydrology
rerequisite: one of GEO 200.0, 204.0, 205.0; or GPY 213.1(.2).

he course examines the fundamentals of hydrology, including the recipitation, infiltration and storage of water. It emphasizes practical pproaches to the examination of water supply, the movement of roundwater through various geological materials, groundwater xploration, contaminant modelling and water resource management.

lasses 3 hrs. and lab 3 hrs. a week. 1 semester.

350.1(.2) Environmental Geoscience Issues
Prerequisite: GEO 200.0 or GEO 205.0 or GPY 203.1(.2).

This course examines issues such as risk assessment and prediction of natural hazards (earthquakes, volcanoes, floods); pathways and sinks of pollutants in surface and groundwaters; the environmental implications of global change, industrial planning and environmental impacts; geological criteria in the environmental assessment process; the roles of monitoring historical assessment and modelling in environmental problems.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

373.1(.2) Geomorphology [GPY 313.1(.2)]
Prerequisite: GEO 200.0 or GPY 213.1(.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.

400.0 International Field Camp
Prerequisite: GEO 200.0, 300.1(.2), 301.1(.2), 325.1(.2), and permission of Department.

Emphasis is placed on highlighting the geological heritage shared by Canada, USA and Mexico. 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 mapping project. Students may be required to travel at their own expense to USA and Mexico.

Field camp.

413.1(.2) Structural Geology
Prerequisite: GEO 325.1(.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.

414.1(.2) Global Geology
Prerequisite: GEO 200.0; and at least one of GEO 312.1(.2), 325.1(.2), and 413.1(.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.

441.1(.2) Mineral Resources
Prerequisite: GEO 200.0.

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, mining, and the environmental impact of resource exploitation.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

442.1(.2) Economic Mineral Deposits
Prerequisite: GEO 441.1(.2).

The course examines the geology, mineralogy, economic geology and origin of major types of metallic and some non-metallic deposits in Canada and elsewhere. Laboratory includes investigation of suites of samples from the deposits.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

5

450.1(.2) Advanced Igneous Petrology
Prerequisite: GEO 312.1(.2).

Genesis of magmas, magma types, petrographic provinces and their distribution in time and space 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 and their application to natural systems. Study of selected suites of igneous rocks.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

451.1(.2) Advanced Metamorphic Petrology
Prerequisite: GEO 313.1(.2).

The topics covered in this course include phase equilibria in metamorphic systems, reaction balancing methods, porphyroblast-matrix relations, and the quantification of pressure-temperature-time trajectories. Laboratory work is centred on the acquisition and manipulation of microprobe data.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

453.1(.2) Principles of Geochemistry
Prerequisite: GEO 200.0.

Principles of distribution of elements in the solar system, in rocks, and in minerals. Chemical processes of geological importance. Chemical interpretation of geological processes in aqueous environments, diagenesis, igneous and metamorphic rocks.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

454.1(.2) Applied Geochemistry
Prerequisite: GEO 200.0.

The application of geochemistry to prospecting for minerals and oil fields; methods of sampling and analysis; statistical evaluation of geochemical data; cycling of geochemical species in the environment; environmental geochemistry.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

462.1(.2) Micropalaeontology of Ostracoda and Foraminifera
Prerequisite: GEO 321.1(.2) or 330.1(.2) (which may be taken concurrently).

A detailed study of Ostracoda and Foraminifera with particular reference to their morphology, taxonomy, ecology, and biostratigraphy. The use of these microfossils in oil exploration will be emphasized.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

465.1(.2) Sedimentology
[GPY 465.1(.2)]
Prerequisite: GEO 325.1(.2) or GPY 325.1(.2).

Dynamics of fluid flow and transport of sediment by air, water and ice. Analysis of modern sedimentary environments including terrestrial, lacustrine, marginal marine, and marine systems. Analysis of ancient sedimentary facies and their environmental interpretation, with emphasis on clastic sediments.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

466.1(.2) Petroleum Geology
Prerequisite: GEO 200.0.

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.

475.1(.2) Cross-listed as GPY 423.1(.2) Glacial Geomorphology
Prerequisite: GEO 373.1(.2) or GPY 313.1(.2).

476.1(.2) Cross-listed as GPY 413.1(.2) Coastal Geomorphology

518.1(.2) Canadian Regional Tectonics
Prerequisite: GEO 413.1(.2).

This course is intended to synthesize the various aspects of geology treated in more specialized courses through an analysis of those processes which have shaped some of the major Canadian geological regions. We will examine the structure, stratigraphy and petrology of mountain belts (Cordillera, Appalachians), Precambrian shield (Grenville, Churchill, Superior), and sedimentary basins (East Coast shelf, Western Canada, Sverdrup) in order to determine what processes, including plate tectonic processes, created them.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

530.1(.2) Directed Study in Geology
Prerequisite: restricted to Year 4 students in the honors 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.

540.1(.2) Special Topics in Geology
Prerequisite: restricted to Year 4 students in the honors 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.

550.0 Honors Project
Prerequisite: honors 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.

565.1(.2) Advanced Sedimentology
Prerequisite: restricted to Year 4 students in the honors program.

Detailed study of selected depositional environments and sedimentary facies. Analysis of sedimentary strata including Canadian examples. Quantitative methods of facies analysis and the application of statistical methods in sedimentology. Methods for the analysis of subsurface sedimentary and stratigraphic sequences. Areas of specific emphasis may vary from year to year.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

Global Business Management (GBM)

This program is administered by the Department of Management.

Committee on Global Business Management

A. Schwind, Coordinator	Management
T. Charles	Finance and Management Science
A. Mukhopadhyay	Economics
A. Ogden	Marketing
P. Secord	Accounting

The topic "Globalization of Business" has received considerable attention in all media for several years. The focus has been increasingly on the lack of competitiveness of Canadian companies internationally. Now even small entrepreneurs have to compete against foreign companies. Multinational organizations hire and transfer employees around the globe. Japanese and Canadians, Italians and Australians, Chinese and Malaysians learn to work together, to communicate effectively, and to manage as a global team, with synergy instead of conflict.

If managers wish to deal with the rest of the world on the same basis, they must learn to adapt psychologically, to communicate effectively, and interact socially with other cultures. Global 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 career in this arena.

Year 1
ECO 201.1(.2) Principles of Economics: Micro
ECO 202.1(.2) Principles of Economics: Macro
ENGL 201.1(.2) English Composition
ENGL 202.1(.2) An Introduction to Literature
MGT 281.1(.2) Introduction to Business Management
MSC 205.1(.2) Introduction to Quantitative Methods for Commerce I
MSC 206.1(.2) Introduction to Quantitative Methods for Commerce II
MSC 225.1(.2) Introduction to Computers
Language elective (1.0) (Chinese, French, German, Japanese, or Spanish)

Year 2
ACC 241.1(.2) Introductory Accounting - Part I
ACC 242.1(.2) Introductory Accounting - Part II
COML 201.1(.2) Legal Aspects of Business - Part I
COM 293.1(.2) Managerial Communications
MGT 383.1(.2) Organizational Behavior I
MGT 384.1(.2) Organizational Behavior II
MKT 270.1(.2) Introduction to Marketing
MSC 207.1(.2) Introductory Statistics for Commerce
Economics elective (1.0) [except ECO 317.1(.2) or ECO 322.1(.2)]

Year 3
ACC 332.1(.2) Planning and Control
ACC 357.1(.2) International Accounting
FIN 360.1(.2) Business Finance I
FIN 361.1(.2) Business Finance II
MKT 375.1(.2) International Marketing
Language elective (1.0) (same language as Year 1 elective)
Geographic elective (1.0) [see note (a) below]
Free elective (0.5)

Year 4
FIN 476.1(.2) International Financial Management
MGT 488.1(.2) International Business Management
MGT 489.1(.2) Strategic Management
Geographic elective (1.0) [see note (b) below]
Cognate elective (1.0) [see note (c) below]
Free electives (1.5)

Notes:

a. Elective must be selected from the approved lists below for one of the following regions: Africa, Americas, Asia, or Europe.

b. Elective must be selected from the approved lists below for one of the regions (Africa, Americas, Asia, or Europe) different from the Year 3 geographic credit.

c. Elective must be selected from the geographic area lists or cognate elective list below. If ECO 310.1(.2), ECO 312.1(.2), ECO 315.1(.2), ECO 413.1(.2), or ECO 414.1(.2) were used to satisfy the Economics elective(s) in Year 2, the number of free electives is increased to 2.0 or 2.5 as appropriate.

d. 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.

e. Notwithstanding the course substitutions possible in notes (c) and (d), all students must complete at least 3.0 non-commerce electives.

Approved Electives Offered at Saint Mary's University*

Africa
HIS 316.1(.2) Africa in the 19th Century, Intrusion and Conquest
HIS 317.1(.2) Africa in the 20th Century, Colonialism and Independence
HIS 322.0 South Africa
HIS 326.1(.2) History of West Africa: 1600-1960
POL 327.0 Government and Politics in the Middle East
REL 323.1(.2) The Islamic Religious Tradition

Americas
ECO 306.1(.2) North American Economic History
ECO 406.1(.2) Canadian Economic History in an International Context
HIS 251.0 The United States: 1877 to the Present
HIS 310.0 Anglo-American History: Studies in Pre-Industrial Labour and Culture, 1600-1865
HIS 318.0 The United States in the 20th Century
HIS 330.0 American Social and Intellectual History
HIS 333.0 History of Canada in the 20th Century
HIS 361.1(.2) Canadian Business History, 1820-1867
HIS 362.1(.2) Canadian Business History, 1867-1930
HIS 375.0 Modern Latin America
HIS 385.0 [IDS 385.0] Aspects of Global History: One Earth, Many Worlds
IDS 421.1(.2) Special Topics in Development Studies
MGT 493.1(.2) Business-Government Relations in Canada
POL 315.0 Canadian Foreign Policy
POL 440.0 Canadian-American Relations since World War II
REL 355.1(.2) Religion and Social Issues in Canada
SPA 305.0 Contemporary Spanish Society

Asia
ANT 325.0 Ethnology: Oceania
ANT 326.1(.2) Ethnology: East Asia
ANT 327.1(.2) Ethnology: Japan
ASN 300.1(.2) Multidisciplinary Study of Asia
ASN 303.1(.2) Contemporary Japan: Institutions and Culture
ASN 400.1(.2) Seminar in Asian Studies
ASN 450.1(.2) China, Eternal and Transforming: Travel and Study
GPY 330.0 Geography of China
GPY 360.1(.2) Geography of Japan
HIS 209.0 East Asia: From Prehistory to Modern Times
HIS 323.0 China Before 1800
HIS 325.0 Asian Crossroads: Southeast Asia from 1600 to Independence
HIS 342.0 China in Revolution: 1840 to the Present
HIS 354.1(.2) Traditional Japan: History and Culture
HIS 381.1(.2) East Asia and the West to 1800
HIS 382.1(.2) East Asia and the West Since 1801
HIS 385.0 [IDS 385.0] Aspects of Global History: One Earth, Many Worlds
HIS 394.1(.2) The Emergence of Modern Korea
HIS 396.1(.2) China and Japan in the 20th Century: Ideology, State and Society
IDS 420.1(.2) Special Topics in Development Studies
REL 323.1(.2) The Islamic Religious Tradition
REL 326.1(.2) The Hindu Religious Tradition
REL 327.1(.2) The Buddhist Religious Tradition
REL 337.1(.2) Hindu and Buddhist Religious Art
REL 340.1(.2) Japanese Religious Traditions
REL 345.1(.2) Chinese Religious Traditions
SOC 447.1(.2) [WMS 447.1(.2)] Work and the Empowerment of Women in India

Europe
FRE 310.1(.2) Introduction to French Culture
GER 304.0 German Culture and Civilization
HIS 304.0 Europe 1848-1989
HIS 305.0 History of Russia and the U.S.S.R.

HIS 306.0 Images and European History
HIS 310.0 Anglo-American History: Studies in Pre-Industrial Labour and Culture, 1600-1865
HIS 339.0 Russia and the U.S.S.R. Since 1917
HIS 385.0 [IDS 385.0] Aspects of Global History: One Earth, Many Worlds
POL 314.1(.2) Development Practice: Politics of Developing Areas

Cognate Electives

ANT 201.0 [WMS 201.0] Women: A Cultural Perspective
ANT 301.1(.2) Nature of Culture
ANT 310.0 Applied Anthropology: Culture Change and Development
ANT 315.0 [IDS 315.0] Peasant Society and Culture
ANT 320.0 World Ethnology
ANT 335.0 Psychological Anthropology
ANT 340.0 Socio-cultural Aspects of Health and Illness
ECO 310.1(.2) Development Economics
ECO 312.1(.2) History of Economic Thought
ECO 315.1(.2) Comparative Economic Systems
ECO 410.1(.2) Issues in Economic Development
ECO 412.1(.2) History of Modern Economic Thought
ECO 414.1(.2) International Trade
GPY 204.1(.2) Demographic and Culture
GPY 214.1(.2) Environment and Livelihood
GPY 302.0 The Geography of World Affairs
MGT 301.1(.2) Work and Alienation
PHI 310.0 Political Philosophy
PHI 317.1(.2) Philosophy of Economics
PHI 325.1(.2) Ethical Issues in International Development
POL 305.0 International Relations
POL 321.1(.2) International Organization
POL 322.1(.2) Politics of International Trade
POL 330.0 Introduction to Public Administration
POL 418.0 International Law
POL 445.0 Introduction to Public Policy
REL 202.0 Introduction to Comparative Religion: When Great Religions Meet
REL 341.1(.2) Violence and Non-Violent: East and West
REL 347.1(.2) Ecology and Religion
SOC 385.1(.2) [IDS 485.1(.2)] Problems of Development
SOC 386.1(.2) [IDS 386.1(.2)] Sociology of Developing Societies
SOC 387.1(.2) [WMS 387.1(.2)] Women and Development
SOC 391.0 Rural Sociology
SOC 420.0 Comparative Regional Development
SOC 422.1(.2) [IDS 422.1(.2); WMS 422.1(.2)] Gender and Development: Theory and Method
SOC 423.1(.2) [IDS 423.1(.2); WMS 423.1(.2)] Gender and Development: Policy and Practice
SOC 425.0 Corporate Power and the World Economy

*Courses may be taken at other institutions subject to the approval of the Program Coordinator and the Dean of Commerce.

History (HIS)

Chairperson, Professor G. Young
Professors E. Haigh, C. Howell, J. Morrison, J. Reid, R. Twomey
Associate Professors B. Kiesekamp, J. Lee, W. Mills
Assistant Professors M. Vance, L. Warner
Professors Emeriti S. Bobr-Tylingo, J. MacCormack

Departmental Policy

To obtain a major concentration in history, students must complete at least six (6.0) history credits, as follows:

a. one (1.0) but no more than two (2.0) credits at the 200 level;

b. two (2.0) or more credits at the 300 level; and

c. HIS 400.0 and one (1.0) credit at the 500 level.

The program of each student must be approved by the Department.

All prospective honors students should refer to the section of this Calendar pertaining to honors degrees and apply to the Registrar for enrolment in that program after their first year at the University.

For an honors degree, students must satisfy the requirements of the major program. They must also complete one (1.0) additional history credit at the 300 level; two (2.0) additional credits at the 500 level, and HIS 500.0 (the honors essay). The program of each student must be approved by the Department.

All students majoring in history are strongly advised to take two (2.0) credits 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 delineated in Faculty of Arts' Regulation 8, Section 3 of this Calendar.

Graduate students should refer to the material entitled "Master's Degree" which is found in Section 3 of this Calendar.

General Course Description

a. History courses numbered at the 200 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 enrol in a 300 or 400 level course, a student must have one (1.0) history credit, or at least five (5.0) university credits, or the permission of the Chairperson. 300 and 400-level courses are usually structured to consist of both lectures and seminars.

c. History courses at the 500 level are normally seminar courses designed for advanced work by history majors and honors students in Year 2 and Year 3, and for Master of Arts students.

d. 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.

201.0 Civilization in the West
A course designed to explore the origins and development of the characteristic political, legal, and cultural institutions of Western Civilization and its impact on other cultures.

203.0 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.

208.0 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 towards 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.

209.0 East Asia: From Prehistory to Modern Times
This course introduces students to an old but vibrant civilization that is becoming increasingly important in today's world. In addition to the cultural heritage which the countries of East Asia, i.e., China, Korea, Japan, share in common, this course will examine distinct historical experiences of each country and the transformation of East Asia in modern times.

215.0 Europe and Canada: Encounter, Enlightenment, Industrialization
This course will examine issues such as the encounters between indigenous people and Europeans, the impact of European thought and customs and the importance of economic and social links between the Old World and the new. Although the course will have a wide chronology, it will focus on the period between the sixteenth and nineteenth centuries.

231.0 Canada to Confederation
This course will examine early Canadian history from the time of the first Indian-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.

312.0 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.

[illegible]0.0 North American Social History
An introductory survey of selected Canadian and American social problems. Topics will include crime and punishment, the permissive society, marriage and the family, prejudice and discrimination.

[illegible]0.0 American History 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.

[illegible]1.0 The United States: 1877 to the Present
This course is concerned with the impact of modern industrialism on American society since 1877. Included is an analysis of the changing nature of American foreign policy, new relationships between business, labour and agriculture, and the impact of industrialism on liberal democratic thought and culture.

In order to enrol in the following courses a student must have 1.0 history credit, or at least 5.0 university credits, or the permission of the Chairperson.

[illegible]4.0 Europe 1848-1989
An examination of the political, social, and economic history of Continental Europe focusing on France, Germany and Italy from the revolutions of 1848 to the end of the Cold War. In particular, the social and economic developments underlying the forces of liberalism, Imperialism, Socialism, Fascism, and Communism, as well as the causes and consequences of World Wars I and II will be considered in some detail.

[illegible]5.0 History of Russia and the U.S.S.R.
An introductory survey beginning with Kievan Rus and ending with the collapse of the Soviet Union in 1991.

[illegible]6.0 Images and European History
Since its beginning, Western culture has been accompanied by pictures as both illustration and vindication. This is a course about pictures and what can be pictured. Students will deal with much already familiar to them, and sources will range from St. Augustine to the photographers of the Farm Security Administration.

[illegible]10.0 Anglo-American History: Studies in Pre-Industrial Labour and Culture, 1600-1865
This course examines "pre-industrial" working people (slave and free") from a comparative perspective. It begins with an overview of the various historical stereotypes of American and English crowds in the 18th century, American slaves from the 17th to the 19th centuries, the English radical and working class movements at the time of the American Revolution. It then looks at the political, economic and cultural lives and attitudes of these groups. Was there a distinctive "popular culture" in history? Did common people have significant ideas and play an active role in the making of history?

[illegible]11.0 Health, Sport and Leisure in Victorian Society
This course deals with the concern for healthy bodies and minds in Victorian Britain and North America. It will address a range of issues including the professionalization of medicine and psychiatry, attitudes toward body and mind, the preoccupation with moral and physical degeneracy, the rise of organized sport, and the notion of social degeneration.

316.1(.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'.

317.1(.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 had acquired in the 'Scramble'. The course will also study the reactions of Africans to colonialism and the factors which led to independence.

318.0 The United States in the 20th Century
A history of the United States in the 20th century with the main emphasis on political development.

320.0 The Atlantic Provinces and New England 1534-1974
An examination of the relationship of New England and the Atlantic Provinces undertaken from a comparative point of view. This course deals with political, economic and religious trends common to the experience of both communities.

322.0 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.

323.0 China Before 1800
This course studies the history of China from the earliest times to the end of the 18th century. The first term covers up to around A.D. 960; the remainder is dealt with in the second term. Special attention will be paid to the changes in cultural, institutional and societal patterns over the time.

325.0 Asian Crossroads: Southeast Asia from 1600 to Independence
This course will concentrate on the vibrant and sometimes turbulent countries of Southeast Asia. This area, including Burma, Cambodia, Indonesia, Laos, Malaysia, the Philippines, Singapore, Thailand and Vietnam, has been a confluence for commercial trade and cultural influence for centuries. The course will begin with the indigenous kingdoms and societies, trace European, American, and Asian expansionism and the resultant resistance to it, and examine the rise of the nationalist movements leading to independence in the second half of the twentieth century.

326.1(.2) History of West Africa: 1600 to 1960
This course will examine the age of African empires, the European intrusion and imperial expansion, the Islamic revolution, and the slave trade through to independence in the 1960s. The course will also include some analysis of methodology used in African history including archaeology and oral tradition.

327.0 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.

330.0 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.

331.0 The Era of the American Revolution
A course on the American Revolution and its aftermath, especially the major social, political, and intellectual transformations of the era. Emphasis on the radicalism of the American Revolution and on major problems of historical interpretation.

332.0 Canadian Social History, 1760-1930
This course will trace the development of British North America from a group of predominately agricultural, rural French and English colonies to an industrialized, urban, mixed ethnic nation. Particular attention will be given to the process of Canadianization and the impact of industrialization on social institutions, working conditions, cultural activities, political ideas and economic development between 1867-1930.

333.0 History of Canada in the 20th Century
A course designed to examine the emergence of Canada's social, political and economic structures in the 20th century. Some attention will also be given to Canada's role as an emerging world power, her relationship with the United States and her role within the British Empire and Commonwealth.

336.1(.2) Hanoverian to Victorian Britain
This course will examine the political factors which precipitated the creation of the British state. Once these have been established, the focus will shift to the profound social and economic transformations that allowed this small island nation to become, by the middle of the

HIS 306.0 Images and European History
HIS 310.0 Anglo-American History: Studies in Pre-Industrial Labour and Culture, 1600-1865
HIS 339.0 Russia and the U.S.S.R. Since 1917
HIS 385.0 [IDS 385.0] Aspects of Global History: One Earth, Many Worlds
POL 314.1(.2) Development Practice: Politics of Developing Areas

Cognate Electives

ANT 201.0 [WMS 201.0] Women: A Cultural Perspective
ANT 301.1(.2) Nature of Culture
ANT 310.0 Applied Anthropology: Culture Change and Development
ANT 315.0 [IDS 315.0] Peasant Society and Culture
ANT 320.0 World Ethnology
ANT 335.0 Psychological Anthropology
ANT 340.0 Socio-cultural Aspects of Health and Illness
ECO 310.1(.2) Development Economics
ECO 312.1(.2) History of Economic Thought
ECO 315.1(.2) Comparative Economic Systems
ECO 410.1(.2) Issues in Economic Development
ECO 412.1(.2) History of Modern Economic Thought
ECO 414.1(.2) International Trade
GPY 204.1(.2) Demographic and Culture
GPY 214.1(.2) Environment and Livelihood
GPY 302.0 The Geography of World Affairs
MGT 301.1(.2) Work and Alienation
PHI 310.0 Political Philosophy
PHI 317.1(.2) Philosophy of Economics
PHI 325.1(.2) Ethical Issues in International Development
POL 305.0 International Relations
POL 321.1(.2) International Organization
POL 322.1(.2) Politics of International Trade
POL 330.0 Introduction to Public Administration
POL 418.0 International Law
POL 445.0 Introduction to Public Policy
REL 202.0 Introduction to Comparative Religion: When Great Religions Meet
REL 341.1(.2) Violence and Non-Violent: East and West
REL 347.1(.2) Ecology and Religion
SOC 385.1(.2) [IDS 485.1(.2)] Problems of Development
SOC 386.1(.2) [IDS 386.1(.2)] Sociology of Developing Societies
SOC 387.1(.2) [WMS 387.1(.2)] Women and Development
SOC 391.0 Rural Sociology
SOC 420.0 Comparative Regional Development
SOC 422.1(.2) [IDS 422.1(.2); WMS 422.1(.2)] Gender and Development: Theory and Method
SOC 423.1(.2) [IDS 423.1(.2); WMS 423.1(.2)] Gender and Development: Policy and Practice
SOC 425.0 Corporate Power and the World Economy

*Courses may be taken at other institutions subject to the approval of the Program Coordinator and the Dean of Commerce.

History (HIS)

Chairperson, Professor G. Young
Professors E. Haigh, C. Howell, J. Morrison, J. Reid, R. Twomey
Associate Professors B. Kiesekamp, J. Lee, W. Mills
Assistant Professors M. Vance, L. Warner
Professors Emeriti S. Bobr-Tylingo, J. MacCormack

Departmental Policy

To obtain a major concentration in history, students must complete at least six (6.0) history credits, as follows:

a. one (1.0) but no more than two (2.0) credits at the 200 level;

b. two (2.0) or more credits at the 300 level; and

c. HIS 400.0 and one (1.0) credit at the 500 level.

The program of each student must be approved by the Department.

All prospective honors students should refer to the section of this Calendar pertaining to honors degrees and apply to the Registrar for enrolment in that program after their first year at the University.

For an honors degree, students must satisfy the requirements of the major program. They must also complete one (1.0) additional history credit at the 300 level; two (2.0) additional credits at the 500 level, and HIS 500.0 (the honors essay). The program of each student must be approved by the Department.

All students majoring in history are strongly advised to take two (2.0) credits 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 delineated in Faculty of Arts' Regulation 8, Section 3 of this Calendar.

Graduate students should refer to the material entitled "Master's Degree" which is found in Section 3 of this Calendar.

General Course Description

a. History courses numbered at the 200 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 enrol in a 300 or 400 level course, a student must have one (1.0) history credit, or at least five (5.0) university credits, or the permission of the Chairperson. 300 and 400-level courses are usually structured to consist of both lectures and seminars.

c. History courses at the 500 level are normally seminar courses designed for advanced work by history majors and honors students in Year 2 and Year 3, and for Master of Arts students.

d. 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.

201.0 Civilization in the West
A course designed to explore the origins and development of the characteristic political, legal, and cultural institutions of Western Civilization and its impact on other cultures.

203.0 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.

208.0 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 towards 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.

209.0 East Asia: From Prehistory to Modern Times
This course introduces students to an old but vibrant civilization that is becoming increasingly important in today's world. In addition to the cultural heritage which the countries of East Asia, i.e., China, Korea, Japan, share in common, this course will examine distinct historical experiences of each country and the transformation of East Asia in modern times.

215.0 Europe and Canada: Encounter, Enlightenment, Industrialization
This course will examine issues such as the encounters between indigenous people and Europeans, the impact of European thought and customs and the importance of economic and social links between the Old World and the new. Although the course will have a wide chronology, it will focus on the period between the sixteenth and nineteenth centuries.

231.0 Canada to Confederation
This course will examine early Canadian history from the time of the first Indian-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.

302.0 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 liberalism; and the impact of industrialization, regionalism, war, and depression on that debate.

309.0 North American Social History
An introductory survey of selected Canadian and American social problems. Topics will include crime and punishment, the permissive society, marriage and the family, prejudice and discrimination.

310.0 American History 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.

311.0 The United States: 1877 to the Present
This course is concerned with the impact of modern industrialism on American society since 1877. Included is an analysis of the changing nature of American foreign policy, new relationships between business, labour and agriculture, and the impact of industrialism on liberal democratic thought and culture.

In order to enrol in the following courses a student must have 1.0 history credit, or at least 5.0 university credits, or the permission of the Chairperson.

314.0 Europe 1848-1989
An examination of the political, social, and economic history of Continental Europe focusing on France, Germany and Italy from the revolutions of 1848 to the end of the Cold War. In particular, the social and economic developments underlying the forces of Liberalism, Imperialism, Socialism, Fascism, and Communism, as well as the causes and consequences of World Wars I and II will be considered in some detail.

315.0 History of Russia and the U.S.S.R.
An introductory survey beginning with Kievan Rus and ending with the collapse of the Soviet Union in 1991.

316.0 Images and European History
Since its beginning, Western culture has been accompanied by pictures as both illustration and vindication. This is a course about pictures and what can be pictured. Students will deal with much already familiar to them, and sources will range from St. Augustine to the photographers of the Farm Security Administration.

310.0 Anglo-American History: Studies in Pre-Industrial Labour and Culture, 1600-1865
This course examines "pre-industrial" working people (slave and free") from a comparative perspective. It begins with an overview of the various historical stereotypes of American and English crowds in the 18th century, American slaves from the 17th to the 19th centuries, the English radical and working class movements at the time of the American Revolution. It then looks at the political, economic and cultural lives and attitudes of these groups. Was there a distinctive "popular culture" in history? Did common people have significant ideas and play an active role in the making of history?

311.0 Health, Sport and Leisure in Victorian Society
This course deals with the concern for healthy bodies and minds in Victorian Britain and North America. It will address a range of issues including the professionalization of medicine and psychiatry, attitudes toward body and mind, the preoccupation with moral and physical degeneracy, the rise of organized sport, and the notion of social regeneration.

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A course on the American Revolution and its aftermath, especially the major social, political, and intellectual transformations of the era. Emphasis on the radicalism of the American Revolution and on major problems of historical interpretation.

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A course designed to examine the emergence of Canada's social, political and economic structures in the 20th century. Some attention will also be given to Canada's role as an emerging world power, her relationship with the United States and her role within the British Empire and Commonwealth.

336.1(.2) Hanoverian to Victorian Britain
This course will examine the political factors which precipitated the creation of the British state. Once these have been established, the focus will shift to the profound social and economic transformations that allowed this small island nation to become, by the middle of the

nineteenth century, a leading world power. The course will cover such diverse topics as industrialization, popular radicalism, the Jacobite rebellions, overseas expansion and nineteenth-century Victorian morality.

339.0 Ruaala and the U.S.S.R. Since 1917
This course will deal with Russia and the Soviet Union from the abdication of Tsar Nicholas II to the post-Khrushchev period. An attempt will be made to examine the discrepancies between the theory of communism and its practice, and the possible reasons for that discrepancy. Some time will be spent considering the situation of religion, culture and the arts in the U.S.S.R.

340.0 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.

341.0 Monarchy and Revolution
Between the Wars of Religion and the French Revolution, Western and Central Europe passed from bureaucratized absolute monarchy to centralized parliamentary monarchy. To illustrate this process, this course will focus on the political and social evolution of Spain, France, Holland and Germany from the late 16th century to the early 19th century.

342.0 China in Revolution: 1840 to the Present
Chinese history since the middle of the 19th century has been one of continuous turmoil and upheaval. In addition to probing into the major developments and the factors responsible for them, this course will examine social, economic and cultural changes which have come about as a result.

346.1(.2) Black Heritage in Maritime Canada
This course will provide a historical survey of the Black population in Maritime Canada, its origins, socio-economic conditions and evolution to the present.

347.0 Blacks in Canada
A course dealing with Black history in Canada to the present. Issues to be addressed include Black immigration and settlement, slavery, Black Loyalism, colour and prejudice, religion and education, characteristics and institutions of the Black community, Black identity, and contemporary institutions and values.

349.0 History of Scotland, 1560-1980
This course will examine the history of Scotland from the Reformation of the 16th century up until the nationalist debates of the 1970's. Emphasis will be placed on political, economic and cultural developments. The evolution of the concept of Scottish nationhood will be explored as a general theme.

360.0 Cross-listed as CLA 303.0 History of Greece

351.0 Cross-listed as CLA 304.0 History of Rome

352.1(.2) The History of Biology
Prerequisite: a university course in history or biology.

A survey of the development and evolution of ideas concerning the nature of living things, their form and function and their relationships from the ancient world to the twentieth century.

353.1(.2) The History of Environmental Sciences
Prerequisite: a university course in history or one of the sciences.

How we perceive the world depends upon our culture. The course is a study of western attitudes to nature from antiquity to the present. It will examine the development of the fields of geography, geology, natural history, evolutionary theory and ecology.

354.1(.2) Traditional Japan: History and Culture
Following the history of Japan from the beginning to the middle of the 19th century, this course will study the shaping of cultural, institutional and social features which exert a powerful influence down to this day. The emphasis will be on understanding the factors which have given Japan a distinct outlook and the Japanese a strong sense of uniqueness.

355.1(.2) The Rise and Fall of Imperial Japan: 1867-1945
This course will study the rise of Japan as a major imperial power early in the 20th century and its fall from that position at the end of W.W.II. The factors that contributed to its rise and fall will be examined in the contexts of Japanese and global histories.

356.1(.2) Post-W.W.II Japan: 1945-Present
This course will study the phoenix-like rise of Japan from the ashes of defeat in W.W.II. The factors that helped Japan achieve this remarkable feat will be examined in the contexts of Japanese and global histories.

357.0 Cross-listed as CLA 307.0 Ancient Rome in Film, Fiction, Fact

360.0 A History of Women in the Western World [WMS 360.0]
A survey which examines the role of women in western civilization from the post Roman and early Christian world to the 20th century. This course will especially concern itself with an historical perspective of women's participation in the social and economic life of their communities.

361.1(.2) Canadian Business History, 1820-1867
Between 1820 and Confederation, British North Americans came to accept that the development of an enterprising business sector was necessary for the survival of a nationality in British North America. This course will examine the origins of this consensus and the impact it had on the conduct of staple production, of mercantile enterprise, of banking institutions and canal, and of canal and railway corporations.

362.1(.2) Canadian Business History, 1867-1930
In this period, corporate business in Canada increasingly came to identify itself with the national ideal. This course will examine how this self-understanding shaped a development strategy which had ambiguous consequences for the consumer, for labour, for peripheral areas and for government accountability.

365.0 The History of Religion and Civil Life in Canada [REL 360.0 (460.0)]
This course will assess the contribution religion made to the shaping of an absolutist and national allegiance in Canada. One of its large concerns will be to detail the impact of pietism, revivalism and Christian renewal movements on an anti-statist or federalist political allegiance.

372.1(.2) Common History: Sources and Methodology
This course will examine local history with particular reference to the Atlantic Region. Documentary and non-documentary sources will be examined and methodology for local history research established. This course will be of interest to those who have an interest in local, ethnic and family history.

373.1(.2) Voices of the Past: Oral Research Methodology
This course examines historical methodology with particular attention to the use of oral research. In areas where there is little documentation, such as labour, ethnic or community history, oral research is of vital importance and represents, in an age of instant communication, an integral part of contemporary history. The theoretical and practical use of oral sources will be examined and methodology, technique and interviewing experience will be included with particular reference to the Atlantic region.

375.0 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.

376.1(.2) Special Topics: U.S. History, 1600-1930
Further details are available from the Chairperson of the Department.

377.1(.2)-379.1(.2) Selected Topics in History
The subject matter of particular half-credit courses will be announced from time to time. They will cover aspects of history in one or more of the three major geographical areas of North America, Europe and the Third World. The topics to be examined will be determined by the instructor.

381.1(.2) East Asia and the West to 1800
This course studies the relationship between East Asia and the West from earliest times to the end of the 18th century. Topics for examination include trade, cultural exchange, the role of nomadic peoples in the East-West exchange, and the impact of the European exploration since the late 15th century.

382.1(.2) East Asia and the West Since 1801
This course studies the changing nature of relationship between East Asian countries and the West since the early 19th century. Topics for examination include the encroaching of Western imperialism, the impacts of such developments of Western origin as the industrial revolution, the two World Wars, and the Cold War on East Asia, and the westernization of East Asian values, mores, and customs.

383.1(.2) Sexuality, Love, and Marriage in East Asia
By examining selected topics on sexuality, love, and marriage in East Asia, this course seeks for a greater understanding of East Asian societies and cultures. The approach will be both historical and cultural. Possible topics for examination include the institutions of marriage and family, love in art and literature, sexual mores and practises, gender roles, and the status of women.

385.0 Aspects of Global History: One Earth, Many Worlds [IDS 385.0]
Selected African, Asian and Latin American societies will be examined especially with regard to the impact of European expansion and conquest on what is now called the Third World. Various economic, political, and social themes will be studied to provide a context for understanding the forces and events which led to the rise of the 'global village' of the 1990s.

386.1(.2) The Invention of Australia
The image that Australia presents in its official tourist brochures is of an exotic "outback" populated by peculiar flora and fauna and the occasional aboriginal, counterbalanced by glimpses of an urban culture symbolized by Sydney Opera House. How are such national images formed? This course will explore this question by examining the changing perception of Australia from the 18th to 20th century. We shall see how exploration, penal settlement, bush-ranging, gold-seeking, British Imperialism, industrialization, sporting tradition, warfare and urban architecture have all, in turn, contributed to our contemporary image of the southern continent.

387.1(.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 bi-cultural and/or multi-cultural 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.

388.1(.2) Early Celtic Britain [IRS 388.1(.2)]
Britain's Celtic past is shrouded in myth and legend. This course will provide students with the historian's and archaeologist's understanding of this same period by exploring the origin of the Celtic peoples in the British Isles and examining the impact of Roman, Anglo-Saxon, Viking and Norman invasions.

389.1(.2) Medieval Celtic Britain [IRS 389.1(.2)]
Ireland, Scotland and Wales were challenged by the threat of English domination throughout the medieval era. This course will examine the ability of each Celtic kingdom to resist this trend, as well as measure the degree to which Celtic institutions, language and culture were transformed in the process.

393.0 History of British North America, 1763-1867
This course will examine the major social, economic, religious and intellectual trends evident in British North America in the period following the Treaty of Paris of 1763. Special attention will be given to the rise of national consciousness and of civil religion in Canada West and to the impact these developments had on French and Maritime Canada.

394.1(.2) The Emergence of Modern Korea
This course studies the history of Korea from the opening of the country in the late 19th century to the present. The turbulent experience of the Koreans, which included the colonial domination by Japan, the partition of the country, and a civil war, will be examined against the backgrounds of Korea's own past as well as the global situation.

395.0 Ireland, 1600-1985: From the Plantations to the "Troubles" [IRS 395.0]
This course will concentrate on Ireland's transition from a colony, for English and Scottish settlers, to an independent state in the European community. Emphasis will be placed on the cultural and political legacy of the 17th century plantations, as well as the consequences of Irish nationalism for Britain and its empire. The development of the "Ulster Question" will be examined in the last section of the course.

Classes 1 1/4 hrs. and seminar 1 1/4 hrs. a week. 1 semester.

396.1(.2) China and Japan in the 20th Century: Ideology, State and Society
This course compares and contrasts the experiences of China and Japan in the 20th century. The differences in their respective paths towards "modernization" will be examined. The causes and consequences of the rise of such "modern" ideologies as nationalism, fascism, and socialism in those countries will also be analyzed.

397.1(.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 of the topics which will 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.

400.0 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.

405.1(.2) Society and Culture in Early Modern Europe
This course investigates the people, culture, and regions of Europe (England, France, Germany, Italy, Spain, Holland) from the Renaissance to the late seventeenth century. Through topics such as witchcraft and literacy, students explore a variety of primary sources including painting, architecture, woodcuts, popular ballads, and literature.

406.1(.2) Ideas and Politics in Early Modern Europe
This course explores the literature and thought of the Renaissance and Reformation through to the seventeenth century. Through visual images as well as writers such as Machiavelli, Castiglione, Erasmus, Marguerite de Navarre, Luther, Calvin or Montaigne, students will trace the developments of ideas about human nature and politics.

410.1(.2) The Scientific Revolution
Between Copernicus and the end of the seventeenth century, the foundations of our contemporary scientific outlook were established in western Europe. The course will examine the cultural and intellectual background of the scientific revolution. It will look at its social and institutional consequences.

411.1(.2) The Enlightenment
The intellectual, social, and philosophical milieu of the western world was profoundly altered in the latter part of the seventeenth and in the eighteenth centuries. Largely in response to the scientific revolution, European political and social assumptions and foundations were questioned. The re-examination led to a profound reshaping of the foundations of European institutions. The course will examine this process and its development.

415.0 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.