Academic Calendar
1976-77

Saint Mary's University
Halifax, Nova Scotia
Canada

Michael Ovenington

Academic Calendar

of

Saint Mary's University

1976 - 1977

SAINT MARY'S UNIVERSITY
Halifax, Nova Scotia
Canada
B3H 3C3
(902) 422-7361 — Administration
422-7331 — Academic

CONTENTS

SAINT MARY'S UNIVERSITY BOARD OF GOVERNORS

Chairman

Mr. Austin E. Hayes

Members Ex-Officio

Chancellor: Most Reverend James M. Hayes, J.C.D., D.D.
Vice-Chancellor: Reverend Monsignor Colin Campbell, V.G.
President: Dr. D. Owen Carrigan
Academic Vice-President: Dr. D. Hugh Gillis

Members Appointed by the Roman Catholic Episocopal Corporation

Mr. Ronald J. Downie, Q.C.	to July 31, 1976
Mr. Austin E. Hayes	to July 31, 1978
Reverend Lloyd Robertson	to July 31, 1977

Members Elected by the Alumni Association

Mr. Kenneth Butler	to July 31, 1977
Mr. Terence Donahoe	to July 31, 1978
Mr. William J. Gorman	to July 31, 1977
Mr. Arthur Leahey	to July 31, 1976
Judge Hughes Randall	to July 31, 1978
Mr. Robert Shaw, C.A.	to July 31, 1976

Members Elected by the Academic Staff

Dr. Cyril Byrne	to July 31, 1976
Dr. J. K. Chadwick-Jones	to July 31, 1978
Prof. R. H. Crowther	to July 31, 1977
Dr. A. P. Monahan	to July 31, 1978
Prof. Dermot Mulrooney	to July 31, 1977
Reverend W. A. Stewart, S. J.	to July 31, 1976

Members Elected by the Students

Mr. Wade Coates	to July 31, 1976
Mr. Brian Cooper	to July 31, 1976
Mr. Paul D. Lynch	to July 31, 1976
Miss Patricia Worsley	to July 31, 1976

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

Very Rev. M. J. Belair, S. J.	to July 31, 1976

Members Elected by the Board of Governors

Mr. M. A. Eisenhauer	to July 31, 1976
Dr. Ralph T. Vaughan, Q. C.	to July 31, 1976
Mr. Joseph Zatzman	to July 31, 1976

Members Appointed by the Lieutenant-Governor in Council

Mr. R. W. Ferguson	to February 28, 1978
Mr. D. I. Jones, Q.C.	to February 28, 1978

ACADEMIC SENATE

Members Ex-Officio

Dr. D. Owen Carrigan, President, Chairman
Dr. D. Hugh Gillis, Academic Vice-President
Dr. William A. Bridgeo, Dean of Science
Dr. Dennis E. Connelly, Dean of Commerce
Dr. John B. Owen, Dean of Arts
Dr. Donald J. Weeren, Dean of Education
Mr. Ronald A. Lewis, Librarian
Mrs. Elizabeth Chard, Registrar
Mr. Robert Hayes, Director of Student Services

Members Elected

To June 1978	To June 1977
Dr. C. Bryne	Dr. R. Beis
Prof. U. Merdsoy	Prof. G. Chauvin
Dr. A. Monahan	Prof. D. Mulrooney
Prof. T. Whalen	Dr. M. Sun
Dr. K. Vaughan	Prof. V. Tobin

To June 1976	Student Senators
Dr. R. Ansell	Mr. Michael Butler
Dr. F. Chao	Mr. Richard Gilman
Prof. R. Connell	Miss Karen Hunter
Dr. K. Fillmore	Mr. Duncan Perry
Rev. W. A. Stewart, S. J.	Miss Mary Beth Wallace

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ADMINISTRATION

OFFICERS

President
D. Owen Carrigan, B.A., M.A., Ph.D.

Academic Vice-President
D. Hugh Gillis, B.A., Ph.D.

Dean of Arts
John B. Owen, B.A., B.Sc., M.A., D.Phil., F.R.H.S.

Dean of Commerce
Dennis E. Connelly, B.Sc., M. Comm., Ph.D.

Dean of Education
Donald J. Weeren, B.A., M.Sc., Ph.D.

Dean of Science
William A. Bridgeo, B.Sc., Ph.D.

Director of Continuing Education
J. William Cosman, B.A., M.A.

Director of University Services
Guy L. Noel, B.E.

Director of Student Services
Robert Hayes, B.A.

Comptroller
Gerald F. Blom

Registrar
Elizabeth A. Chard, B.A., B.Ed., M.A.

Librarian
Ronald A. Lewis, B.A., M.Div., M.L.S.

Director of Public Relations
Corinne Noonan

Director of Development and Alumni Affairs
Charles A. Vaughan

FACULTY 1975-76

PROFESSORS EMERITUS

M. W. Burke-Gaffney, S.J., Ph.D. (Georgetown)
Professor Emeritus in Astronomy

J. Loewenstein Ph.D. (Vienna), F.R.A.I.
Professor Emeritus in Anthropology

J. L. Ryan, D. Litt. (Saint Mary's)
Dean Emeritus in Engineering

Stanislas Swianiewicz, Dr. Jur. (Vilna)
Professor Emeritus in Economics

PROFESSORS

Harold G. Beazley, B. Comm. (Saint Mary's), D. Litt.
Professor of Business Administration

Richard H. Beis, Ph.D. (Notre Dame)
Professor of Philosophy

Stanislaw Bobr-Tylingo, D. es Lettres (Paris)
Professor of History

Robert G. Boyd, B.A. (Hons.) (Melbourne)
Professor of Political Science

John K. Chadwick-Jones, Ph.D. (Wales
Professor of Psychology

Theodore B. Ciuciura, Dr. Jur. (Munich)
Professor of Political Science

William J. Dalton, Ph.D. (Ottawa)
Professor of Political Science

Donald A. Fergusson, Ph.D. (Chicago)
Professor of Business Administration

Dattatraya G. Kabe, Ph.D. (Wayne State)
Professor of Mathematics

John R. MacCormack, Ph.D. (Toronto)
Professor of History

Michael J. C. Martin, Ph.D. (Sheffield)
Professor of Business Administration

Arthur P. Monahan, Ph.D. (Toronto)
Professor of Philosophy

James W. Murphy, S. J., Ph.D. (Toronto)
Professor of Chemistry

Dangety S. Murty, D.Sc. (Andhra), F.I.E.R.E.
Professor of Physics

Alfonso Rojo, D.Sc. (Madrid)
Professor of Biology

Allan T. Sabean, M.Sc. (McGill)
Professor of Chemistry

Bartlett H. Stoodley, Ph.D. (Harvard)
Visiting Professor of Sociology

Joseph J. Vorstermans, Dr. Econ. (Tilburg)
Professor of Economics

ASSOCIATE PROFESSORS

Carlos A. de Albuquerque, Ph.D. (Cambridge)
Associate Professor of Geology

Gamal A. Badawi, Ph.D. (Indiana)
Associate Professor of Business Administration

Louis Batiot, Ph.D. (Massachusetts)
Associate Professor of French

Vedat Baydar, D.Sc. (Istanbul)
Associate Professor of Business Administration

William P. Boyle, Ph.D. (Queen's, Belfast)
Associate Professor of Engineering

Milton Chew, Ph.D. (Carnegie Institute of Technology)
Associate Professor of Business Administration

Ronald D. Connell, M.B.A. (Queen's), C.D.
Associate Professor of Business Administration

Andre B. Corbeau, Ph.D. (Tulane)
Associate Professor of Business Administration

Roger H. Crowther, M.A. (Cambridge)
Associate Professor of English

James A. Darley, Ph.D. (Western Ontario)
Associate Professor of Psychology

FACULTY 1975-76

Donald H. Davies, Ph.D. (Bristol)
  Associate Professor of Chemistry

Ernest E. D. Day, Ph.D. (Sheffield)
  Associate Professor of Geography

Frederick J. Dockrill, Ph.D. (Dalhousie)
  Associate Professor of Education

Lilian Falk, Ph.D. (Harvard)
  Associate Professor of English

Sandor Halebsky, Ph.D. (Cornell)
  Associate Professor of Sociology

George B. Hallett, M.A. (Dalhousie)
  Associate Professor of English

John T. Haysom, Ph.D. (Cambridge)
  Associate Professor of Education

Joseph G. Jabbra, Ph.D. (Catholic U. of America)
  Associate Professor of Political Science

James R. Jaquith, Ph.D. (Indiana)
  Associate Professor of Anthropology

B. M. Kapoor, Ph.D. (Delhi)
  Associate Professor of Biology

Karl W. Konrad, Ph.D. (Stanford)
  Associate Professor of Psychology

Guy Le Pierrès, Dip. d'Etudes Superieures
  (Rennes), CAPES
  Associate Professor of French

William Lonc, S.J., Ph.D. (St. Louis)
  Associate Professor of Physics

Dougald A. MacFarlane, Ph.D. (Washington)
  Associate Professor of Economics

Harold F. McGee, Ph.D. (Southern Illinois)
  Associate Professor of Anthropology

W. Terrance McGrath, Ph.D. (Southern California)
  Associate Professor of Economics

Michael R. MacMillan, Ph.D. (Alberta)
  Associate Professor of Education

Rowland C. Marshall, Ph.D. (Ottawa)
  Associate Professor of Philosophy

Urhan S. Merdsoy, M.S. (Rochester)
  Associate Professor of Physics

Dermot L. Mulrooney, M. Eng. (N.S. Tech. C.)
  Associate Professor of Engineering

Lawrence F. Murphy, S.J., Ph.D. (Marquette)
  Associate Professor of Religious Studies.

Roman Nahrebecky, Dr. Jur. (Prague)
  Associate Professor of German

Ishmael O. Okraku, Ph.D. (Cornell)
  Associate Professor of Sociology

Fernande Pepin, D. es Lettres (Laval)
  Associate Professor of French

Richard J. H. Perkyns, Ph.D. (London)
  Associate Professor of English

Francis R. Phillips, M.A. (London)
  Associate Professor of Education

John E. Power, S.J., M.A. (Toronto)
  Associate Professor of English

Zahoorul H. Qureshi, M.B.A. (U.C.L.A.)
  Associate Professor of Business Administration

Enriqueta Rojo, M.Sc. (Madrid)
  Associate Professor of Biology

Q. A. Siddiqui, Ph.D. (Leicester)
  Associate Professor of Geology

Kirtan P. Singh, Ph.D. (Penn. State)
  Associate Professor of Mathematics

Yash Pal Singh, Ph.D. (Birla Institute, India)
  Associate Professor of Mathematics

John K. Snyder, M.A. (Brown)
  Associate Professor of English

Emero S. Stiegman, Ph.D. (Fordham)
  Associate Professor of Religious Studies

FACULTY 1975-76

Mary Sun, Ph.D. (London)
  Associate Professor of History

Kurian K. Thomas, Ph.D. (Florida)
  Associate Professor of Biology

Franz V. Tomscha, M.Sc. (Johann-Wolfgang-Goethe)
  Associate Professor of Physics

Kathleen Tudor, Ph.D. (Toronto)
  Associate Professor of English

Keith Vaughan, Ph.D. (St. Andrew's)
  Associate Professor of Chemistry

Michael Wiles, Ph.D. (Leeds)
  Associate Professor of Biology

G. Fred. W. Young, Ph.D. (Chicago)
  Associate Professor of History

John C. O'C. Young, Ph.D. (London)
  Associate Professor of Chemistry

ASSISTANT PROFESSORS

Robert N. Ansell, Ph.D. (Glasgow)
  Assistant Professor of Philosophy

Stanley A. Armstrong, M.A. (Yale)
  Assistant Professor of Religious Studies

Janet Baker, M.A. (Queen's)
  Assistant Professor of English

Theodore A. Bednarek, Ph.D. (Toronto)
  Assistant Professor of Astronomy

Halina Bobr-Tylingo, Dip. d'Etudes
  Approfondies (Paris VI)
  Assistant Professor of Biology

Paul W. R. Bowlby, Ph.D. (McMaster)
  Assistant Professor of Religious Studies

Cyril J. Byrne, Ph.D. (Toronto)
  Assistant Professor of English

Ronald H. Cameron, Ph.D. (London)
  Assistant Professor of History

David C. Carlson, Ph.D. (Minnesota)
  Assistant Professor of Business Administration

Victor M. Catano, Ph.D. (Lehigh)
  Assistant Professor of Psychology

John C. Chamard, M.B.A. (Harvard)
  Assistant Professor of Business Administration

Faith Chao, Ph.D. (Toronto)
  Assistant Professor of Mathematics

Guy Chauvin, M.A. (Dalhousie)
  Assistant Professor of Political Science

Dennis J. Chipman, B. Comm. (Dalhousie), C.A.
  Assistant Professor of Business Administration

Ronald Cosper, M.A. (Cornell)
  Assistant Professor of Sociology

Bernard E. Davis, Ph.D. (Mass. Inst. Tech.)
  Assistant Professor of Education

Charles Dirksen, Ph.D. (Oregon)
  Assistant Professor of Business Administration

Ravinder M. Diwan, Ph.D. (Florida)
  Visiting Assistant Professor of Engineering

Jaroslav Dostal, Ph.D. (McMaster)
  Assistant Professor of Geology

David L. DuPuy, Ph.D. (Toronto)
  Assistant Professor of Astronomy

Clive M. Elson, Ph.D. (Queen's)
  Assistant Professor of Chemistry

Paul A. Erickson, Ph.D. (Connecticut)
  Assistant Professor of Anthropology

Anthony J. Farrell, Ph.D. (Princeton)
  Assistant Professor of Modern Languages

Keith G. Fillmore, Ph.D. (British Columbia)
  Assistant Professor of Physics

Walter Finden, Ph.D. (Waterloo)
  Assistant Professor of Mathematics

Bette L. Hanrahan, M.A. (Saint Mary's)
  Assistant Professor of Education

Denis Healy, M.Ed. (Columbia)
  Assistant Professor of English

FACULTY 1975-76

Donald J. Higgins, Ph.D. (Carleton)
    Assistant Professor of Political Science

Colin D. Howell, M.A. (Dalhousie)
    Assistant Professor of History

Mo-Tak Kiang, Ph.D. (Dalhousie)
    Assistant Professor of Mathematics

Burkhard Kiesekamp, Ph.D. (Toronto)
    Assistant Professor of History

Nathan D. Kling, M.B.A. (Texas)
    Assistant Professor of Business Administration

Robert J. Konopasky, Ph.D. (Windsor)
    Assistant Professor of Psychology

Julia C. Kwong, Ph.D. (Toronto)
    Assistant Professor of Sociology

Ronald G. Landes, Ph.D. (York)
    Assistant Professor of Political Science

Michael J. Larsen, Ph.D. (Toronto)
    Assistant Professor of English

Robert J. McCalla, Ph.D. (Hull)
    Assistant Professor of Geography

Barry R. Marks, Ph.D. (Purdue)
    Assistant Professor of Business Administration

Wallace G. Mills, Ph.D. (Los Angeles)
    Assistant Professor of History

Hugh A. Millward, Ph.D. (Western Ontario)
    Assistant Professor of Geography

N. Dann Milne, Ph.D. (Texas)
    Assistant Professor of Economics

Arthur Murphy, M.A. (Dalhousie)
    Assistant Professor of French

Michael A. Overington, Ph.D. (Wisconsin)
    Assistant Professor of Sociology

George W. Patterson, Ph.D. (Alberta)
    Assistant Professor of Modern Languages

Shripad Pendse, Ph.D. (Stanford)
    Assistant Professor of Business Administration

David C. Pigot, M.A. (Dalhousie)
    Assistant Professor of English

Helen Ralston, R.S.C.J., Ph.D. (Carleton)
    Assistant Professor of Sociology

Brian S. Robinson, M.A. (Alberta)
    Assistant Professor of Geography

Linda Ruffman, Ph.D. (Columbia)
    Assistant Professor of Sociology

Porter Scobey, M.A. (Dalhousie)
    Assistant Professor of Mathematics

Joseph F. Schulman, Ph.D. (Michigan)
    Assistant Professor of Economics

Andrew T. Seaman, M.A. (Dalhousie)
    Assistant Professor of English

Gillian M. Thomas, Ph.D. (London)
    Assistant Professor of English

Vincent McB. Tobin, M.A. (Dalhousie)
    Assistant Professor of Classics

Richard J. Twomey, Ph.D. (Northern Illinois)
    Assistant Professor of History

M. Susan Walter, M. Ph. (Toronto)
    Assistant Professor of Anthropology

Gary A. Welch, Ph.D. (Washington)
    Assistant Professor of Astronomy

Terrence A. Whalen, M.A. (Hons.) (Melbourne)
    Assistant Professor of English

LECTURERS

Carol A. Charlebois, M.A. (British Columbia)
    Lecturer in Political Science

Stephen A. Davis, M.A. (Memorial)
    Lecturer in Anthropology

Wayne Grennan, M.A. (Dalhousie)
    Lecturer in Philosophy

FACULTY 1975-76

Wendy R. Katz, M.A. (Dalhousie)
Lecturer in English

Stig O. Larsson, M.Sc. (Alberta)
Lecturer in Business Administration

David C. Perrier, M.A. (Dalhousie)
Lecturer in Sociology

Philip A. Street, M.A. (York)
Lecturer in Psychology

Terrance A. Tomkow, B.A. (Simon Fraser)
Lecturer in Philosophy

David Van Dyer, M.E. (N.S. Tech. C.)
Lecturer in Engineering

Henry Veltmeyer, M.A. (Alabama)
Lecturer in Sociology

Gregory M. Walsh, B.Comm. (Saint Mary's), C.A.
Lecturer in Business Administration

Barry G. White, M.A. (Dalhousie)
Lecturer in Mathematics

James J. White, M.B.A. (Western Ontario)
Visiting Lecturer in Business Administration

ON LEAVE, 1975-76

Robert J. Bollini, Ph.D. (California)
Associate Professor of History

Donald J. Brean, M.Sc. (London)
Assistant Professor of Business Administration

Patricia Connelly, M.A. (Dalhousie)
Lecturer in Sociology

Ervin J. Doak, Ph.D. (Toronto)
Associate Professor of Economics

T. Edward Flynn, Ph.D. (London)
Associate Professor of English

Robert D. Foster, Ph.D. (Oregon)
Associate Professor of Economics

Jack L. Ginsburg, Ph.D. (Rutgers)
Associate Professor of Chemistry

Elizabeth V. Haigh, Ph.D. (Wisconsin)
Assistant Professor of History

J. Geoffrey Harrison, Ph.D. (Queen's, Belfast)
Professor of English

David Hope-Simpson, Ph.D. (McGill)
Professor of Geology

Sheila E. Kindred, M.A. (Toronto)
Lecturer in Philosophy

Irmingard I. Lenzer, Ph.D. (Indiana)
Associate Professor of Psychology

Edward J. McBride, M.A. (Catholic U. of America)
Associate Professor of Political Science

Roger A. MacDonald, M.A. (Dalhousie)
Assistant Professor of English

Kenneth A. MacKinnon, M.A. (Dalhousie)
Associate Professor of English

Daniel W. MacInnes, M.A. (Memorial)
Lecturer in Sociology

John Mackriss, M.A. (Toronto)
Associate Professor of French

George F. Mitchell, Ph.D. (Toronto)
Associate Professor of Physics

John H. Radford, B.Comm. (Saint Mary's), C.A.
Lecturer in Accounting

Harold J. Schroeder, M.B.A. (British Columbia)
Assistant Professor of Business Administration

William A. Stewart, S.J., Ph.L.
(Immaculate Conception)
Professor of Philosophy

Christopher J. Terry, Ph.D. (Kent)
Associate Professor of English

Geraldine T. Thomas, M.A. (Dalhousie)
Assistant Professor of Classics

ADMINISTRATIVE OFFICES 1975-1976

Admissions Office

Leo R. MacDonald, B.A., Director
Michael Derrick, B.A., Assistant Director

Athletics

Robert Boucher, Arena Manager
  and Hockey Coordinator
James Clark, B.B.A.,
  Football Coordinator
Roy Clements, Soccer and Volleyball Coordinator
Brian Heaney, B.Sc., Basketball Coordinator
Kathleen Mullane, B.P.E.
  Women's Athletic Coordinator

Audio Visual Services

Paul E. Rooney, Head

Bookstore

Keith A. Tower, Manager

Business Office

Garry Smith, Accountant
Matthew Gallagher, Purchasing Officer
Russell Lownds, Receiving and Stores

Computer Services

A. M. Tingley, B.E., M.E., Head

Continuing Education

J. H. Battye, B.A., M.A., Assistant Director
Robert Dietz, Curator, Art Gallery
Denis Healy, B.A., M.Ed., Director,
  International Education Center

Development and Alumni Affairs

K. J. Cleary, B.A., B.Ed., M.A.,
  Alumni Coordinator

Library

Barbara Dacey, B.A., B.L.S., Head of Public Services
C. Gosine, A.L.A. Bibliographer
Christine MacGillivray, Administrative Assistant
Lloyd Melanson, B.A., M.L.S.
  Head of Technical Services
D. Vaisey, B.A., M.L.S., Head of Reference

Personnel

Frederick McKellar, Personnel Officer

President's Office

Carol M. Markesino, Executive Secretary

Registrar's Office

Murray Wilson, B.A., B.Ed., Assistant Registrar
Theresa Brennan, B.A., Assistant to the Registrar

Student Services

L. W. Smith, B.A., B.Ed., M.A.
  Head of Counselling
Rev. J. J. Hennessey, S.J., B.A., M.A., Counsellor
Sandra Little, B.A., B.Ed., M.A., Counsellor
Rev. Harvey Seasons, B.A., Chaplain
Rev. Wayne Gritter, B.A., B.D., Assistant Chaplain
Sister Peggy Malcolm, S.C., Assistant Chaplain
E. T. Cosgrove, B.Sc., B.E., Financial Aid Officer
John Rodgers, Manager, Canada Manpower Centre on
Campus

University Services

G. H. Somers, Dip. Eng., Superintendent of
  Physical Plant
Peter Weal, Manager, Printing Plant

S E C T I O N   1

General
Information

GENERAL INFORMATION

HISTORY

Saint Mary's University was founded in 1802 to provide opportunities for higher learning to young Catholic men. Its founder, the Reverend Edmund Burke, had meagre resources to work with but, on later being named Bishop with responsibility for Nova Scotia, he continued to support the college as essential to the development of the Catholic community. It was not until 1841, however, that the Nova Scotia House of Assembly gave formal, if temporary, recognition of its academic role. Its legal status was confirmed in perpetuity by enactment in 1852, but the college had an uncertain existence for many years.

In 1913, the Christian Brothers of Ireland, a teaching order, were invited by the Archdiocese of Halifax to direct the college and its academic program. During the ensuing years, Saint Mary's University became more widely known for the quality of its undergraduate teaching and continued to develop new instructional programs, most notably within its Faculty of Commerce. In 1940, the Upper Canada Province of The Society of Jesus was invited to succeed the Christian Brothers as administrators and teachers in the University, and for thirty years until the enactment in 1970 of the new act of incorporation, the college remained under Jesuit supervision. The long-standing emphasis on liberal arts and commerce was extended to include new programs in science, engineering, and teacher education. Extension courses became an important part of the University's commitment to an active educational role in the community.

The transfer of responsibility from the Roman Catholic Archdiocese of Halifax to an independent Board of Governors in 1970 began a new phase in the life of Saint Mary's University. Now a public, co-educational institution functioning within its tradition of Christian values, the University offers full undergraduate programs in arts, science and commerce, with pre-professional programs in engineering, medicine, law, theology, dentistry and architecture, and selected graduate study. Five thousand students are annually enrolled in day and evening programs given at its thirty-acre campus, located in the south end of Halifax, and at several off-campus locations in Nova Scotia. An energetic building campaign has given the University almost a dozen modern buildings, including high-rise academic and residence complexes for married and single students, a Student Center, a Science building, and recently a new Library.

Saint Mary's University remains faithful to the founding ideals of dedication to undergraduate teaching and concern for the individual student. The traditions formed by its founder and early teachers, built upon by the commitment to sound education of the Christian Brothers of Ireland and strengthened by the educational tradition and imaginative leadership of the Canadian Jesuits, provide a stable base for further development.

The direction in which this development will take place is indicated by the establishment of the Institute of Human Values. The Institute acts internally as an instrument for focussing the human and physical resources of the university on the relationship between knowledge, values and freedom with the object of stimulating purposeful and effective leadership in all three of these areas of human activity. Externally it acts as a clearing house of information and a channel of communication serving scholars in all fields who share this common concern. Further information on the Institute is carried in Section 8 of this Calendar.

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, Association of Commonwealth Universities, and the International Association of Universities.

AFFILIATIONS

Saint Mary's University has been associated with the Nova Scotia Technical College since 1916, providing the first three years of courses 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 and Regis College in Toronto.

SECTION 2

Student
Services
and
University
Residences

STUDENT SERVICES

Student Services at Saint Mary's University encompass Counselling, Chaplaincy, Health Services, Athletics and Recreation, Student Affairs, and Student Awards.

STUDENT BEHAVIOR

Saint Mary's University, in accepting students, takes it for granted that they are prepared to engage seriously in the pursuit of learning within an ordered academic institutional environment. Rules and regulations which affect student behavior are intended to ensure that the quality of life of the student and of those associated with him in the work of the University is respected and preserved.

The largest measure of responsibility for maintaining standards of conduct rests with the students themselves, as individuals and through their own organized disciplinary system. The University reserves the right, however, to counsel, admonish, limit the activities of, impose penalties on, or dismiss any student or group of students whose conduct violates normally accepted standards of civilized behavior or is in conflict with the University's objectives, policies, rules or regulations.

CHAPLAINCY

Because of its traditional commitment to Christian education, Saint Mary's University continues to emphasize personal and social values deriving from the experience of Christian civilization. Its students and teachers represent a diversity of cultural and religious backgrounds and the University encourages participation in activities related to all faiths.

A Catholic chaplaincy has been endowed, and Protestant and Jewish chaplaincy services are available to students. During the academic year a variety of religious events — pastoral guidance, liturgical services, ecumenical worship and inter-faith contacts — are available on campus and all students are encouraged to share in them.

COUNSELLING SERVICES

Through its counselling services, Saint Mary's University offers individual guidance and counselling for all students. Professionally trained and experienced counsellors are available to assist in problems of personal, social, academic or vocational adjustment and to provide general guidance.

Counsellors maintain continuous communication on matters of student welfare with other services, and academic and administrative operations, and are in a position to call upon the full resources of the University and the external community in dealing with matters of concern to a student.

HEALTH SERVICES

Students are required to submit a completed medical report to Health Services at the time of registration. This information is considered confidential and is not included in any university record. A Health Benefits Program is available to full-time students. The Medical Clinic on campus operates from 9:00 a.m. to 5:00 p.m. Monday to Friday. A physician is on call at night and on weekends.

STUDENT SERVICES

DEPARTMENT OF ATHLETICS

The Department organizes a variety of athletic activities on a number of different levels providing an opportunity for every student at Saint Mary's University to participate in some aspect of the total program.

INTRAMURAL AND RECREATIONAL PROGRAM:

The Intramural Program is designed to promote fun, recreation, and sportsmanship by encouraging students to compete on a friendly basis. Emphasis is placed on participation. Activities include: hockey, basketball, soccer, softball, volleyball, bowling, football, and table tennis.

On a less competitive level, the program offers the following recreational activities: Judo Club, Badminton Club, Ski Club, skating, weight lifting, swimming, ladies' keep-fit classes and tennis.

In addition to the activities above, a large variety of equipment is available on a sign-out basis for recreation at the student's leisure.

REPRESENTATIVE PROGRAM:

Saint Mary's University is a member of the Atlantic Universities Athletic Association, and participates in regularly scheduled and tournament sports, competing with other universities in the Atlantic region.

The sports included in the varsity program are:

MEN	WOMEN
Basketball	Basketball
Football	Field Hockey
Rugby (N.S.R.F.U.)	Ice Hockey (Exhibitional)
Soccer	Badminton
Hockey	Curling
Badminton	Tennis (Exhibitional)
Curling	Skiing (Exhibitional)
Golf	Volleyball
Judo	
Wrestling	
Tennis	
Skiing	
Volleyball	

Facilities on campus include the gynmasium, hockey arena, soccer field, football field, recreation room, combative room, weight room, swimming pool and tennis courts. The Athletic Department arranges for off-campus facilities for golf, curling, and skiing.

UNIVERSITY RESIDENCES

One of the distinctive features of Saint Mary's University is its new residence complex. Approximately one third of the student body resides on its beautiful 30-acre campus. The University does not require students to live in residence; however, it highly recommends residence life and encourages all first year students from outside the metropolitan area to reside in the modern on-campus facilities.

The residence complex includes the 17-storey Edmund Rice Residence, the four-storey Vanier House and the twenty-storey Ignatius Loyola Residence. Constructed during the last four years and awarded a 1971 Canadian Housing Design Council award, these residences are ideally located for Saint Mary's students. The residence complex is linked together and serviced by a student's cafeteria, mini-market, beauty salon, barber shop, a pool, and above-ground as well as underground parking, an art gallery, a branch of the Royal Bank of Canada, and a laundromat. A further attraction of the Ignatius Loyola Building is the Reverend M. W. Burke-Gaffney Observatory, whose facilities are open to students and the public. For further information see the Astronomy section.

For the 1976-77 academic year, female resident students will be accommodated in Vanier House and in the Edmund Rice Residence.

EDMUND RICE RESIDENCE

This 17-storey building consists of 16 floors of furnished apartments, six per floor, accommodating four students each. Each apartment has a living room, bath, two double bedrooms and a kitchen. There are no single rooms available in this structure. Students living in apartments usually prepare their own meals. However, some students choose to eat in the cafeteria and may take advantage of the available meal plans.

VANIER HOUSE

Comprised of four separate four-story houses, Vanier House offers double and single accommodations. On each floor, exclusive of the first which provides under-cover connection with the other houses and with the Edmund Rice and Ignatius Loyola Residences, there are three suites, each with six students occupying two single and two double rooms, and sharing a bathroom. There is a common lounge on each floor, and limited cooking facilities. Therefore, students living in this area of the residence are on a board plan.

IGNATIUS LOYOLA RESIDENCE

This structure consists of 19 floors of residence in two separate wings. The south wing is assigned to married students and consists of 103 apartments of three sizes — one bedroom, two bedrooms and a larger two bedroom. Application for accommodation should be made to the Director of University Residences. Occupancy of married students' apartments is on an annual lease basis. The north wing consists of suites for six single male students who live in four single rooms and one double and share a bathroom. These six share responsibility for general tidiness of the suite between weekly cleanings by University staff. There is a common lounge on each floor for the occupants of the four suites on that floor and their guests. Students in the Ignatius Loyola Residence are on a board plan.

Fees for accommodation in each of these residences and for various meal plans are specified in Financial Information, Section 7 of this Calendar.

SECTION 3

Academic
Regulations
and
Admission
Requirements

ACADEMIC REGULATIONS

Responsibility

It is the responsibility of each student, faculty member, and administrative officer concerned with academic matters to be familiar with the rules and regulations published in this Calendar.

Definitions

Academic Year:	The period extending from Wednesday following Labor Day in September to and including Convocation Day in May of the following year.
Admission:	Acceptance of an applicant as a student.
Advanced Standing:	Credit granted for work completed before admission to Saint Mary's University.
Audit:	Non-credit registration in a credit course.
Concentration (also called a Major):	A field of specialization in a particular subject or subjects.
Course:	A unit of instruction in a particular subject. Courses are designated as follows: .0 (full year) .1 (first semester) .2 (second semester) .0 (CE) or .1 (CE) or .2 (CE) (evening courses offered by the Division of Continuing Education). .0 (SS) or .1 (SS) or .2 (SS) (courses offered in a summer session).
Credit:	A completed unit of university work. One credit is granted for each completed full-year course; a half credit is granted for a completed semester course. A minimum of twenty credits is required for a first baccalaureate degree.
Elective:	A course not specifically required by a student's program of studies.
Option:	A course or group of courses chosen from a specific list.
Program:	An approved group of courses leading to a degree or diploma.
Registration:	Enrolment of a student in a course, courses or program.
Semester:	A period of instruction corresponding to one half of the academic year; each semester normally lasts fourteen weeks.
Subject (also called a discipline):	A specific field of study, e.g., accounting, chemistry, history.
Summer Sessions:	A period of instruction, normally lasting six weeks, during the months of May through August; two summer sessions are offered each year.
Transfer Credit:	Credit granted for work completed at another university after admission to Saint Mary's.

Course Abbreviations:

ANTHROPOLOGY	Ant
ASIAN STUDIES	Asn
ASTRONOMY	Ast
BIOLOGY	Bio
BUSINESS ADMINISTRATION	Bus
CHEMISTRY	Che
CLASSICS	Cla
LATIN	Lat
GREEK	Gre
ECONOMICS	Eco
EDUCATION	Edu
ENGLISH	Egl
ENGINEERING	Eng
GEOGRAPHY	Gpy
GEOLOGY	Geo
HISTORY	His
MATHEMATICS	Mat
MODERN LANGUAGES	
FRENCH	Fre
GERMAN	Ger

ACADEMIC REGULATIONS

SPANISH	Spa
CHINESE	Chi
PHILOSOPHY	Phi
PHOTOGRAPHY	Pho
PHYSICS	Phy
POLITICAL SCIENCE	Pol
PSYCHOLOGY	Psy
RELIGIOUS STUDIES	Rel
SOCIOLOGY	Soc
WEST EUROPEAN STUDIES	Wes

Number of Courses in a Year

1.   a) Students must formally register, through the Registrar's Office, for all courses. The normal load for a full-time student is five courses but any student registered for at least three courses in a semester is classified as full-time. Students registered for fewer than three courses are classified as part-time. Students may apply to the Dean of their Faculty for permission to carry an extra half or full course. Permission will be granted only in exceptional circumstances or to students whose academic performance during the previous year was better than average. Forms to request a course overload are available in the Registrar's Office and must be refiled with the Registrar for processing.

b) A student normally takes only one course or equivalent during a summer session. Where a student has attained a quality point average of 3.0 during the previous academic year of full-time study, two courses may be authorized at the Dean of Faculty's discretion. No more than three courses or equivalent may be taken by a student during two summer sessions in any year.

Auditing Courses

2.   Students may audit courses with the consent of the instructor concerned but they must register as auditors in these courses; they are not entitled to submit exercises, write examinations or be given grades in audited courses. An audited course may be converted to a credit course, on the instructor's written recommendation, within four weeks from the beginning of classes in that course during the academic year or two weeks during a summer session. The conversion must be processed through the Registrar's Office.

Student Advising

3.   a) Each student registered for a course or program will, as soon as possible after registration, be assigned an academic advisor. The advisor will be expected to familiarize himself with the student's program and progress, assist the student in planning for options and electives, and provide a continuing personal liaison between the student and the University on academic matters.

b) Students entering their first year of University study will be assigned advisors by the Dean of Faculty.

c) Students registered for a general degree program will be assigned advisors by the Dean of Faculty.

d) Students concentrating in a discipline or registered for an honors degree will be assigned advisors by the Chairman of the Department.

Grading System

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

b) Instructors must make known in writing, within two weeks of the beginning of a course, the grading system to be used in the course. The written statement must include the relative weight which will be given to examinations, tests, written assignments and other means of evaluation.

Rating, Grades and Quality Points

5.   a) The rating of a student's performance in a course is expressed in equivalent grades and quality points:

Rating		Grades		Quality Points
Excellent	=	A	=	4.0
		B+		3.5
Good	=	B	=	3.0
		C+		2.5
Satisfactory	=	C	=	2.0
		C−		1.5
Marginal Pass	=	D	=	1.0
Fail or withdrawal after deadline	=	F	=	0.0
Withdrawal Failure	=	WF	=	0.0

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

Aegrotat standing (see sec. 14 following) AE

Authorized withdrawal from course (see sec. 18(c) following) WP or W

c) The minimum passing grade is D. Students should be aware that the grade of D is not ordinarily transferable as a credit to other educational institutions.

d) Students who have not completed the work of the course may, in special circumstances and with the approval of the Dean, be given the temporary grade of "IC" (incomplete) by the instructor; if no permanent grade has been submitted to the Registrar's Office by the instructor within one month of the end of the course, a permanent grade of "F" will be recorded.

Quality Point Average

6.   a) A quality point average is used to determine the standard of a student's performance for the academic year.

b) Each letter grade is given a quality point equivalent as above.

c) The quality point average for the academic year is computed by dividing the total number of quality points by the total number of full courses or their equivalent.

d) The cumulative quality point average is based upon all courses taken for university credit, including courses taken in summer sessions.

Standing Required for Continuance

7.   (New regulations governing continuance came into effect on September 1, 1974. The regulations for each student will normally continue to be those which were in effect at the time of the student's first registration into a particular degree program provided the student completes the degree requirements within ten years of first registration. In the case of students readmitted after being requested to withdraw for academic reasons, or of students transferring to a different degree program, the new regulations will apply).

a) All students are expected to attain satisfactory academic standards. The minimum standard considered to be satisfactory is a quality point average of 1.5.

b) A full-time student who, at the end of the first year of university studies, has not attained a quality point average of 1.0 will be placed on probation. If, at the end of the second academic year, a quality point average of 1.5, or a cumulative quality point average of 1.25 for the work of the two years, has not been attained, the student will not be permitted to register during the subsequent year.

Definitions

i) "probation" is a conditional status given to a student who has shown evidence of academic weakness.

ii) "request to withdraw" is a formal notice from the Registrar requesting that a student withdraw from academic work for a specified period or permanently.

c) A full-time student, who at the end of any academic year of university studies other than the first year, does not attain a quality point average of 1.5 or have a cumulative quality point average of 1.25, will be placed on probation.

d) A part-time student who on the completion of five credits has not attained a cumulative quality point average of 1.25 will be placed on probation. If, on completion of two additional credits, a cumulative quality point average of 1.25 has not been attained, the student will not be permitted to register during the subsequent year.

e) A student whose probationary status has not been removed at the end of one academic year will not be permitted to register during the subsequent year.

f) Probationary status cannot be removed by taking courses at another educational institution; a student may, however, be granted transfer credit for such courses on the termination of probation.

g) A student who has been requested to withdraw must apply to the Admissions Office for re-admission. The university does not guarantee that re-admission will be granted. A student who has been re-admitted must achieve a quality point average of 1.5 in course work subsequently undertaken; otherwise, the student may be denied the right to further registration.

h) A student must achieve a cumulative quality point average of 1.5 in order to qualify for a Bachelor's degree even though other requirements for the degree, including the stipulated number of courses, may have been satisfied.

ACADEMIC REGULATIONS

Final Examinations

8.   a) Final examinations are held at times scheduled and notified by the Registrar's Office. Final examinations for courses ending in the first semester will be held in December; final examinations for all other courses will be held in April. The holding of a final examination in a course is at the discretion of the Department concerned.

All examinations will be scheduled by the Registrar's Office if they exceed in time the regular class period of the course. Two or more tests or examinations, offered within the regular class periods during the last three weeks of the term, are not permitted as a substitute for an examination scheduled through the Registrar's Office.

b) Students are not permitted to take final examinations unless they have registered by the prescribed date within the academic year in which they present themselves.

c) Students are expected to take final examinations in all courses where these examinations are required.

d) In special circumstances, the Dean of Faculty may give a student permission to postpone an examination in any course for not more than a year; this permission will be granted only if the final examination is weighted at fifty per cent or more of the course grade.

Evaluations

9.   a) Instructors will submit to the Registrar's Office an evaluation of all students registered in courses at the end of each semester. In the case of courses being completed during the first semester, final grades will be given. In continuing full year courses, temporary grades will be assigned and will be recorded as such by the Registrar's Office.

b) December examinations which affect Christmas evaluations will be scheduled by the Registrar's Office if they exceed in time the regular class period of the course. Two or more tests or examinations, offered within the regular class periods during the last three weeks of the first semester, are not permitted as a substitute for the December examination scheduled through the Registrar's Office.

Supplementary Examinations

10.   Supplementary examinations are no longer offered.

Special Examinations

11.   a) A special examination may be arranged if
i) a student presents a legitimate reason, acceptable to the Dean of Faculty, for not having taken a final examination on the scheduled date, or
ii) a student has failed a course in exceptional circumstances which the instructor and Chairman (or Dean, as appropriate) are satisfied justify a special examination being given, or
iii) the Committee on Academic Appeals has made a judgment that a special examination be given.

b) The standard grading system (see sec. 5) will be followed.

c) Special examinations will be scheduled by the Registrar's Office. Except in the case of (a) (iii) above, a processing fee of $10.00 for one examination and $20.00 for two or more examinations will be charged to the student.

Failure in a Course

12.   A student fails a course when he obtains in that course a final grade which is lower than a D. No quality point credit will be given for failed courses.

13. Academic Appeals

a) Appealing of Grades
i) Examination papers and class records of students who fail by a slight margin, or are at the boundary of two grades, will be examined with special care by the instructor concerned. Because of this, it is not probable that the original grade will be changed on appeal. A student who wishes to question his final grade may, however, submit to the Registrar a request for reconsideration. The application must reach the Registrar within one month of the end of the course and must be accompanied by a fee of $10.00. This fee will be refunded to the student if, as a result of the reconsideration, a failing mark is raised to a pass or if a grade is raised to a higher grade.

ii) The reconsideration will be conducted by two examiners, with professional expertise in the subject area, to be named by the Committee on Academic Appeals. It shall involve a re-reading of the final and other examinations, if any, and a review of the student's course

record. It shall be the responsibility of the student and the instructor to provide the examiners with all available evidence on tests, exercises, papers, reports and other graded material in the course. The report of the examiners and the evidence upon which it was based will be submitted to the Chairman of the Committee on Academic Appeals.

b) Other Appeals

On appeals other than those against assigned grades the procedures shall be as follows:

i) Normally within one month of the event or of the decision being received by the student, he shall submit his appeal in writing and direct it to the committee through the Office of the Registrar.

ii) The Chairman of the Committee on Academic Appeals shall forward a copy of the appeal to the Dean of Faculty concerned, and, if relevant, to the chairman of the department and the professor.

iii) As far as possible the committee shall render and communicate its decision through the Registrar to the parties concerned within two weeks of receiving the appeal.

iv) In the event of an adverse committee decision on an appeal, the student shall have the right to appeal the decision to Senate.

c) The Committee shall make a judgment on the appeal and inform the Registrar of it within two weeks of receiving the report. The Registrar will communicate the judgment to the student and take whatever further action may be required.

Final Standing in Cases of Illness

14.   Students who because of medical or compassionate reasons are unable to write a final examination may apply to the Dean of the Faculty for aegrotat standing. If this request is granted, the instructors involved will be asked to provide an estimated final grade or, if that is not possible, to advise whether the student could be granted credit for the course without a grade; in the latter case, the course or courses concerned will be assigned a grade of ''AE'' and will not be included in computing the quality point average. Students may apply for aegrotat standing for a maximum of five courses during their undergraduate program.

Course Changes

15.   a) At the beginning of a course, a period of time is provided for students to alter their registration without the change being noted on their permanent record. During this period, a course may be added, dropped or exchanged for another course.

b) The period of time provided from the first day of classes is

i) two weeks in a full year course,

ii) one week in a semester course,

iii) five days in a summer session course (three days in a half session).

c) Authorization for such course changes shall be given by the student's advisor or appropriate Chairman or Dean, and must be processed by the Registrar's Office.

Declaration of Major Area of Concentration

16.   In order to declare a major area of concentration, a student must file a Change of Registration Form with the Registrar. This form must have been signed by the chairman of the department in which the student intends to major. It is not sufficient for a student to make a change of major by indicating same on the Registration Form.

Procedure for Changing Faculty

17.   In order to register an official change of faculty a student must file with the Registrar a Change of Registration Form which has been signed by the Dean of the faculty into which the student intends to transfer.

Upon receipt of such a Change of Registration Form, the Registrar or the Dean of the faculty will advise on the number of credits (including advanced standing credits) being transferred to the student's new degree program.

A student on probation at the time of authorized transfer of faculty automatically remains on probation.

Withdrawing from a Course

18.   a) After the time limits indicated in 15(b) above have expired, and provided the course is still in its first half of class instruction, a student may be authorized by the appropriate Chairman or Dean to withdraw from the course. In the case of students registered for a major concentration, authorization will be by the Chairman; in the case of students who have not selected a major concentration, authorization will be by the Dean.

ACADEMIC REGULATIONS

b) If authorization is granted, the student will be responsible for submitting the authorization, on a prescribed course withdrawal form, to the Registrar's Office. The Registrar will then inform the appropriate instructor and request a grade.

c) A grade of "WP" or "WF" or "W" will be given. If the student's work in the course up to the time of withdrawal is satisfactory, a grade of "WP" may be given; if it is not satisfactory, a grade of "WF" will be given; otherwise of grade of "W" will be recorded.

d) A student who registers for a course and does not withdraw with authorization is considered to be taking the course; and if no grade is assigned by the instructor, a grade of "F" will be recorded.

Retaking a Course

19.   a) A student may be permitted to retake any course. If the course includes a laboratory, either class or laboratory portions may be retaken. Each course counts only once in the program for the degree. Each failure counts in computing quality points for the year and for the degree.

b) A course taken at another educational institution will not ordinarily be accepted as a substitute for a failed course required by the student's program.

Withdrawal for Academic Reasons

20.   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.

Academic Responsibility

21.   a) University students are expected to have achieved a reasonable measure of intellectual growth, self discipline and maturity. While the University's teaching resources are available for help and guidance in the programs of study undertaken by a student, and every effort will be made by instructors and staff to assist a student with academic or other problems, the final responsibility for success or failure in academic studies rests on the student.

b) A student who does not adhere to traditional ethical standards in the conduct of his academic work will be subject to penalty, including the possibility of being requested to leave the University, e.g.,

i) a student who copies another's work during an examination may be denied credit for the course; in the case of a second offense, or further violations, the student may be asked to leave the University;

ii) a student who tries to submit the work of another person as his or her own, whether it be that of another student or be copied without acknowledgement from another source, will be given no mark for the submission; further violations may result in a denial of credit for the course or a request to leave the University.

Transfer Credit

22.   a) Any student registered at Saint Mary's may be authorized by the Dean of Faculty to take courses elsewhere for transfer credit on a degree program in the Faculty. Such authorization must be processed through the Registrar's Office prior to the student actually enrolling in the course or courses.

b) A student seeking a first degree on the partial basis of credits obtained at another university will ordinarily be expected to complete seven of the degree credits at Saint Mary's; a student offering work done at non-university post-secondary educational institutions will normally be expected to obtain ten of the degree credits at the University. These limitations do not apply where the University has entered into special credit arrangements with another institution or has authorized additional credits for particular programs partially completed at another institution.

c) In cases where the University has entered into a special arrangement with another educational institution for shared instruction in a particular program, the normal registration process (see section on Registration) will be followed.

d) Before transfer credit can be considered, the student must have the university concerned send to the Registrar an official transcript of the work done.

e) No transfer credit will be given for courses with grades of "D" or equivalent.

Second Undergraduate Degree

23.   Students who hold a first degree and wish to register in a different Faculty for a second undergraduate degree will be required to complete all of the degree requirements, as specified by the Dean of that Faculty, and will normally be expected to take a minimum of five additional courses.

ACADEMIC REGULATIONS

Convocation Dates and Degree Parchments

a. Students are required to apply for graduation by the date stipulated in the University Diary of the Academic Calendar.

b. There is only one convocation exercise, in May of each year. The names of students who complete their degree requirements over the summer months are presented to Senate, usually in November. Successful candidates will be notified by the Registrar and can opt to graduate next May at the Convocation exercise or can obtain their degree by mail as soon as it has been printed. Students who choose the first option, can, upon application to the Registrar, be granted a letter testifying that all the degree requirements have been completed.

c. The parchment shows the degree which has been conferred but not (a) designators with regard to major area of concentration nor (b) any distinctions (such as summa cum laude) which may be awarded. Both these notations are shown on the student's official record card and hence become part of any academic transcript issued.

ADMISSION REQUIREMENTS

Students seeking admission to Saint Mary's University should address all enquiries, applications or correspondence to

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

Application Procedures

1. a) Application forms may be obtained by writing to the above address or telephoning (902) 422-7331 local 257 or 258.

b) Completed application forms should reach the Admissions Office by September 1, 1976 and must include provincial or other accredited school certificates which give matriculation grades or marks, and a processing fee of $5.00 which is non-returnable.

c) A confidential report form will be sent to the applicant with the application. It should be given to the high school principal or guidance officer, where appropriate, with a request that the completed form be mailed directly to the above address.

d) All students enrolling for the first time must present, at or before the time of registration, a certificate of medical fitness signed by an authorized medical practitioner and evidence of an x-ray taken within six months of the date of registration.

e) An applicant who has completed courses at another university or post-secondary educational institution must ask that institution to send an official transcript of the work done by the applicant to the above address.

f) A student whose mother tongue is not English may be required to take an English language comprehension and usage test before being considered for admission. A student whose mastery of English is not considered to be adequate for University studies may be required to take a non-credit course in English usage.

g) i) Students who previously had been enrolled at Saint Mary's but were not in attendance during the preceding academic year or during a period of up to three years, and who wish to resume studies in the same degree program in which they were enrolled, must notify the Registrar in writing of their intent to return to the University before registering for any course.

ii) Students seeking to enter a different degree program, or who have not been enrolled during the preceding four years or longer, or who have been requested to withdraw (see Academic Regulations) must apply for re-admission to the Director of Admissions.

Admission Requirements

Nova Scotia

2. Students entering from the Province of Nova Scotia school system must have completed

either

a) Grade XI (Junior Matriculation) with satisfactory grades in English and four other academically recognized subjects. Students intending to concentrate in commerce, engineering or science must include mathematics as one of the five courses taken.

or

b) Grade XII (Senior Matriculation) with satisfactory grades in English and four other academically recognized subjects, as defined below:

i) Students intending to concentrate in arts may be admitted to a three year degree or a four year honors program if they meet the requirement of five completed courses in Grade XII with satisfactory grades, as defined below;

ii) students intending to concentrate in commerce may be admitted to a three year degree or a four year honors program if they meet the requirement of satisfactory grades in English, mathematics, and three other academically recognized subjects, as defined below;

iii) students intending to concentrate in science, engineering, or pre-professional studies (e.g., medicine and dentistry) may be admitted to a three year degree or a four year honors program if they meet the requirement of satisfactory grades in five courses, including English, mathematics, two science and one other academically recognized subject, and the additional requirement of having superior grades (i.e., 65 per cent or above) in the mathematics and science subjects.

c) Students who have completed Grade XII but whose final grades do not meet the standards for admission to a three year degree or a four year honors program will be given credit for courses in which they have obtained a grade of 60 per cent. In the case of mathematics and science subjects, a grade of 75 per cent will be required for admission to further work in those subjects. No credit will be granted for Grade XII work done after admission to the University.

ADMISSION REQUIREMENTS

Definitions:

i) "satisfactory grades" means an average in five subjects of 60 per cent with no mark below 50 per cent,

ii) "academically recognized subjects" means any subject offered in the university preparatory program of the Nova Scotia school system,

New Brunswick

3. a) Students entering from the New Brunswick or Prince Edward Island school system who have completed Grade XII are subject generally to the provisions outlined for Nova Scotia Grade XII (Senior Matriculation) students.

b) Students who do not meet the above requirements but who have been awarded a high school graduation certificate may be accepted into a four year degree program as provided above for Nova Scotia Grade XI (Junior Matriculation) applicants.

Newfoundland

4. Students who have completed Grade XI in the Newfoundland School system may be admitted to a four year degree program.

Other Provinces

5. The requirements for admission to a four year degree program are:

a) Quebec: High school leaving certificate. Students who have completed the first year of CEGEP with high standing may be considered as having the equivalent of Nova Scotia Grade XII (Senior Matriculation).

b) Ontario: Grade XII diploma of the five year program. Students who have completed a secondary school honors graduation diploma (Grade XIII) will ordinarily be admitted to a three year degree or a four year honors program.

c) Manitoba, Saskatchewan and Alberta: Grade XI (Junior Matriculation) certificate. Students who have completed Grade XII (Senior Matriculation) may be considered for a three year degree or a four year honors program.

d) British Columbia: Completion of a four year secondary school program.

United States

6. a) Students who have graduated from high school with 16 points — 4 in English and 12 in other academic subjects — will be considered for admission to a four year degree or a five year honors program. Students seeking admission to commerce, engineering and science must have 3 points in mathematics.

b) Students must arrange to provide the Admissions Office with a high school transcript, a confidential evaluation from the school principal or counsellor, and CEEB and SAT test results.

c) High school graduates with excellent grades, test scores and recommendations may be considered for advanced standing in relevant subject areas. A student who has satisfactorily completed a year or more of university or college program, beyond high school, may be considered for additional advanced credit.

Other Countries

7. a) The completion of the equivalent of four years at a North American high school or of the English GCE at Ordinary Level will be required for admission consideration. Passes must be obtained, at the minimum, in five subjects including English, and in mathematics for admission to commerce, engineering and science. A better than average academic record will be required.

b) A student who has completed work beyond the secondary school standard may be considered for advanced credit.

c) An overseas student whose first language is not English, or who has not attended an English language secondary school, will be required to take an English language test. These tests are administered by the University of Michigan, the College Entrance Examination Board, and the University of Cambridge. The University of Michigan English proficiency test is administered by the Language Institute at Ann Arbor, Michigan, U.S.A. 48104, and is given on request in any country in the world at any time during the academic year.

ADMISSION REQUIREMENTS

Advanced Standing

8.   a) Advanced standing may be granted for work completed before admission to Saint Mary's. It means the placement of a student in a course or program suitable to the level of preparation attained. It is ordinarily granted for completed high school studies at the Senior Matriculation level, or courses taken at a post-secondary educational institution or at another university; in the case of mature students, advanced standing may be granted for experience judged to be relevant to undertaking formal education at the university level.

b) Students in their final year of high school, i.e. Nova Scotia Grade XII or equivalent, by arrangements made between their high school and the University and providing they meet admission requirements, may register in a course offered by the University. The granting of advanced standing for more than five credits will, in such cases, be at the Dean of Faculty's discretion.

c) A student seeking advanced standing must have the institution previously attended send an official transcript of the work done to the Director of Admissions. Mature students must submit documentation, with transcripts if relevant, to the Director of Continuing Education and will normally be interviewed before a decision on advanced standing is made by the Registrar.

d) A request for advanced standing will not be considered after the lapse of one year from the student's first registration at Saint Mary's.

e) In the case of high school or other post-secondary academic work, advanced standing will be given only for courses with satisfactory grades as required by the relevant Saint Mary's program and, as a general policy, grades of ''D'' or lower are not acceptable.

Graduate Studies

9.   Candidates for admission to the Master's program must,

a) hold a Bachelor's degree from a university of recognized standing, and have completed an undergraduate program in the subject area of graduate study comparable to an honors degree from Saint Mary's University. (For the Master in Business Administration program, the Bachelor's degree need not be in Commerce or Business Administration).

b) have the approval of the Committee on Graduate Studies, and of the department concerned.

Note: A Bachelor of Education degree comparable to that granted by Saint Mary's University with second class standing will be considered the equivalent of an honors degree for candidates seeking admission to graduate study in Education.

10.   Candidates who have not completed the requirements for admission may, on recommendation of the department concerned, be admitted by the Committee on Graduate Studies to a program of preliminary study.

11.   Certain departments may have speoial requirements for admission in addition to the general requirements.

12.   Application for admission should be made to the Director of Admissions. The application form calls for an official transcript of the student's academic record and letters of recommendation from two persons in a position to judge the applicant's capacity for graduate study. For the Master in Business Administration program only, applicants are required to complete the Admission Test for Graduate Studies in Business administered by Educational Testing Service, Princeton, N.J. The form, and all supporting documents, must ordinarily be on hand by May 31.

Financial Aid to Graduate Students

In addition to loans and bursaries under the Canada Student Loan Plan, a number of university fellowships are available. Please refer to the Financial Aid section of this Calendar.

Financial Aid to Graduate Students

In addition to loans and bursaries under the Canada Student Loan Plan (see financial aid section of this Calendar), a number of University fellowships up to a maximum of $2,750 for the calendar year are available to full-time students. Application should be made in writing to the Committee on Graduate Studies, in care of the Director of Admissions. There is also the possibility of supplementing fellowships through remuneration for departmental duties.

REGISTRATION

Procedures

1.   Registration procedures are the responsibility of the Registrar's Office and will be made known to students, instructors and administrators.

Dates

2.   The dates for registration will be as given in the Diary (see Centerfold) of this Calendar.

Student Responsibility

3.   a) Students are responsible for ensuring that their course registration is accurate and complete. Course prerequisites, as listed in this Calendar, should be noted prior to registration.

b) Students are responsible for making sure that courses for which they register are suitable to the requirements of the degree program and will be acceptable as credits towards a degree.

c) No credit will be given for courses in which a student has not been formally registered.

d) Subject advisors and University counsellors will be available to assist students before and during the registration process.

Cancellation of Courses

4.   If the number of students registered for a course is not sufficient to warrant its being offered, the course may be cancelled.

Late Registration

5.   a) A fee of $10.00 will be charged to students who, without prior agreement with the Registrar's Office, apply to register after the final date for registration indicated in this Calendar.

b) A student will not be permitted to register for any course after the lapse of time indicated below from the beginning of classes in that course:

i)	Full year course	2 weeks
ii)	One semester course	1 week
iii)	Summer course	
	full session	5 days
	half session	3 days

Changes in Registration

6.   a) A student will not normally be authorized to change registration after the deadline indicated in this Calendar.

b) A change in registration must be formally authorized and be recorded by the Registrar's Office. Authorization will be given by the Dean in the case of students who have not selected a major concentration or are in a general degree program; it will be given by the Chairman in the case of students who have registered for a major concentration or honors program.

c) A change in registration does not become effective until it has been acknowledged to the student by the Registrar's Office.

Transcript Information

A student requesting a transcript is required to complete the appropriate form available in the Registrar's Office. Transcript requests are processed in the order in which they are received and the normal delivery time is 3 days although at peak periods, additional time is needed. Transcripts show advanced standing credits together with *all* academic work completed and credited at Saint Mary's University. Failing grades as well as passing ones are included. References are also included for: dean's list, scholarships held, academic probation, and academic withdrawal. The cost for a transcript is $1.00 for original plus $.50 for each copy made at the same time. Official transcripts are those forwarded directly from the Registrar's Office to a third party.

SECTION 4

Faculties
and
Courses

ARTS
SCIENCE
COMMERCE
ENGINEERING
EDUCATION

FACULTY OF ARTS

General Information

The Faculty of Arts offers programs of study leading to the degrees of Bachelor of Arts, Bachelor of Arts (Honors), and Master of Arts. The last of these is at present available only in History and in Philosophy.

The primary purpose of the ordinary B.A. 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 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 or subjects. It requires greater specialization, and a higher level of performance, than the ordinary B.A. program, and includes courses specially designed for Honors students.

All candidates for the Bachelor's degree are expected to be able to express themselves clearly, cogently, and with at least tolerable felicity 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 course 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.

The following requirements apply to all students who registered for the first time in September 1975 and thereafter. Students registered in degree programs in effect before that date will remain in those programs unless they specifically request permission to transfer.

Degree of Bachelor of Arts

1. Subject to the regulations set forth in this Calendar, the candidate must complete the equivalent of 20 full courses following Junior Matriculation, or 15 courses following Senior Matriculation. In either case at least eight of these courses must be at the 300-level or above.

2. During the regular academic year, a full-time student will normally take the equivalent of five full courses. In exceptional circumstances, students with a quality point average of at least 3.0 in the previous year of full-time study may, at the discretion of the Dean, be permitted to take a sixth course.

3. Each candidate must receive credit for:
   (a) English 200 or, at the discretion of the Chairman of the English Department, an alternative full course in English.
   (b) The equivalent of a full course in Philosophy 200 (Basic Logic) *or* mathematics *or* a language other than English (French, German, Spanish, Latin, Greek or Chinese) *or* a natural science (astronomy, biology, chemistry, geology or physics).
   (c) The equivalent of one full course from among the remaining humanities (classics, history, philosophy other than Philosophy 200, and religious studies).
   (d) The equivalent of two full courses, to be selected from at least two subjects, in the social sciences (anthropology, economics, geography, political science, psychology and sociology).

Credits for Grade XII work may not be used in fulfillment of any of these requirements. Most full-time students will find it to their advantage to attempt to satisfy 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.

4. Not later than the beginning of the junior year, candidates must declare the particular subjects 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, classics, economics, English, French, geography, German, history, Latin, mathematics, philosophy, political science, psychology, religious studies, sociology and Spanish. In addition, Asian studies and West European studies are two areas of concentration which are formally organized; and alternative areas, tailored to the needs and interests of particular students, may be devised and approved by the Dean of Faculty. Once major subjects or areas of concentration have been declared, candidates' programs must be approved annually, and supervised, by the Departments in which they are majoring or by the persons responsible for their areas of concentration. While a subsequent change of major subject or area of concentration is possible, students are advised that such a change may necessitate additional courses in order to meet graduation requirements.

5. In addition to satisfying requirement 3, each candidate must receive credit for the equivalent of not fewer than six full University courses in the subject of the major or in the chosen area of concentration; but may count among these six any relevant course or courses taken in fulfillment of requirement 3. Not fewer than four of the six courses must be at the 300-level or above. No department may require more than the equivalent of eight full courses in the major subject.

6. Within the limits imposed by these regulations, any candidate may count towards his B.A. degree the equivalent of up to three full courses from outside the range of recognized Arts subjects as specified in requirement 4. The Dean of Faculty may authorize an extension of this upper limit to meet special program requirements or where there are sound academic reasons for doing so.

7. In order to have major subjects or areas of concentration formally entered upon their records at the time of graduation, candidates must have maintained a cumulative quality point average of 2.0 (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. Candidates who fail to achieve this average may, provided that they fulfill all other requirements, graduate as non-majors.

8. Candidates have the option of declaring minor fields in addition to major ones. To satisfy the requirements for a minor they must receive credit for at least four courses in that particular subject or area of concentration, and at least two of these courses must be at the 300-level or above.

9. It is also possible to declare a double major, in which case the candidate must fulfill 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 courses normally required for graduation; but the Dean, with the approval of the appropriate Departmental Chairmen, may reduce these requirements in the light of a student's overall record.

Degree of Bachelor of Arts — Honors

10. The Faculty of Arts at present offers honors programs with majors in the following subjects: anthropology, economics, English, history, mathematics, modern languages, philosophy, political science, psychology, religious studies and sociology. It is also possible to take combined honors in any two of these subjects.

11. Subject to the regulations set forth in this Calendar, the candidate must complete the equivalent of 25 full courses following junior matriculation or 20 full courses following senior matriculation.

12. Formal application for admission to the honors program must be made on a form obtainable from the Registrar's Office. The approval of both the Dean of the Faculty and the Chairman of the appropriate Department is necessary for admission, and the normal prerequisite is a cumulative quality point average at the time of admission of at least 2.5 overall, and 3.0 in the intended subject or area of concentration. Subsequent to admission, maintenance of an overall quality point average of 3.0 is normally a condition for continuance in the program, and is essential for graduation with honors. Candidates should complete the formalities for admission not later than the beginning of their junior year. While later admission may be permitted, it may result in the lengthening of the time in which the program could otherwise be completed.

13. Every candidate for an honors degree shall satisfy requirement 3.

14. Every candidate for an honors degree with a single major must also receive credit for the equivalent of not fewer than ten full university courses in the major subject, of which not fewer than eight must be at the 300-level or above. Supporting courses and electives must be decided in consultation with, and must be approved by, the department of the major, which may also lay down such additional requirements as do not conflict with existing University or Faculty regulations.

15. Every candidate for a combined honors degree must also receive credit for the equivalent of not fewer than seven full university courses in each honors subject, of which not fewer than ten must be at the 300-level or above, including at least four in each subject. Supporting courses and electives must be decided in consultation with, and must be approved by, the departments from which the majors are chosen. These departments may also lay down such additional requirements as do not conflict with existing University or Faculty regulations.

16. Every candidate for honors must have a quality point average of 3.0 in the honors subject or subjects, with not more than two grades of C, and no grade lower than C, in the same subject or subjects.

DEGREE OF MASTER OF ARTS IN HISTORY

The University's general requirements for admission to Graduate Studies and for the Master of Arts degree apply to the Department of History. The particular requirements of the Department, which include a thesis as well as course work, are as follows:

1. Students with a pass B. A. will normally enter the two-year program. The course requirements are as follows:
   Year I — His 515.0, one other 500 level course, and two 600 level options.
   Year II — His 690.0, one 500 level course, and two 600 level options.
   Students with a B.A. (Honors) may be permitted, at the discretion of the Department, to enter a one-year program, in which the course requirements will be His 515.0, His 690.0, one other 500 level course, and two 600 level options.

2. The candidate will be required to demonstrate a reading knowledge of at least one language other than English by passing a test carried out in cooperation with the language department concerned. French is required of candidates intending to write a thesis on any aspect of Canadian history.

3. The subject of the thesis must be decided in consultation with the thesis advisor.

4. Before presenting a thesis, the student must pass a written, comprehensive examination in both a major and a minor field. Upon completion of the thesis, an oral defence will be required. Two months prior to this defence, the candidate will be invited to select an examination board from among the members of the Department of History. While the Department will make every attempt to meet individual requests, it cannot guarantee full compliance.

5. After a review of a candidate's progress at the end of the first term, the Department may recommend to the Dean that the student be required to withdraw from the program.

FACULTY OF ARTS

DEGREE OF MASTER OF ARTS IN PHILOSOPHY

The University's general requirements for admission to Graduate Studies and for the Master of Arts degree apply to the Department of Philosophy. The particular requirements of the Department are as follows:

1. Candidates are normally required to have an honors degree in philosophy with at least second class standing, or its equivalent. In some cases a candidate with a general B.A. or its equivalent may be admitted with the permission of the Department. Such candidates will have to make up for background deficiencies. Some acquaintance with modern logic and the various sections of the history of philosophy is desirable for all candidates.

2. The degree can normally be taken in one year. Candidates with certain deficiencies in philosophical knowledge and education are asked to study for two years.

3. Candidates usually take four full courses in an academic year. Those enrolling in a two-year program may be asked to attend certain medium level courses in their first year. In addition to the regular courses listed in the Calendar, reading and tutorial classes can be arranged for those who require special or advanced instruction. (See Reading Courses in the philosophy section of this Calendar).

4. Every Master of Arts candidate is required to write a thesis which shows critical acumen as well as originality. Thesis research is closely supervised by one or two members of the Department. Areas from which the topic of the thesis may be chosen include: ancient, medieval, and modern philosophy, metaphysics, philosophy of mind, epistemology, logic, philosophy of science, philosophy of man, philosophical analysis, philosophy of language, existentialism, phenomenology, ethics, and aesthetics.

FACULTY OF SCIENCE

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 B grade in all courses followed in the honors subject. This program involves an additional year of study and is 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 make application to follow an honors program before the end of their sophomore year. Students can apply subsequently for admission to the program. Formal application for admission to an honors program must be made on a form available in the Registrar's Office. The form must be submitted by the student to the Chairman of the Department concerned, and must receive the approval of the Dean of Science.

Major

The regular major program demands a minimum grade of C in all courses in the major subject. The 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 performance and motivation develop in that way.

General

The general program is designed to give a person a good educational background for life in today's technological world. It is of the same duration as the major program but broader in content. More emphasis is placed on the humanities and social sciences, recognizing that greater understanding of science in relation to society will be required of educated people in the days ahead. Students taking this program as preparation for entrance to professional schools are urged to place special emphasis on a high standard of performance from the beginning.

SCIENCE DEGREE REQUIREMENTS

Since one of the objects of the University is to give special emphasis to the Christian tradition and values in higher education, all science students are urged to devote a part of their formal course work to a study of this tradition and these values in the Departments of History, Philosophy and Religious Studies.

1. Subject to the regulations set forth in this Calendar, the candidate must complete the equivalent of 20 full courses following junior matriculation, or 15 full courses following senior matriculation. Not more than seven credits of the required twenty may be at the 100 level without the approval of the Dean of Science. All numbering is based on a 20 course program.

2. The candidate will normally take five full courses during the regular academic year.

3. Each candidate for the Degree of Bachelor of Science must receive credit for:

    (a) one university course in English
    (b) two courses in mathematics (Mat 100.0 and 200.0
    (c) one course in physics
    (d) two courses in the humanities in addition to (a) — (the humanities herein intended are English, history, modern languages, philosophy and religious studies)
    (e) one course in history, philosophy, or religious studies in addition to (d).

FACULTY OF SCIENCE

DEGREE OF BACHELOR OF SCIENCE - GENERAL

4. Each candidate for the general Degree of Bachelor of Science shall, in addition to satisfying the requirements in sections 1 to 3, receive credit for:
   (a) not less than five or more than seven courses in one subject from biology, chemistry, geology, mathematics, physics, psychology. This subject shall be known as the ''subject of concentration'';
   (b) three Science courses not in the subject of concentration and in addition to the required mathematics and physics courses;
   (c) sufficient elective courses to complete the degree program.

DEGREE OF BACHELOR OF SCIENCE - MAJOR

5. Each candidate for the Bachelor of Science Degree with a Major shall, in addition to satisfying the requirements in sections 1 to 3, receive credit for:
   (a) not less than seven or more than nine courses in the major subject;
   (b) three science courses not in the major subject and in addition to the required mathematics and physics courses;
   (c) sufficient elective courses to complete the degree program.

6. The candidate's program must be approved by the Department in which the major is taken and must satisfy any core program specified by that Department 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 candidate in consultation with the Department concerned.

7. Each candidate must obtain a grade of not less than C in every course in the major subject. 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 concerned.

DEGREE OF BACHELOR OF SCIENCE-HONORS

8. An honors program with a major may be taken in one of the following subjects: biology, chemistry, mathematics, physics, psychology.

9. Each candidate for the Bachelor of Science Degree with Honors shall satisfy requirement number 3.

10. All honors programs must consist of 25 full courses or equivalent following junior matriculation or 20 full courses or equivalent following senior matriculation.

11. An honors program with a combined major may be taken in any two subjects from biology, chemistry, geology, mathematics, physics, psychology.

12. In an honors program with a major, the 20 full courses taken beyond the first year level must include 10 to 12 full courses beyond the first year level in the major subject. Supporting courses and electives will be decided in consultation with and must be approved by the department of the major subject.

13. In an honors program with a combined major, the 20 full courses beyond the first year level must include 12 to 16 full courses or equivalents beyond the first year level in the two subjects. Not more than 10, nor less than 6, full courses shall be taken in either of them. Supporting courses and electives will be decided in consultation with, and must be approved by the departments of the combined major.

14. A candidate for the Bachelor of Science Degree with Honors must obtain a grade of not less than C in every honors course as described in sections 12 and 13 with an average of not less than B in the same courses. A student receiving a mark of less than C in any honors course will be permitted to continue in the honors program only with the approval of the department.

The above Faculty requirements will apply to all incoming students from September 1975 and thereafter. Students registered in degree programs in effect prior to that date may elect to remain in their present degree programs or transfer to programs under the new requirements.

FACULTY OF SCIENCE

ENGINEERING AND SCIENCE COURSE

Students who have obtained the Diploma of Engineering under Schedule "B" may proceed to the degree of Bachelor of Science on successful completion of a further year of study.

The program of this additional (fourth) year will include: a course in mathematics, an elective from the humanities* and any three from physics, chemistry, or mathematics, or three courses in geology.

All programs must have the approval of the Dean of Science.

*See Requirement 3(e) under Science Degree Requirements.

DEGREE OF MASTER OF SCIENCE IN ASTRONOMY

The University's general requirements for admission to Graduate Studies and for the Master's Degree in Astronomy apply to this program. Particular requirements are as follows:

1.   Admission to the program requires a Bachelor's degree with a major in physics, or in mathematics (a minor in physics is strongly urged). Undergraduate students at Saint Mary's University would be encouraged to take Ast 202.0, 401.1, and 402.2, but these courses are not prerequisites for the graduate courses.

2.   Course requirements for the master's degree are as follows:

a.   A total of six courses plus thesis (Ast 610.0)

b.   At least four graduate courses in astronomy in addition to the thesis. Ast 401.1-402.2 may be counted as one of these courses. Ast 605.0 and Ast 606.1 are required.

c.   At least one but not more than two courses from Mathematics or Physics at the 400 or 500 level.

Elective courses are to be approved by the faculty advisor.

3.   Students will be required to obtain approval of a thesis topic before the end of their first year in the program (normally before May 1).

4.   Candidates must normally spend two academic years in residence. This is in addition to any time needed to meet the normal admission requirements.

5.   The normal course load will be four in the first year and two plus thesis in the second year. An overall grade average of B(3.0) must be achieved for the six-course program. An acceptable thesis must be submitted.

6.   Candidates must pass an oral examination in which they will be expected to demonstrate comprehensive knowledge of basic areas in astronomy. This examination will normally be given at the beginning of the second year of study.

FACULTY OF COMMERCE

GENERAL INFORMATION

The program of study leading to the degree of Bachelor of Commerce is offered to students who desire the advantage of higher education and wish, at the same time, to prepare themselves for graduate study, or a place in the business community, the public service, or professional life. The program provides a broad background in the humanities and social sciences together with a development of the conceptual foundations of accounting, business administration and economics.

The Faculty offers two undergraduate programs of study — Bachelor of Commerce (General) and Bachelor of Commerce (Honors). The major concentrations in the general Degree Program are in accounting, business administration and economics. The programs available in the Honors Degree are in business administration and economics.

Candidates for the Master's Degree may concentrate in management of technology, financial management, planning and control, marketing management or management of human resources.

The requirements for the General Degree are described below; the requirements for the Honors Degree appear on page 37.

DEGREE OF BACHELOR OF COMMERCE — GENERAL PROGRAM

Requirements:

1. Subject to the regulations set forth in this Calendar, the student must complete a total of twenty full courses following junior matriculation, or the equivalent of fifteen full courses following senior matriculation.

2. During the regular academic year, the student will normally take the equivalent of five full courses. The five courses to be taken will be decided upon by the student in consultation with the department of his major. A major must be selected not later than the end of the sophomore year.

3. Completion of a major concentration in accounting, or business administration or economics.

4. The Freshman Year
   The student must complete five courses as follows:
   (a) one required course: Mat 113
   (b) four elective courses to be chosen from the following: Anthropology 100 level, Biology 103, Classics 100 level, Economics 100 level, French 100 level, German 100, History 100 level, Latin 102, Physics 111, Political Science 200, Psychology 201, Spanish 101, and a course in Religious Studies.

5. The Sophomore, Junior and Senior Years
   (a) the student will take 15 courses at the 200 level and above —
   (b) the student must complete the following courses:
      (1) Egl 200
      (2) Bus 240
      (3) Bus 280
      (4) Eco 202
      (5) Cml 301
      (6) A non-commerce elective in one of philosophy, psychology, political science or sociology approved by the Department. (Economics majors are required to complete a course in philosophy).
   (c) the student must complete a major concentration in one of the following subjects as listed:
      (1) Accounting — Bus 203, 204, 321, 341, 342, 346, 348, 360, 361, and Cml 302 plus two half-courses to be chosen from: Bus 323, 324, 425, 443, 444, 449, 450, 453, 455.
      (2) Business Administration — Bus 203, 204, 317, 321, 360, 361, 370, 382 and 489.
      (3) Economics — five full-year course equivalents to include:
         Eco 201, 202, 203, 204, 300, 301, and the equivalent of three full Economics courses at the 300 level or above.
   (d) in addition to the courses listed under (b) and (c) above, the student must complete the equivalent of two approved full-year courses to be chosen from the subject areas of the languages, humanities, social sciences (including economics), natural sciences, or business administration.
   (e) the remaining courses required under section (a) will be chosen by the student in consultation with his department.

FACULTY OF COMMERCE

The following programs show the courses and course sequence for each major concentration in the general degree:

Accounting

First Year — Freshman
Mat 113.0 (1)
  Mathematics for Commerce Students
Elective (1)   Elective (1)
Elective (1)   Elective (1)

Second Year — Sophomore
Bus. 203.1 or 203.2 (1/2)
  Introductory Quantitative Methods for Commerce
Bus. 204.1 or 204.2 (1/2)
  Introductory Statistics Methods for Commerce
Bus 240.0 (1)
  Principles of Financial and Managerial Accounting
Bus 280.0 (1)
  Principles of Management
Eco 202.0 (1)
  Principles of Economics
Egl 200.0

Third Year and Fourth Year
Bus 321.1 or 321.2 (1/2)
  Introduction to Computers
Bus 341.1 (1/2)
  Intermediate Financial Accounting — Part I
Bus 342.2 (1/2)
  Intermediate Financial Accounting — Part II
Bus 346.1 or 346.2 (1/2)
  Introductory Cost Accounting
Bus 348.1 or 348.2 (1/2)
  Planning and Control
Bus 360.1 (1/2)
  Business Finance — Part I
Bus 361.2 (1/2)
  Business Finance — Part II
Cml 301.1 (1/2)
  Legal Aspects of Business — Part I
Cml 302.2 (1/2)
  Legal Aspects of Business — Part II

A non-commerce elective in one of philosophy, psychology, political science or sociology approved by the Department.
Elective (1/2)   Elective (1)
Elective (1)   Elective (1)
Elective (1)

(Electives must include the equivalent of one full course from Bus 323, 324, 425, 443, 444, 449, 450, 453, 455).

Business Administration

First Year — Freshman
Mat 113.0 (1)
  Mathematics for Commerce Students
Elective (1)   Elective (1)
Elective (1)   Elective (1)

Second Year — Sophomore
Bus 203.1 or 203.2 (1/2)
  Introductory Quantitative Methods for Commerce
Bus 204.1 or 204.2 (1/2)
  Introductory Statistics for Commerce
Bus 240.0 (1)
  Principles of Financial and Managerial Accounting
Bus 280.0 (1)
  Principles of Management
Eco 202.0 (1)
  Principles of Economics
Egl 200.0 (1)

Third Year — Junior
Bus 370.1 or 370.2 (1/2)
  Introduction to Marketing
Bus 360.1 (1/2)
  Business Finance — Part I
Bus 361.2 (1/2)
  Business Finance — Part II
Bus 317.1 or 317.2 (1/2)
  Introduction to Production
Bus 321.1 or 321.2 (1/2)
  Introduction to Computers
Bus 382.0 (1)
  Organizational Behavior
Cml 301.1 (1/2)
  Legal Aspects of Business — Part I

A non-commerce elective in one of philosophy, psychology, political science, or sociology approved by the Department.

Fourth Year — Senior
Bus 489.2 (1/2)
  Business Policy
Elective (1/2)   Elective (1)
Elective (1)   Elective (1)
Elective (1)

FACULTY OF COMMERCE

Economics

First Year
Mathematics 113 (1)
    Mathematics for Commerce Students
Elective
Elective
Elective
Elective

Second Year
Business Administration 240 (1)
    Principles of Financial and Managerial Accounting
Business Administration 280 (1)
    Principles of Management
Economics 201.1 and 202.2
    Principles of Economics
Economics 203 (1/2)
    Introductory Mathematics for Economists
Economics 204 (1/2)
    Introductory Statistics for Commerce
English 200 (1)

Third Year
Commercial Law 301
    Legal Aspects of Business — Part I
Economics 300
    Intermediate Microeconomic Theory
Economics 301
    Intermediate Macroeconomic Theory
Economics Elective
Natural Science, Mathematics or Computer
Humanities or language (e.g., philosophy, religious studies, English, French)
Elective ($1/2$ credit)

Fourth Year
Economics Elective
Economics Elective
Elective
Elective
Elective

DEGREE OF BACHELOR OF COMMERCE — HONORS

The Faculty of Commerce offers honors programs in business administration and economics. Students who wish to enter one of these programs must make application for admission on a form available in the Registrar's office. Applicants must meet the admission requirements of the particular program (business administration or economics) and all applications must receive the approval of the department concerned and the Dean of Commerce.

The student is required to complete twenty full courses, or equivalent, beyond completion of Grade XII, and meet the requirements of the particular program.

A student must have the approval of the Committee on Academic Appeals to transfer from an honors program to a general program.

Honors Program in Business Administration
1. Admission requirements:
    An overall cumulative average of 2.6 at the end of the junior year. Students are advised to apply before the junior year so that academic counselling may be given; conditional admission may be granted at this time.

2. Requirements for Honors Degree:
    a) completion of twenty full courses (or equivalent) beyond completion of Grade XII;
    b) the student must meet the requirements for a concentration in business administration in the general program;
    c) maintenance of a 2.6 overall average;
    d) i)   at least ten full courses (or equivalent) in the Business Administration Department;
        ii)   a student may substitute a course (to be included in the ten courses) from another department with the permission of the Department of Business Administration;
    e) completion of the following courses:
        i)   Statistical Analysis for Business (Business 307.1 or .2)
        ii)   Intermediate Microeconomic Theory (Eco 300.1 or .2)
        iii)   Intermediate Macroeconomic Theory (Eco 301.1 or .2)
        iv)   Business Research (Business 591.1 or .2);

f) i) a student must complete **functional specialization** in two of the following areas: accounting, economics, finance, management, management science, marketing;

ii) **functional specialization** in an area means two and one-half courses (or equivalent) at the 300 or 400 level in that area;

iii) courses from other departments can be included (in the two and one-half courses) with the permission of the Department of Business Administration,

iv) a listing of courses which satisfy a **functional specialization** in each of the six areas will be prepared annually by the Department of Business Administration.

Honors Program in Economics

1. Admission requirements:
   a) a 2.6 average in economics;
   b) junior year or higher standing.

2. Requirements for Honors Degree:
   a) ten full-year courses or equivalent in economics;
   b) no grade below C (2.0) in these ten courses (a student may receive a grade lower than C, but it cannot be counted in the ten required courses);
   c) a minimum average of 2.6 in the ten economics courses presented for honors;
   d) the student must meet the requirements for a major in economics;
   e) eight of the ten courses must be on or above the 300.0 level:

      i) a student may substitute a course from another department which is below or above the 300.0 level with the permission of the Department of Economics;

      ii) these substitutes will normally be in the Mathematics Department;

   f) the eight courses on or above the 300.0 level (or equivalent) must contain at least one of the following:
      i) Mathematical Economics (Eco 302.0)
      ii) Introduction to Economics (Eco 309.1)
      iii) Introduction Economics Statistics (Eco 303.1 or 303.2)
      iv) Advanced Microeconomics (Eco 440.1)
      v) Advanced Macroeconomics (Eco 441.2);
   g) the student will be expected to complete university requirements for graduation;
   h) twenty full courses, or equivalent, beyond Grade XII completion are required.

DIVISION OF ENGINEERING

NOTE:

1. Students who plan to enter civil, mining, or metallurgical engineering at the Nova Scotia Technical College must substitute Geology 201.0 for the second year elective.

2. Engineering 113.1 (Surveying) is a required course for students proceeding to the Nova Scotia Technical College in civil, or mining engineering.

3. The selection of courses from the humanities, where not specifically designated, is subject to the approval of the registration advisor.

4. Students with above average results in Grade XII may be permitted to complete the Diploma in Engineering in a 2-year period.

5. Where it is deemed advisable, students with partial Grade XII certificates may be given credits in certain subjects depending on the mark in the course and the general average. Such a decision will be at the discretion of the Director of Engineering.

DEGREE OF BACHELOR OF SCIENCE IN ENGINEERING MANAGEMENT

The purpose of this Degree is to provide students with sufficient engineering background and managerial skills to enable them to be employed in positions in management now held, in many instances, by people whose background has been purely in engineering.

The intention of the program is to give students a balanced selection of courses in business administration, physical sciences and the humanities in addition to a thorough grounding in engineering studies. The first year of courses is selected in such a way that on completion of the year a student is able to transfer to Commerce or any other faculty with minimum dislocation and loss of credit.

The course of studies is designed principally for admission from Grade XII, but provision is made to enable a student to enter from Grade XI and complete the program in the normal time.

Students entering from Grade XI would take Mat 100.0 in the first year followed by Phy 111.0 and Mat 201.0 during the following summer, at the end of which they would have the required prerequisite course plus three elective courses. The last three years of both streams would be identical.

The program conforms closely with the requirements for the Diploma in Engineering and is structured to permit the student to complete the requirements for the Diploma in Engineering by replacing the elective in the fourth year with Eng 303.1 (Fluid Mechanics) and Eng 304.2 (Mechanics of Deformable Bodies) and adding Che 203.0.

YEAR ONE	YEAR TWO
Mat 201.0	Mat 311.0
Che 101.0	Phy 221.0
Eng 106.1	Eng 108.1 or 113.1
Eng 107.2	Eng 212.2
Eng 200.0	Bus 240.0
	Bus 280.0

Social Science — Humanities

YEAR THREE	YEAR FOUR
Mat 314.0	Elective
Eng 203.2	Eng 308.0
Eng 204.1	Eng 314.1
Eng 302.0	Eng 306.1
Eco 201.2/202.2	Bus 489.2
Bus 370.1 (370.2)	Bus 360.1
Bus 317.1 (317.2)	Bus 385.1 (385.2)
	Bus 361.2

ENGINEERING AND SCIENCE

Students who have obtained the Diploma in Engineering under the diploma program may proceed to the Degree of Bachelor of Science by enrolling in the Science Faculty and fulfilling the requirements as outlined under the Science section of this Calendar.

DIVISION OF ENGINEERING

Engineering studies at Saint Mary's University provide the first three years of a five-year engineering degree in association with the Nova Scotia Technical College. Students follow a core program leading to the Diploma in Engineering or a Bachelor of Science and a Diploma in Engineering upon completion of their courses at Saint Mary's. With a Diploma in Engineering a student may enter, without examination, any of the departments at the Nova Scotia Technical College and obtain the degree of Bachelor of Engineering (civil, electrical, mechanical, chemical, metallurgical, mining, or industrial) on the successful completion of the last two years of a five-year course.

DEGREE OF BACHELOR OF SCIENCE AND DIPLOMA IN ENGINEERING

Students entering with senior matriculation or equivalent, as defined below, will follow the curriculum given below and designated as Bachelor of Science plus Diploma program. On successful completion of this program the student will receive the Diploma in Engineering and a Degree in Science.

Senior Matriculation Requirements —

A total of five courses from those listed below with a grade standing of 50% in each course and a general average of at least 65% is a necessary entrance qualification for those who plan to follow the program outlined in Schedule "A".

 i   English
 ii Mathematics
 iii Physics
 iv Chemistry
 v   One course from history, geology, geography, ancient and modern languages.

SCHEDULE "A"

FIRST YEAR

Eng 106.1	Mat 201.0
Eng 107.2	Phy 221.0
Eng 108.1 or 113.1	Che 203.0
Eng 212.2	Egl 200.0

SECOND YEAR

Eng 203.2	Phy 320.1
Eng 204.1	Phy 322.2
Mat 311.0	Geo 201.0 or elective
Che elective	Elective

40

THIRD YEAR

Eng 302.0	Eng 303.2
Eng 314.1	Eng 308.0
Eng 304.2	Mat 425.0
Eng 306.1	Elective

DIPLOMA IN ENGINEERING

Students entering with Junior Matriculation or equivalent, as defined in this Calendar, will follow the curriculum given below and designated as diploma program. On successful completion of this program the students will be awarded the Diploma in Engineering.

SCHEDULE "B"

FIRST YEAR

Eng 106.1	Mat 201.0
Eng 107.2	Phy 111.0
Eng 108.1 or 113.1	Che 101.0
Mat 116.2	Egl 200.0

SECOND YEAR

Eng 203.2	Phy 221.0
Eng 204.1	Geo 201.0 or elective
Mat 201.0	Elective (one semester)
Che 203.0	Eng 212.2

THIRD YEAR

Eng 302.0	Eng 303.2
Eng 314.1	Eng 308.0
Eng 304.2	Mat 311.0
Eng 306.1	Elective

Beginning in September 1976, students with excellent grades in Nova Scotia Grade XII or equivalent, may be eligible to enter a two-year Engineering Diploma Program.

FIRST YEAR

Eng 106.1	Mat 201.0
Eng 107.2	Phy 221.0
Eng 204.1	Che 203.0
Eng 203.2	Egl 200.0

SECOND YEAR

T.B.A.

FACULTY OF EDUCATION

BACHELOR OF EDUCATION PROGRAM

This program of studies is designed to give university graduates a professional foundation for careers in teaching. It is a full-time, full-year program consisting of six courses which deal primarily with preparation for teaching in junior and senior high schools.

There are two goals aimed at in this program. The first is to provide students with a basic competence in the skills of teaching academic subjects, the second goal is to encourage the development of those ideas which perceive the process of education as being one which, while providing the facts and skills necessary for living, has, at the same time, the more significant aim of expanding and enriching the mind of the learner. In furtherance of this goal, students are required to undertake a considerable amount of reading and writing with the object of developing their own personal understanding and philosophy of education.

The program comprises six courses:

Edu 501.0 Philosophy of Education

Edu 502.0 Psychology of Education

Edu 503.0 General Methods of Teaching

Edu 504.0 History of Education

Edu 505.0 Practice Teaching

Edu 520 through 549 Content and Methods of Specific Fields

Options within these courses are announced by the Faculty of Education prior to each academic year, as is the availability of any acceptable equivalent courses offered by other faculties of the University.

The six courses are not intended to be six independent phases of the program. Rather, their content is intended to be integrated in a manner that best conduces to the aims mentioned above. The organization of the courses — their placement in the academic year, their combination into integrated units, and so forth — is arranged accordingly and may be changed from year to year in keeping with experience gained.

This program meets the approval of the Department of Education of Nova Scotia, and on successful completion of their studies, students may apply to the Department of Education of the Province of Nova Scotia for a teaching certificate. Students are entirely responsible for any negotiations with the Department of Education respecting their status.

Candidates should note that the pass mark for the entire program is a C average, while for individual courses the pass mark is D, with the exception of Education 505, Practice Teaching, for which the pass mark is C. No supplementary examinations are provided.

The standing of candidates is reviewed by the faculty at the end of the first semester. On the basis of the likelihood of successful completion of the program, the faculty decides either to confirm candidacy, terminate candidacy, or continue candidacy on a probationary basis.

ADMISSION REQUIREMENTS

Candidates must hold a Bachelor's degree from Saint Mary's University or from another recognized university of similar standing.

Candidates who have had professional teacher training at the Nova Scotia Teachers College and who have since acquired a Bachelor's degree at Saint Mary's University, may obtain the Bachelor of Education degree by successfully completing two courses in the program selected in consultation with the Dean of Education or his representative. The Faculty undertakes to offer each year at least one course that would be suitable for this purpose at a time when practising teachers can attend.

Candidates who have had professional teacher training of two or three years duration at a Teachers College in another province of Canada, a College of Education in the United Kingdom or Teacher Training College in the United States, who are licensed as teachers by the Province of Nova Scotia, and who have acquired a Bachelor's degree, may obtain the degree of Bachelor of Education by undertaking a program of study approved by Senate regulations.

Admission may be refused in cases where the applicant lacks the academic background necessary for course work related to, and practice teaching in, a secondary school subject for which the Faculty offers teacher preparation, or where the applicant is otherwise deemed unsuited to teaching.

FACULTY OF EDUCATION

APPLICATION PROCEDURE

1. Complete application forms and make sure that all documents required are complete and returned with the application.

2. Make sure that supporting documents — transcripts, references, and so on will be sent to the University by those concerned. The Director of Admissions does **not** undertake to send for transcripts or references.

3. Applications should be made as soon as possible, but in any case, applications received after August 15th may not be processed in time for registration in September.

MASTER OF ARTS DEGREE IN EDUCATION

The University's general requirements for admission to Graduate Studies and for the Master of Arts degree apply to the Faculty of Education. The particular requirements of the Faculty are as follows:

1. The candidate for admission is normally asked to appear for a personal interview with the Dean of Education or a faculty member designated by him. The interview usually occurs after the candidate's application form and supporting documents are on hand.

2. The candidate is encouraged to have completed at least one year of successful teaching before embarking on the M.A. in Education program.

3. Course offerings include the following fields: philosophy of education, psychology of education, comparative education, curriculum and educational administration/supervision. The complete listing of courses is found in the Education section of this Calendar.

4. In conjunction with the writing of a thesis, a candidate must enrol in Education 610.0 (Graduate Research Seminar). This course does not count as one of the eight half courses normally required for the degree.

MASTER'S DEGREE

GENERAL REQUIREMENTS

1.   Candidates normally must spend at least one academic year in residence. This period is additional to any time needed to meet the normal admission requirements. The Faculty of Education does make provision for part-time studies for the Master's degree.

2.   Candidates must complete four full courses and submit an acceptable thesis. On the recommendation of the department concerned, a three course program is permissible for a candidate undertaking a proportionately more demanding thesis. In departments authorized by the Committee on Graduate Studies, a five course 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.

3.   A department may accept two advanced courses in the chosen subject area completed at other universities as part of the requirements, provided they have not been applied previously towards another degree.

4.   A grade of B is required in all courses.

5.   Two failures will require withdrawal from the program. There will be no supplemental examinations.

6.   A candidate must complete all degree requirements within five calendar years of being accepted for the Master's degree program.

In addition, candidates are referred to the particular requirements of the faculty in which they intend to pursue their master's studies.

SPECIAL PROGRAM

YEAR OF STUDY ABROAD, ANGERS

Saint Mary's University has entered into an arrangement whereby qualified students have the opportunity to study at the Catholic University of the West in Angers, France. Permission to participate in this program is granted by the Dean of Arts, the Chairman of the student's area of concentration, and the Chairman of the Modern Languages Department. Usual registration procedures are to be followed, except that tuition fee payments must be made directly to the University of the West.

PRE-PROFESSIONAL COURSES

PROFESSIONAL SCHOOLS

Students who intend to continue studies at professional schools, e.g., theology, law, medicine, dentistry, should ensure that their plan of studies includes courses needed for admission to the appropriate professional school. Calendars of professional schools may be consulted in the Offices of the Registrar or Information Services, and in the Library. If the University's programs do not meet the entrance requirements of the selected professional school, the student should inform the Dean at registration so that an adequate program can be worked out.

A sequence of pre-professional courses may, with the Dean's permission, replace the major concentration for the Bachelor's degree. Though not strictly required by some professional schools, it is recommended that the student complete an undergraduate degree before seeking admission to a professional school. Prerequisite course requirements apply to pre-professional students.

ARCHITECTURE

Saint Mary's University, in association with the Nova Scotia Technical College, offers the first two years of a six-year course in Architecture leading to a Bachelor of Architecture degree.

Qualification for entrance to the Architecture program at Nova Scotia Technical College is the satisfactory completion of at least two years in a degree program at any university or equivalent institution recognized by the Faculty of the School of Architecture. A university course in mathematics is prerequisite, except that the Admissions Committee may instead require a written examination in this subject.

Providing it has been undertaken in a 'recognized' degree program virtually any course of studies — including arts, fine arts, engineering and other technologies, science, agriculture, social sciences, education, medicine — is acceptable.

Selection from the qualified students for admission to the School of Architecture is carried out by a selection committee of the Faculty of the School of Architecture.

SECTION 5

Continuing
Education

CONTINUING EDUCATION

Continuing Education offers varied programs of credit and non-credit courses designed to enable:

a) students, to take a course or study towards a degree on a part-time basis;
b) teachers, to up-grade their professional standing;
c) managers in government, industry and commerce, to acquire new background and skills;
d) technicians and other professionals, to up-grade their qualifications;
e) adults generally, to enrich their education and lives.

DEGREE PROGRAM

Saint Mary's University has developed a major program to serve those who wish to take courses or study towards a degree on a part-time basis. An increasing number of courses are being scheduled in late afternoon, evening and weekend time periods so that persons who have to work for a living can continue to pursue their education if they wish to do so.

Late afternoon, evening and Saturday classes, and summer sessions, enable the part-time student to work towards a degree at the University. Evening and Saturday courses follow the academic timetable, beginning in September and ending with April examinations. Part-time students enjoy the same privileges as full-time students attending day classes. The Office of Student Services will assist them in matters of personal, social, educational or vocational concern. Issued with an ID card, the part-time student has normal access to the resources of the University Library, and may visit the Art Gallery and attend concerts at student rates. Each year, more and more adults of all ages are finding the University's part-time program a way of achieving academic and professional goals while engaged in other employment.

In response to an increasing demand from communities outside Halifax, courses are offered at off-campus locations: Dartmouth, Truro, Kentville, Sackville, Bridgewater and Yarmouth. Courses will be offered in other locations if their is sufficient interest. Individuals wishing to explore the possibility of having off-campus courses in their community should communicate with the Director of Continuing Education.

Two summer sessions are held each year: one from mid-May to the end of June, and the other from the beginning of July to mid-August. A student is permitted to take one course in each session and, in exceptional cases with the Dean of Faculty's approval, two courses in one of the Summer Sessions. Course offerings in the summer sessions have recently been expanded to permit students to begin and complete programs of study leading to a degree.

Every effort is made to offer during the evening hours and in the summer sessions a sufficiently varied and predictable selection of credit courses to enable a person who can attend classes only in the evenings to plan and carry through studies towards a degree in a systematic way and within a reasonable period of time.

NON-DEGREE PROGRAM

COORDINATED PROGRAMS

The coordinated programs described below are offered by the University in cooperation with various professional organizations. Upon completion of a program, the student is normally eligible for the award of a certificate from the sponsoring organization.

Canadian Institute of Management

The Canadian Institute of Management offers a four-year program of management development intended to improve the effectiveness of middle and senior level managers employed in manufacturing, transportation, wholesaling, retailing, the service industry and the public service. The program has resulted from the identification of management needs through extensive research. This program is designed to promote skill-development in general management combined with specialization in functional areas or organizational sectors.

The Canadian Institute of Management program comprises seven instructional units:

Year 1
Organization as Systems
Managerial Accounting

Year 2
Quantitative Information for Decision-making
Organizational and Human Behavior

Year 3
Two optional courses selected from the areas of industrial management, public sector management, wholesale and distribution management, retail management, and management of the smaller enterprise.

Year 4
Applied Management

CONTINUING EDUCATION

Students who complete successfully the seven units listed above, and who maintain membership status in The Canadian Institute of Management, will be entitled to use the professional designation C.I.M.

Fellows' Program in Banking

The Fellows' program in Banking consists of ten instructional units designed to provide formal education for men and women who wish to prepare themselves for more responsible positions in banking. It is intended for students who are capable of taking courses at the university undergraduate level. The courses offered cover such subjects as accounting, business administration, financial management, economics, money and banking, business strategy, marketing, information systems, organizational behavior, personnel management, and business law.

Candidates seeking admission to the program should apply through the Personnel Department of the Bank in which they are employed.

Students who successfully complete the program will be entitled to use the professional designation FICB (Fellow of the Institute of Canadian Bankers).

The instructional units may, where other university requirements are met and at the discretion of the Dean of Commerce, be counted as course credits towards the degree of Bachelor of Commerce.

Real Estate Program

This program, offered in cooperation with the Nova Scotia Real Estate Association, is designed for those who are practitioners in the real estate industry or who are planning to enter it, as well as for those who are concerned with real estate as a professional interest or an investment. Special real estate courses are combined with basic business courses to provide a broad background.

Applicants are expected to have high school graduation or equivalent, to be associated with the real estate industry or planning to enter it, and to have business experience.

To complete the academic requirements for the professional designation F.R.I. (Fellow of the Real Estate Institute of Canada), a candidate must successfully complete nine courses as set out below:

Year 1	Principles of Economics
	Building Design and Construction
	Urban Land Economics

Year 2	Real Estate Mathematics and Statistics
	Land Planning and Development
	Real Estate Financing

Year 3	Appraisal Principles
	Land Law I
	Land Law II

Those who have completed the above courses and have otherwise qualified through practical experience for the F.R.I. designation may wish to undertake the following additional program:

> Advanced Appraisal
> Real Estate Investment Analysis
> Real Estate Income Taxation

Personnel-Industrial Relations Program

This three-year program, offered in cooperation with the Maritime Personnel Association, is designed to provide training in the fundamentals of personnel and industrial relations for practitioners wishing to upgrade their qualifications. The emphasis in program instruction is on critical analysis and application of industrial relations and personnel principles to practical problems.

The program is intended for those already employed in personnel and related work in industry or government. Applicants are expected to have high school graduation or equivalent.

| Year 1 | Labor Economics |
| | Labor Relations |

| Year 2 | Managerial Psychology |
| | The Personnel Function |

| Year 3 | Organizational Behavior |
| | Current Personnel Problems |

Students who successfully complete the program are awarded a certificate by the Council of Canadian Personnel Associations.

Certified General Accountants Association

Introductory Accounting
Intermediate Accounting

CONTINUING EDUCATION

SAINT MARY'S UNIVERSITY CERTIFICATE PROGRAMS

Executive Development Certificate Program

This program is designed for working managers who are making the transition from more specialized positions to the area of general management. It is intended to present an intensive review of management functions and to help provide the skills and understanding required for executive development. It is open to qualified men and women who have assumed or will shortly assume positions of higher responsibility in management. It is appropriate for all organizations in both the private and public sectors of society.

Applicants are expected to have high school graduation or equivalent, to have recognized experience in a managerial position, and to be at least 25 years of age.

Year 1	Business Organization and Administration Introductory Financial and Managerial Accounting
Year 2	Marketing Management Financial Management Economics of Business
Year 3	Business Policy and Strategy And any two of: Commercial Law Communications Intermediate Financial Accounting Contemporary Economic Issues Production Management Management and Human Resources Management and the Computer

Criminology Certificate Program

This program is designed to provide a broad theoretical and practical foundation, based on courses chosen from several academic fields, for persons who deal in their daily work with problems of delinquency, criminal behavior and the treatment of offenders.

Applicants are expected to have high school graduation or equivalent. The program is intended primarily for working officers in the police forces, in Federal and Provincial correctional services and custodial institu-

tions, and for court workers. It is open, however, to any interested and qualified persons.

Year 1	Deviant Criminal Behavior Criminal Law Interpersonal Relations
Year 2	Community Relations and Public Issues The Judicial System Penology

Marine Biology Certificate Program

This is a one-year program designed to provide a theoretical background to the methodology of fishery investigation. The program is intended for working technicians. Applicants are expected to have high school graduation or equivalent.

Topics covered include an introduction to fisheries science, fish biology, sampling a population, measurement and data recording, age determination, sex, maturity and fecundity, food and feeding, the aquatic environment, unit stocks, straining techniques. The course includes both lectures and laboratory work.

Electronics Certificate Program

This is a one-year program designed to provide understanding and practical experience in solid-state electronic analog and digital circuits. The treatment will emphasize conceptual understanding, but some algebra and trigonometry will be employed for quantitative verification of the concepts.

The program is intended for working technicians. Applicants are expected to have high school graduation, including high school mathematics, and to have taken a previous course in introductory electronics, such as the Saint Mary's course entitled 'Electronics for Science' (Phy 260.0).

The course consists of lectures and experimentation.

MISCELLANEOUS COURSES

The Evolving Universe
Chinese Civilization
Creative Color Photography
Creative Writing
Effective Communication
Figure Drawing
Figure Painting
French Conversation

CONTINUING EDUCATION

Interior Design
Investment
Music Appreciation
Reading/Discussion Course
Reading Dynamics
Spanish Guitar
Understanding Electronics

Each class meets one evening each week for a two-hour period. There are no entrance requirements except a sincere desire to learn.

MATURE APPLICANTS

To mature persons, including those who do not meet the University's normal entrance requirements, Saint Mary's offers special mature student programs leading to the Bachelor of Arts, Bachelor of Science and Bachelor of Commerce degrees, and the Diploma in Engineering.

Mature applicants are each considered on an individual basis. To qualify for admission as a mature student, an applicant must have been out of school for at least five years and show, through work experience or in other ways, capability of benefitting from university studies.

Mature applicants may apply for admission as part-time or as full-time students.

Mature students admitted to the University are accepted on the condition that they achieve passing grades in the course or courses of study undertaken in the first year or summer session of study.

Mature students are expected to enrol initially in one or more prescribed courses, depending on the program.

Students who have been full-time students at a university are normally not eligible for admission to the mature students program within a five-year period from their last year of registration.

Application Procedure

The application procedure for mature applicants is as follows:

i)   An application for admission form may be obtained by writing, telephoning or visiting:

> Director of Continuing Education
> Saint Mary's University
> Halifax, Nova Scotia B3H 3C3
> Telephone: (902) 422-7361
> ext. 250, 251, 252, 253

ii) The completed application for admission form should be accompanied, if possible, by an accredited school certificate giving grades or marks attained during last year of attendance.

iii) An applicant who has completed courses at another university or post-secondary educational institution must ask that institution to send an official transcript of the work done by the applicant to the Director of Continuing Education.

iv) Each applicant must arrange through the Director of Continuing Education, an appointment for interview, if possible before the following dates:
First summer session — May 6
Second summer session — June 24
Fall-winter session — September 1

DEGREE PROGRAM FOR VOCATIONAL SCHOOL TEACHERS

1. Vocational teachers may be admitted to the Bachelor of Arts program if they have completed:
   a) eight years trade training and experience,
   b) grade XII or its equivalent,
   c) the three-summer program at the New Brunswick Institute of Technology,
   d) and three years successful teaching at a Vocational High School or Technical Institute.

2. Teachers so admitted shall qualify for the Degree of Bachelor of Arts by completing twelve courses, satisfying otherwise the requirements for that degree as determined by Senate.

3. Vocational teachers may proceed to the degrees of Bachelor of Education and Bachelor of Arts concurrently. The Degree of Bachelor of Education may be obtained by successfully completing at least two courses in Education, to be selected in consultation with the Dean of Education.

SECTION 6

Description
of
Courses

ANTHROPOLOGY

Associate Professor, Chairman James R. Jaquith
Professor Emeritus   J. Loewenstein
Associate Professor   Harold F. McGee, Jr.
Assistant Professor   Paul A. Erickson
Lecturers Stephen A. Davis, Susan DeMille Walter

Departmental Policy:
1. To obtain a major concentration, a student is required to have completed at least six courses in anthropology. These must include both 210.0 and 260.0 and four additional courses above the 200 level.
2. To obtain an honors concentration in anthropology, a student is required to (a) satisfy pertinent Faculty of Arts requirements; (b) meet Departmental major requirements; (c) complete the equivalent of ten full courses in anthropology, including the following obligatory core: Ant 210.0, 260.0, 300.0, 370.0, 380.0, 390.0, 450.0 and 599.0; (d) in addition, honors majors are urged to take at least one of the following methods courses: Ant 321.0, 360.0, 410.0.
3. The program for majors must be approved by the student's Departmental advisor who will be assigned at the time the major is declared.
4. In the case of re-numbered courses, students are advised that only one credit can be obtained for one course, even if that course was offered on different levels in different years.
5. Ant 201.0, 220.0, 221.0, 230.0 and 310.0 do not have prerequisites and are open to non-majors; as are Ant 210.0 and 260.0.

201.0(CE) WOMEN: ANTHROPOLOGY'S OTHER HALF

1 credit

Sex differences in the lower primates. Early man and woman. Female roles in evolutionary stages. Female roles in other cultures. Enculturation of values and sex roles. Biological basis for sex differences, including personality. The developmental cycle in the life of women. Application to modern woman.

R. M. Jaquith

210.0 PRINCIPLES OF SOCIO-CULTURAL ANTHROPOLOGY

1 credit

An introduction to the study of socio-cultural systems. Non-western cultures, economic systems, political systems, religions, language and values are contrasted with those of western, industrialized societies.

Classes 3 hrs. a week. 2 semesters.

Staff

220.0 NATIVE PEOPLES OF NORTH AMERICA

1 credit

A survey of the Indian and Eskimo peoples of North America, their cultures and their life histories as groups.

Classes 3 hrs. a week. 2 semesters.

Walter

221.0 NATIVE PEOPLES OF ATLANTIC CANADA AND MAINE

1 credit

Prerequisite: Basic course in anthropology, Canadian history, cultural geography or sociology.

An examination of the social and cultural history of the native peoples of the Atlantic area. The political, religious, technological, economic, kinship and aesthetic systems of the Abanaki, Beothuk, Malecite-Passamaquoddy, Micmac, and Penobscot ethnic groups will be discussed within a temporal framework.

Classes 3 hrs. a week. 2 semesters.

McGee

260.0 INTRODUCTION TO PHYSICAL ANTHROPOLOGY AND ARCHAEOLOGY

1 credit

The physical evolution and cultural development of man. Topics include the principles of biological evolution, history of the primates, fossil man, and prehistory from the palaeolithic to the neolithic.

Classes 3 hrs. a week. 2 semesters.

Davis, Erickson

ANTHROPOLOGY

300.0   ADVANCED SOCIO-CULTURAL ANTHROPOLOGY

1 credit

Prerequisite: Ant 210.0.

An in-depth examination of some of the basic concepts used by anthropologists to analyze socio-cultural systems. Special attention will be given to the concepts of culture, structure, communitas, and the dialectic.

Classes   3 hrs. a week. 2 semesters.

McGee

310.0   CULTURE CHANGE AND DEVELOPMENT

1 credit

Prerequisite: a social science course or permission of instructor.

An examination of anthropological and other theories of social and cultural change, with references to case studies. Development is considered as a special case of socio-cultural change.

Class   3 hrs. a week. 2 semesters.

Jacquith

319.0   CULTURAL ECOLOGY (formerly 230.0)

1 credit

An introduction to the study of the relationship between man and his environment, ranging from hunting and gathering societies to the dawn of civilization.

Classes   3 hrs. a week. 2 semesters.

320.0   WORLD ETHNOGRAPHY

1 credit

Prerequisite: Ant 210.0.

Vanished and vanishing cultures in Africa, Oceania, North America, South America and Asia, viewed in relation to historical and environmental influences.

Classes   3 hrs. a week. 2 semesters.

Walter

321.0   ETHNOHISTORY

1 credit

Prerequisite: Ant 210.0.

Ethno-history 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.

Classes   3 hrs. a week. 2 semesters.

Walter

340.0   CULTURAL GEOGRAPHY OF CHINA

1 credit

Prerequisite: Gpy 201.0 (formerly 152.0).

The course will cover the following topics: physical foundations, hydraulic agriculture, the nomad frontier, origins in the loess, Chinese expansion to the south, China's marketing and administrative geography, the Communist revolution.

Classes   3 hrs. a week. 2 semesters.

345.0   EVOLUTION AND HUMAN BEHAVIOR (formerly 340.0 Human Ethology)

1 credit

Prerequisite: Ant 260.0.

An examination of physical anthropology's contribution to the nature-nurture debate, with attention to animal models for human behavior.

Classes   3 hrs. a week. 2 semesters.

Erickson

349.0 (Rel. 320.0)   MYTH AND SYMBOL

1 credit

What is myth? What is religious symbol? Are they relevant and meaningful for modern man? This course offers a comparative analysis of the nature of religious experience, myth and symbol by looking into various religions — primitive, classical and modern. Attention will be given to modern theories of myth and symbol as developed, for example, by Freud, Jung, Eliade, and several notable anthropologists.

Note: This course may be taken at the 420-level with the following prerequisite: one course in philosophy or anthropology, or Rel 306.0.

ANTHROPOLOGY

350.0   ANTHROPOLOGY OF RELIGION
1 credit

Prerequisite: Ant 210.0 or consent of instructor.

Examination of religious behavior from anthropological perspective. Cross-cultural consideration of such questions as origin and nature of religion, religion as adaptation to environment, religion and culture change.

Classes   3 hrs. a week. 2 semesters.

Jaquith

360.0   METHOD AND THEORY IN ARCHAEOLOGY
1 credit

Prerequisite: Ant 260.0.

Concepts and methods of archaeology, lab analysis, survey methods, and collection of data. Suggested for students who intend to take field work courses in anthropology.

Classes   3 hrs. a week. 2 semesters.

Davis

370.0   ARCHAEOLOGY OF NORTH AMERICA
1 credit

Prerequisite: Ant 260.0.

A survey of North American prehistoric culture, the course considers man's first entre into North America and the subsequent cultures which developed here.

Classes   3 hrs. a week. 2 semesters.

Davis

380.0   ADVANCED PHYSICAL ANTHROPOLOGY
1 credit

Prerequisite: Ant 260.0.

An advanced treatment of primate behavior, primate anatomy and human genetics involving laboratory and workbook exercises.

Classes   3 hrs. a week. 2 semesters.

Erickson

390.0   LINGUISTIC ANTHROPOLOGY
1 credit

Prerequisite: Ant 210.0 or consent of instructor.

Comprehensive cross-cultural introduction to language and speech behavior; to the relations between language and culture generally; to the analysis and description of languages in terms of their constituent units and dynamics; to the social functions of language; applied linguistics and literacy.

Classes   3 hrs. a week. 2 semesters.

Jaquith

399.0   DIRECTED INDEPENDENT STUDIES
1 credit

Directed independent study on a reading or research program agreed to by student and instructor. The student must obtain instructor's approval of proposed study plan before registering for the course.

Staff

410.0   METHODOLOGY AND FIELDWORK IN SOCIO-CULTURAL ANTHROPOLOGY
1 credit

Prerequisite: Ant 210.0.

This course applies concepts already familiar to the student in actual fieldwork within the Province of Nova Scotia, as far as circumstances permit.

Classes   2 hrs. a week. 2 semesters.

McGee

420.0   ECONOMIC ANTHROPOLOGY
1 credit

Prerequisite: Ant 210.0.

The interplay in pre-industrial communities among material conditions, social relations and forms of exchange. Topics include substantive and formalist approaches, resources, the organization of work, reciprocity, surplus goods, leveling devices, redistribution, and market exchange.

Classes   3 hrs. a week. 2 semesters.

ANTHROPOLOGY

430.0 POLITICAL ANTHROPOLOGY

1 credit

Prerequisite: Ant 210.0.

This course considers public goal-oriented behavior in pre-industrial communities. Topics include settlement of disputes, factionalism, and differences in access to and exercise of power.

Classes 3 hrs. a week. 2 semesters.

McGee

450.0 HISTORY OF ANTHROPOLOGICAL THEORY

1 credit

Prerequisite: Ant 210.0, 260.0 and two additional courses in anthropology.

The development of anthropological theory from the Enlightenment to the present with reference to current theoretical issues.

Classes 3 hrs. a week. 2 semesters.

Erickson

460.0 FIELDWORK IN ARCHAEOLOGY (SS)

1 credit

Prerequisite: Ant 260.0, 360.0 or 370.0.

The first half of the course involves detailed instruction in, and practical application of, archeological field techniques in the excavation of a site in Nova Scotia. The second half of the course involves intensive on-campus training in the laboratory analysis of artifacts recovered in the excavation phase of the course.

3 weeks field work and 3 weeks lab.

Davis

461.0 ADVANCED FIELDWORK IN (SS) ARCHAEOLOGY

1 credit

Prerequisite: Ant 460.0.

Students are expected to have knowledge of field and laboratory techniques used in archaeology. They will conduct their own excavations and analysis of an archaeological site and its material.

3 weeks field work and 3 weeks lab.

Davis

470.0 THE DAWN OF CIVILIZATION

1 credit

Prerequisite: Ant 210.0, 260.0.

A study of man's earliest civilization in the light of recent archaeological research; Southeast Asia, the Far East, the Near East and the New World. Open to history students.

Classes 2 hrs. a week. 2 semesters.

Loewenstein

480.0 SEMINAR

1 credit

To be offered in response to expressed student desire for advanced instruction in anthropological topics not covered intensively in substantive course offerings. Will be given as formal seminar by a full-time Anthropology staff member.

Classes 3 hrs. a week. 2 semesters.

Staff

499.0 DIRECTED HONORS RESEARCH

1 credit

Supervised preparation of a significant research paper for honors students in anthropology.

2 semesters.

Staff

The following courses in Anthropology will be offered in 1976-77:

Ant 210.0	Ant 320.0	Ant 390.0
Ant 220.0	Ant 321.0	Ant 399.0
Ant 260.0	Ant 340.0	Ant 410.0
Ant 300.0	Ant 360.0	Ant 450.0
Ant 310.0	Ant 370.0	Ant 470.0
Ant 319.0	Ant 380.0	Ant 480.0
		Ant 499.0

The following courses in Anthropology will not be offered in 1976-77:

Ant 201.0	Ant 420.0
Ant 221.0	Ant 430.0
Ant 345.0	Ant 460.0
Ant 349.0	Ant 461.0
Ant 350.0	

ASIAN STUDIES

Committee on Asian Studies
Dr. Bowlby, Chairman (Religious Studies)
Prof. Boyd (Political science)
Dr. Leung (Languages)
Dr. McGrath (Economics)
Prof. Robinson (Geography)
Dr. Sun (History)

There is little question of the place or significance of Asian Studies in university education. Since World War II, we have witnessed the increasing importance of Asia in world politics and economics and have recognized the need for educated citizens to develop a better understanding of the forces involved. An informed acquaintance with the Asian experience in the field of politics, history, culture, philosophy, and religion has become an essential corollary to a full understanding of our own Western experience.

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 program in Asian Studies.

REGULATIONS

Aside from the normal university requirements for the Bachelor of Arts degree, students intending to complete a major concentration in Asian Studies are required to obtain at least six full course credits from among the following courses, which are to be taken from at least three different departments. They must also choose from among the listed faculty members, a supervisor who will oversee their programs of study.

ASIAN STUDIES
400.0(SS) China's Developmental Experience
401.0 (Edu 539.0) Contents and Methods of Asian Studies

MODERN LANGUAGES
CHINESE
100.0 Elementary Chinese
200.0 Intermediate Chinese

ECONOMICS
310.1 Development Economics
311.2 Issues in Economic Development
313.1 International Finance
314.2 International Trade
315.2 Comparative Economic Systems
323.1 Soviet-Type Economy

GEOGRAPHY
340.0 Cultural Geography of China
409.0 The Birth of the City

HISTORY
209.0 Modern East Asia
291.0 History of India, 1500-1947
323.0 Dynastic History of China
324.0 Cultural History of Japan
342.0 China in Revolution
511.0 Seminar on Modernization in East Asia

POLITICAL SCIENCE
440.0 Politics of the Developing Areas
441.0 Government and Politics in East Asia
553.0 International Studies Seminar

RELIGIOUS STUDIES
235.0 Introduction to Asian Religions
323.0 Religions of India
324.0 Religions of China

SOCIOLOGY
320.0 Ethnic and Minority Groups

ASIAN STUDIES

400.0(SS)   CHINA'S DEVELOPMENTAL
                   EXPERIENCE

                                        1 credit
Prerequisite: a course in Asian studies, or equivalent.

An unusual travel-and-learn opportunity, this course takes students into China to personally view developments in that country. It is offered in the summer and requires six weeks full time. Students are given an intensive week of orientation in Hong Kong prior to entering the People's Republic of China; and, on departure, another week in Hong Kong is devoted to analysis and interpretation of individual experiences. This study of China's development under communism is undertaken from a variety of disciplines, including history, economics, geography, politics, the arts, and sociology.

Time in China is approximately four weeks. This offering is dependent on adequate enrolment and travel arrangements.

Six weeks full time.

                                             Sun

The following courses in Asian Studies will be offered in 1976-77:

Asn 400.0	Eco 313.1	His 209.0	Pol 553.0
Asn 401.0	Eco 314.2	His 291.0	Rel 235.0
Chi 100.0	Gpy 340.0	Pol 441.0	Rel 324.0

The following courses in Asian Studies will not be offered in 1976-77:

Chi 200.0	Eco 323.1	His 324.0	Pol 440.0
Eco 310.1	Gpy 409.0	His 342.0	Rel 323.0
Eco 311.2	His 323.0	His 511.0	Soc 320.0
Eco 315.2			

Detailed descriptions of the above courses can be found under the relevant departmental headings.

ASTRONOMY

Chairman, Assistant Professor   G. A. Welch
Observatory Director, Assistant Professor   D. L. Du Puy
Professor Emeritus   M. W. Burke-Gaffney, S.J.
Associate Professor   G. F. Mitchell

The Burke-Gaffney Observatory opened early in 1972 and began a program to make its facilities available to the general public, and to students and faculty at Saint Mary's University. The telescope is a reflector with a 16-inch diameter mirror and is equipped with research instrumentation. Students interested in observing with the telescope (whether or not enrolled in an astronomy course) should contact the Observatory.

UNDERGRADUATE COURSES
The Astronomy Department does not offer a major or concentration in astronomy. Students who intend to pursue a career in astronomy are advised to major in physics and to take Ast 202.0, 401.1 and 402.2 as electives. Ast 201.0 is a non-mathematical course intended for the non-science student.

THE MASTER'S PROGRAM
Saint Mary's University is the only institution in Atlantic Canada offering a Master's degree in Astronomy. The 600-level courses listed are graduate courses and are not usually open to undergraduate students. The Master's program attempts to provide the student with a broad background in physical science, to foster the student's research ability, and to develop in the student an understanding of modern astronomy at the professional level. The graduate will be sufficiently versatile to enter a doctoral program elsewhere, pursue a technological career, or choose a career in teaching.

The program is two years in length and includes course work and a thesis. The number of courses required will depend on the qualifications of the student, but will normally be six plus thesis. The major effort of the student in the first year will be in acquiring a basic knowledge of astronomy through courses, seminars, and general reading. Four courses will normally be taken, of which one must be physics or mathematics. During this first year a thesis topic will be chosen in consultation with the Department. In the second year the student will normally take two courses and complete a thesis. The thesis work will be carried out under the supervision of a faculty member and will involve original research.

Admission and degree requirements are given in the Graduate Studies section of this Calendar.

201.0   INTRODUCTION TO CONTEMPORARY ASTRONOMY
1 credit

This course is designed especially for the non-science student. It will provide the practical background necessary to enjoy amateur astronomy, and will introduce some of the exciting recent astronomical discoveries. Practical topics will include the methods of locating celestial objects, the principles of telescopes, celestial navigation, and methods used to uncover the true characteristics of astronomical objects. Observing sessions will be conducted at the Burke-Gaffney Observatory. Contemporary astronomical discoveries will be discussed in relation to the origin of the solar system, birth and aging processes in stars, the question of other life in the universe, the nature of the Milky Way and the possible fate of the universe.

Classes   3 hrs. a week. 2 semeters.

DuPuy and Welch

202.0   INTRODUCTORY ASTRONOMY FOR SCIENCE STUDENTS
1 credit

Prerequisite: Phy 111.0 and Mat 100.0.

After a study of the celestial sphere, the motions of the earth and time measurement, the solar system will be investigated in some detail. Topics will include the moon, planets, asteroids, comets, and the sun. Consideration of the properties of stars and stellar evolution will lead to a brief discussion of neutron stars, black holes and pulsars. Our Galaxy will be examined with respect to its size, rotation, and spiral structure. The nature and space distribution of external galaxies will be studied.

Classes   3 hrs. a week. 2 semesters.

Mitchell

401.1   THE SOLAR SYSTEM
$^1/_2$ credit

Prerequisite: Phy 221.0 and Mat 310.0.

This course will provide an introduction to the sun, the solar magnetic field, and solar activity, as related to solar system phenomena. Also included will be topics in the origins and characteristics of comets, meteors, asteroids, the interplanetary material, and a discussion of the interiors and atmospheres of the terrestrial and Jovian planets. Recent results from the Mariner interplanetary probes and Apollo experiments will be discussed.

Classes   3 hrs. a week. 1 semester.

DuPuy

ASTRONOMY

402.2   STARS AND STELLAR SYSTEMS
$1/2$ credit

Prerequisite: Phy 221.0 and Mat 310.0.

This course begins with an introduction to observational properties of open clusters, associations, and globular clusters, including the luminosity function and galactic distributions. Topics include interstellar reddening, zero-age main-sequence determination, metal abundances, and spectroscopic parallaxes. A discussion of stellar populations in galaxies and the Local Group of galaxies will be included.

Classes   3 hrs. a week. 1 semester.

DuPuy

601.2   RADIO ASTRONOMY
$1/2$ credit

This course will begin with a treatment of radio emission mechanisms including thermal radiation, synchrotron radiation and line radiation. Design of radio receiving systems and the techniques of interferometry and aperture synthesis will be discussed. The theoretical methods will then be used to interpret observations of a wide variety of radio sources. Specific application of modern observing techniques will be investigated.

Classes   3 hrs. a week. 1 semester.

Welch

602.2   GALACTIC STRUCTURE
$1/2$ credit

Basic structure of the Milky Way will be presented, including solar motion and the Local Standard of Rest, stellar populations, and the role of variable stars and associations in spiral structure. Galactic rotation will be examined in detail, including observational determinations of the Oort constants, mass distribution models, and comparisons of 21 cm maps with spiral structure derived from optical spiral arm tracers.

Classes   3 hrs. a week. 1 semester.

Welch

603.0   RELATIVITY AND COSMOLOGY
1 credit

Review of special relativity; developing ideas from Riemannian geometry and tensor calculus required for the derivation of Einstein's field equations and the solution of these equations. Second semester will deal with solutions of the field equations. The Schwarzschild and Kerr solutions will be obtained and their relevance to neutron stars and black holes will be examined. The solutions which represent homogeneous spacetimes admitting rotation, expansion, and shear will be investigated in detail. A comparison between model predictions and astronomical observations will be made. Among the observations discussed will be galaxy redshifts, radio source counts, and the microwave background radiation.

Classes   3 hrs. a week. 2 semesters.

Mitchell

605.0   FUNDAMENTAL ASTROPHYSICS
1 credit

Prerequisite: Phy 432.2 and 439.2 and Mat 410.0 (may be taken concurrently).

The physical conditions in the outer layers of stars will be deduced from their continuous radiation and their spectral lines. This treatment of *stellar atmospheres* will involve a discussion of ionization and excitation, atomic and molecular spectra, and the thermodynamics of a gas. The topic of *stellar structure* will include an application of nuclear physics to stellar energy production and a treatment of nucleosynthesis in stars (explosive and non-explosive). A discussion of the *interstellar medium* will include interstellar clouds, the intercloud medium, ionized hydrogen regions, interstellar molecules, dust grains, and the galactic magnetic field.

Classes   3 hrs. a week. 2 semesters.

Mitchell

ASTRONOMY

606.1 TECHNIQUES IN OBSERVATIONAL ASTRONOMY
$^1/_2$ credit

Prerequisite: Phy 432.2 and 439.2 and Mat 410.0 (may be taken concurrently).

This course will provide background and practical experience in the acquisition and reduction of astronomical data. Basic areas covered will include photoelectric photometry, photographic photometry and spectral classification. Project assignments will involve the student with the full range of instrumentation available at the Burke-Gaffney Observatory, including multi-color photoelectric photometer, spectrograph, direct camera, Cuffey iris photometer and measuring engine.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

Welch

607.1 BINARY AND VARIABLE STARS
$^1/_2$ credit

Prerequisite: Phy 438.1 and Mat 410.0 (may be taken concurrently).

This course will provide basic methods of analyzing binary and variable star data to deduce physical properties of stars. Topics will include visual binaries, Zwier's versus Thiele-Innes methods, spectroscopic binaries, eclipsing binaries, and classes of variable stars. Applications will include newly discovered x-ray binary systems, the search for black holes in multiple systems, Wesselink's method, and the period-density relation.

Classes 3 hrs. and lab 2 hrs. a week. 1 semester.

DuPuy

609.2 EXTRAGALACTIC ASTRONOMY
$^1/_2$ credit

Prerequisite: Ast 606.1 or permission of instructor.

Starting with a survey of the different galaxy classes, recent observations of galaxies will be reviewed with emphasis on how these observations are interpreted using concepts arising from studies of the Milky Way. The present stellar content and possible evolutionary histories of the galaxy classes will be compared. The nature of galaxy clusters will be examined, and this will lead to a discussion of how observations of galaxies are employed to infer the large-scale properties of our universe.

Classes 3 hrs. a week. 1 semester.

Welch

610.0 THESIS

Prerequisite: second year graduate standing.

Normally taken during the second year of enrolment in the M.Sc. program, this course will formalize the efforts of the student and the thesis advisor to choose a topic, initiate research, and organize material for the dissertation.

Student's thesis advisor

1. The following courses in Astronomy will be offered in 1976-77:
   Ast 201.0   Ast 602.2   Ast 606.1   Ast 609.2
   Ast 202.0   Ast 605.0   Ast 607.1   Ast 610.0

2. The following courses in Astronomy will be offered in alternate years:
   Ast 401.1   Ast 601.2   Ast 607.1   Ast 609.2
   Ast 402.2   Ast 602.2

3. The following courses in Astronomy will not be offered in 1976-77:
   Ast 401.1   Ast 402.2   Ast 601.2   Ast 603.0

BIOLOGY

Chairman, Associate Professor   B. Kapoor
Professor   A. Rojo
Associate Professors   E. Rojo, K. Thomas
   M. Wiles
Assistant Professor   H. Bobr-Tylingo

The Biology Department offers programs to fulfill the requirements of the following degrees:

1. the general degree of Bachelor of Science, with a *concentration* in biology.

2. the degree of Bachelor of Science with a *major* in biology and,

3. the degree of Bachelor of Science with *honors* in biology.

In addition, the Department also prepares students for the professional studies of medicine and dentistry.

STUDENTS INTENDING TO TAKE AN HONORS DEGREE IN BIOLOGY SHOULD CONSULT THE CHAIRMAN OR A MEMBER OF THE DEPARTMENT BEFORE COMPLETING REGISTRATION.

Students completing a concentration in biology should be able to understand most of the disciplines of the subject and be capable of teaching or doing technical work in biological, paramedical or health science fields after appropriate on-job training. Students finishing a major in biology should be capable of undertaking graduate level work in biology either after a further year of honors work or after a qualifying year in a graduate program. In the major program more emphasis is placed on the scientific aspects of education and training, while a concentration in biology is aimed at providing a broad general education in arts and sciences.

The following schemes are recommended by the Department for biology students doing the general science degree, the degree with a major, or an honors degree.

Scheme A: General Science Degree with Biology Concentration

Freshman Year
1. Egl 200.0
2. Mat 100.0
3. A course in the humanities
4. Bio 111.1 & 112.2
5. Che 101.0

Sophmore Year
1. A course in English
2. Mat 200.0
3. Che 202.0
4. Bio 204.0
5. Bio 205.0

Junior Year
1. Two courses from the following:
   Bio 302.0
   Bio 305.0
   Bio 307.1 & 308.2
   Bio 309.0
   Bio 310.0
   Bio 317.0
2. Che 343.0
3. Phy 201.0
4. A course in the humanities.

Senior Year
1. One course from the following:
   Bio 302.0
   Bio 305.0
   Bio 307.1 & 308.2
   Bio 309.0
   Bio 310.0
   Bio 317.0
2. One course from the following:
   Bio 401.1 or 403.1 or 407.1 or 411.1
   plus Bio 408.2 or 412.2
   Bio 405.0
   Bio 406.0
3. A course in history, philosophy or religious studies
4. Free elective (preferably geology)
5. Free elective (preferably a course in the humanities or social sciences)

BIOLOGY

Scheme B: Science Degree with a Major in Biology

Freshman Year
1. Egl 200.0
2. Mat 100.0
3. A course in the humanities
4. Bio 111.1 & 112.2
5. Che 101.0

Sophmore Year
1. A course in English
2. Mat 200.0
3. Che 202.0
4. Bio 204.0
5. Bio 205.0

Junior Year
1. Bio 307.1 & 308.2
2. Two courses from the following:
   Bio 302.0   Bio 310.0
   Bio 305.0   Bio 317.0
   Bio 309.0
3. Che 343.0
4. A course in the humanities

Senior Year
1. Two or three courses from the following:
   Bio 302.0   Bio 401.1, 403.1,
   Bio 305.0   Bio 407.1 or 411.1 plus
   Bio 309.0   Bio 408.2 or 412.2
   Bio 310.0   Bio 405.0
   Bio 317.0   Bio 406.0
2. Phy 201.0   Bio 420.0
3. A course in history, philosophy or religious studies
4. Elective (preferably geology, contingent on choice in (1) above)

Scheme C: Science Degree with Honors in Biology

Students must satisfy the requirement for the major degree program as outlined in Scheme B, and in the honors year, take the following five courses:

Honors Year

The student will consult his/her Honors supervisor for the selection of courses.

1. One course from the following:
   Bio 401.1 & 408.2   Bio 405.0
   Bio 401.1 & 412.2   Bio 406.0
   Bio 403.1 & 412.2   Bio 420.0
   Bio 411.1 & 412.2
2. Bio 549.0
3. Two courses from the following:
   Bio 501.0   Bio 553.0
   Bio 550.0   Bio 554.0
   Bio 552.0   Bio 555.0
4. Bio 590.0

NOTE: In any biology course, the instructor may decide to substitute a one hour seminar or discussion period for one of the lectures.

103.0   BIOLOGY, ENVIRONMENT AND MAN
(for non-science students)

1 credit

An introduction to the scope and principles of modern biological science. Wherever possible examples explaning these principles will be drawn from familiar, everyday events. The importance of biology in today's world will be discussed with particular emphasis on the problems associated with degradation of the environment and with human ecology. This course will not include laboratory work, but rather two lecture hours per week, and discussion sessions averaging two hours per week where demonstrations will sometimes be presented.

Note: Normally this course is restricted to non-science students for whom it constitutes a science elective. However, should a student wish to change to a science degree after taking the course, credit would be granted for the course, either as an arts elective, or in the case of a mark of A as a regular science course equivalent to the introductory biology courses: Bio 111.1 and 112.2.

Classes   4 hrs. a week. 2 semesters.

Staff

BIOLOGY

111.1 PRINCIPLES OF GENERAL BIOLOGY PART 1

1/2 credit

Course designed for science students. A study of the physical, chemical and biological bases of the activities of living organisms. Emphasis will be on the modern approaches to biological sciences through a consideration of the following disciplines of biology: ecology, physiology, cytology, genetics, molecular biology, evolution and behavior.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

A. Rojo

112.2 PRINCIPLES OF GENERAL BIOLOGY PART 2

1/2 credit

Prerequisite: Bio 111.1.

This unit is a continuation of studies undertaken in Biology 111.1.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

A. Rojo

204.0 BOTANY

1 credit

Prerequisite: Bio 111.1 and 112.2.

A study of different plant groups: viruses, bacteria, fungi, algae, bryophytes, ferns, gymnosperms and angiosperms. Introduction to physiological processes in plants, including photosynthesis, transpiration, absorption, nutrition, enzymes, hormonal action and growth.

Classes 3 hrs. a week. 2 semesters.

Bobr-Tylingo

205.0 ZOOLOGY

1 credit

Prerequisite: Bio 111.1 and 112.2.

A systematic survey of the animal kingdom with emphasis on gross morphology and its relation to function. Phylogenetic relationships, the influence of physiological adaptation through the mechanisms of heredity, and the involvement of evolutionary processes in the diversity of modern animal life.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

E. Rojo

220.0 HUMAN SOCIETY AND THE
(SS) ENVIRONMENT

1 credit

An interdisciplinary course on the relationship between human society and the environment. The course will attempt to integrate social, political, economic, legal, historical and ecological aspects of environmental questions by reference to topical matters such as: man as part of nature, energy as a limiting factor in world population growth, environmental quality, the economics of pollution control, planning for the future and Canadian case histories. Field trips will be undertaken to examine various situations at first hand, such as Cape Breton coal mines and Bedford Institute of Oceanography.

Classes 3 hrs. a week and field trips during 1 summer session.

Instructor TBA

249.1 INTRODUCTION TO MARINE BIOLOGY

1/2 credit

Prerequisite: Bio 111.1 and 112.2 or equivalent.

A three week summer course sponsored by the Atlantic Universities Inter-University Committee on the Sciences and offered at the Huntsman Marine Laboratory, St. Andrews, New Brunswick, during July. The course is an introduction to the principles and methods of marine biology with an emphasis on field studies. Admission is by application. Students are expected to defray their own travel costs to and from the Laboratory.

36 hrs. including lab and field work during 1 summer session.

302.0 CYTOLOGY

1 credit

Prerequisite: Bio 204.0 and 205.0.

Structure and function of the cell organelles, cell reproduction, meiosis, reproductive cytology, architecture of the chromosome, function of the chromosomes, chromosomal rearrangements, polyploidy, sex-chromosomes, karyotype evolution, cytology in relation to taxonomy.

Classes 3 hrs. and lab. 3 hrs. a week. 2 semesters.

Kapoor

BIOLOGY

305.0 GENERAL PHYSIOLOGY

1 credit

Prerequisite: Bio 204.0, 205.0, and Che 343.0 or permission of Department.

An introduction to the essential aspects of cellular physiology and a discussion of the physiology of the major organ systems of the vertebrate body. The topics discussed include: circulation, respiration, digestion, nutrition, metabolism, muscles, nervous system and endocrine system.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

Thomas

307.1 GENETICS

$^1/_2$ credit

Prerequisite: Bio 111.1 and 112.2, 204.0 and 205.0, or one concurrently; Che 101.0 or 202.0.

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. 1 semester.

E. Rojo

308.2 BIOSTATISTICS

$^1/_2$ credit

Prerequisite: Bio 111.1 and 112.2, 204.0 or 205.0 concurrently; Mat 100.0.

Introduction to the principles and methods of analyzing and using quantitative data in the biological sciences. The emphasis will be on practical applications of statistics in biology rather than on statistical theory. Material covered includes graphical presentation of data, transformation of data, handling of data. Descriptive statistics, distributions, regressions, correlation, probability theory, comparisons of sets of data and sampling methods will be studied. Calculator usage and computer programming will be undertaken, the latter if time permits.

Text: W. Schefler, *Statistics for the Biological Sciences,* (Addison-Wesley), 1969.

Classes 3 hrs. and calculator or computer 3 hrs. a week. 1 semester.

Wiles

309.0 BOTANY OF DOMESTICATED PLANTS

1 credit

Prerequisite: Bio 111.1, 112.2, 204.0.

An introduction to the study of economically important plants, their origin, domestication, botany, cultivation, harvesting, uses, diseases, breeding and their role in modern world economy. Plants and plant products of industrial importance, medicinal plants, food plants and food adjuncts will be treated in detail.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

Kapoor

310.0 ECOLOGY

1 credit

Prerequisite: Bio 204.0 and 205.0, or one concurrently.

A study of the fundamental concepts and principles of modern ecology, consideration of physiological ecology, population ecology, and community ecology. A brief treatment of speciation, applied ecology, conservation and management. Renewable and nonrenewable natural resources; the earth's biosphere as a dynamic, balanced system.

Text: E. P. Odum, *Ecology,* 3rd edition, Saunders, 1971.

Classes 3 hrs. and lab or field 3 hrs. a week. 2 semesters.

Wiles

317.0 EVOLUTION

1 credit

Prerequisite: Bio 204.0, 205.0, 307.1 and 308.2.

A study of the history of the concept of evolution, the process whereby present species came into being, the mechanisms operating in nature, the factors affecting evolution and the final result as we witness it. Main areas of study are population genetics, history of the earth, fossil records and the evolution of man.

Text: L. E. Mettler and T. G. Gregg, *Population Genetics and Evolution,* Prentice-Hall, 1969.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

A. Rojo

BIOLOGY

401.1 MORPHOLOGY OF VASCULAR PLANTS
$^1/_2$ credit

Prerequisite: Bio 204.0 and 205.0 or permission of Department.

Structure, development and evolution of major taxa of vascular plants: pteridophytes, gymnosperms and flowering plants, both extinct and extant.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

Kapoor

403.2 PLANT TAXONOMY
$^1/_2$ credit

Prerequisite: Bio 204.0 and 205.0.

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 or field 3 hrs. a week. 1 semester.

Kapoor

405.0 BIOLOGY OF FISHES
1 credit

Prerequisite: Bio 205.0 and 308.2.

A study of the embryology, anatomy, physiology and classification of fishes. In classification and geographical distribution, emphasis will be placed on the marine northwest Atlantic fishes and the fresh-water fishes of Nova Scotia.

Text: K. F. Lagler, J. E. Bardach and R. R. Miller, *Ichthyology* (Wiley, 1962).

Classes 3 hrs. and lab or fieldwork 3 hrs. a week. 2 semesters.

A. Rojo

406.0 MICROBIOLOGY
1 credit

Prerequisite: Bio 302.0, 305.0; Che 101.0 or 202.0.

Morphology, biochemical activity and classification of microorganisms: viruses, bacteria, molds, yeasts, and other microscopic life forms.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

Bobr-Tylingo

407.1 HISTOLOGICAL TECHNIQUES
$^1/_2$ credit

Prerequisite: Bio 111.1, 112.2, 204.0, 205.0, Che 101.0.

A study of the microscopic structure of tissues and organs with special emphasis on vertebrate body. Principles and practice of microtechnique including basic histochemistry and autoradiography will be discussed. Laboratory work will consist of performing a wide range of histological and histochemical techniques using mainly animal cells, tissues and organs.

Classes 3 hrs. a week. 1 semester.

Thomas

408.2 VERTEBRATE EMBRYOLOGY
$^1/_2$ credit

Prerequisite: Bio 204.0, 205.0 or permission of the Department.

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.

Thomas

411.1 PRINCIPLES OF ANIMAL PARASITOLOGY
$^1/_2$ credit

Prerequisite: Bio 205.0.

Relation beween parasites and their hosts, emphasizing protozoa and helminths of aquatic vertebrates and of man. Aspects studied are biology, ecology and evolution of parasites, and physiology and immunology of parasitism. Laboratory work is on living and prepared materials, maintenance of life cycles and infectivity of aquatic vertebrates.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

Wiles

412.2 HUMAN GENETICS
$^1/_2$ credit

Prerequisite: Bio 307.1 and 308.2.

The chemical and physical nature of genes. The study of population genetics in plants and animals using a statistical approach. Emphasis will be on human mutations through study of chromosomes and analysis of pedigrees.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

E. Rojo

BIOLOGY

420.0 COMPARATIVE CHORDATE ANATOMY
(SS)

1 credit

Prerequisite: Bio 205.0.

A comprehensive study of gross anatomy of the various systems of animal representatives of major classes, beginning with Amphioxus and culminating with mammals.

Text: A. J. Romer, *The Vertebrate Body* (4th edition), W. B. Saunders 1970. Laboratory Manual: S. Wischnitzer, *Atlas and Dissection Guide for Comparative Anatomy,* Freeman, 1967.

Classes and lab. 1 summer session.

A. Rojo

501.0 ADVANCED BACTERIOLOGY

1 credit

Prerequisite: Bio 406.0.

Morphology, taxonomy and genetics of bacteria with special emphasis on their ecology and biochemical activities.

Classes 2 hrs. plus tutorials and lab 3 hrs. a week. 2 semesters.

Bobr-Tylingo

549.0 HONORS SEMINAR

1 credit

Prerequisite: Fifth year honors standing.

Seminars followed by discussions based on recent advances in biology. In consultation with the honors advisors, the honors students will select and prepare the topics for presentation to biology faculty and students. All biology professors will evaluate the seminars.

Classes 3 hrs. a week. 2 semesters.

Staff

550.0 MYCOLOGY

1 credit

Prerequisite: Bio 204.0, 305.0, 302.0; Che 202.0 or 343.0.

The study of morphology, classification, genetics and ecology of main groups of land and water fungi, fungal relationship to man, animals and plants will be discussed.

Classes 2 hrs. plus tutorials and lab 3 hrs. a week. 2 semesters.

Bobr-Tylingo

552.0 CYTOGENETICS

1 credit

Prerequisite: Bio 302.0.

Study of chromosome biology, experimental studies on the mitotic apparatus, karyotype and its evolution, sex chromosomes, control of meiotic system, regulation of chromosome pairing, cytology in relation to taxonomy and cancer cytology.

Classes 2 hrs. plus tutorial and lab 3 hrs. a week. 2 semesters.

Kapoor

553.0 MARINE INVERTEBRATES

1 credit

Prerequisite: Bio 205.0.

Study of marine invertebrates with emphasis on commercial species. Taxonomy, morphology and physiology of the different groups will be 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.

E. Rojo

554.0 EXPERIMENTAL FISH EMBRYOLOGY

1 credit

Prerequisite: Bio 205.0, 405.0 and 408.2.

Theory on embryology of fish with emphasis on the formation of main organs (brain, eye, otolith, skeleton, heart and musculature). Laboratory work will be based on the development of one or two fishes from both marine and freshwater environments. The histological study of one embryo will complement the macroscopic and microscopic observations. Experiments will be conducted to correlate the environmental conditions (temperature, salinity, light, etc.) to the development of the species selected.

Classes 3 hrs. plus tutorials and lab 4 hrs. a week. 2 semesters.

A. Rojo

BIOLOGY

555.0   ADVANCED PHYSIOLOGY

1 credit

Prerequisite: Bio 302.0, 305.0 and Che 343.0.

A course dealing in some detail with advances in particular areas of animal physiology. Areas covered include metabolism of proteins, carbohydrates, lipids, and nucleic acids, intermediary metabolism, regulation and control of metabolic processes, bioenergetics, molecular physiology of muscles and neurophysiology.

Classes   3 hrs. plus tutorials and lab 3 hrs. a week. 2 semesters.

Thomas

590.0   RESEARCH THESIS

1 credit

Prerequisite: Honors standing, fifth year.

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.

Staff

The following courses in Biology will be offered in 1976-77:

Bio 103.0	Bio 310.0	Bio 501.0
Bio 111.1/112.2	Bio 401.1/403.2	Bio 549.0
Bio 204.0	Bio 405.0	Bio 552.0
Bio 205.0	Bio 406.0	Bio 554.0
Bio 302.0	Bio 407.1/408.2	Bio 555.0
Bio 305.0	Bio 411.1/412.2	Bio 590.0
Bio 307.1/308.2		

The following courses are offered in alternate years and will not be offered in 1976-77:

Bio 309.0	Bio 317.0

BUSINESS ADMINISTRATION

Chairman, Associate Professor   A. B. Corbeau
Professors   H. G. Beazley; D. A. Fergusson;
     M. J. C. Martin
Associate Professors   G. A. Badawi; V. Baydar;
     M. Chew; R. D. Connell;
     D. E. Connelly; Z. H. Qureshi
Assistant Professors   D. J. Brean; J. Chamard;
     D. Chipman; C. Dirksen;
     D. W. Moore; S. G. Pendse;
     H. J. Schroeder
Lecturers   G. M. Walsh
Visiting Lecturer   J. J. White

PROGRAMS OFFERED IN THE DEPARTMENT OF BUSINESS ADMINISTRATION

The three undergraduate programs offered by the department are outlined in the following pages. For full details of these programs, please refer to sections on Bachelor of Commerce — General, and Bachelor of Commerce — Honors.

Course prefixes used in the outlines are as follows:

Bus   Business Administration
Cml   Commercial Law
Eco   Economics
Egl   English
Mat   Mathematics
Phi   Philosophy

Credit value of each course is indicated in parenthesis after the course number.

1. General Program in Business Administration

FIRST YEAR — FRESHMAN

Mat 113.0 (1) Mathematics for Commerce Students
Elective (1)
Elective (1)
Elective (1)
Elective (1)

SECOND YEAR — SOPHOMORE

Bus 203.1 (.2) Introductory Quantitative Methods for Commerce
Bus 204.1 (.2) Introductory Statistics for Commerce
Bus 240.0 Principles of FInancial and Managerial Accounting
Bus 280.0 Principles of Management
Eco 201.1 and 202.2 Principles of Economics
Egl 200.0

THIRD YEAR — JUNIOR

Bus 370.1 (.2) Introduction to Marketing
Bus 360.1 Business Finance — Part I
Bus 361.2 Business Finance — Part II
Bus 317.1 (.2) Introduction to Production
Bus 321.1 (.2) Introduction to Computers
Bus 382.0 Organizational Behavior
Cml 301.1 Legal Aspects of Business — Part I
A non-commerce elective in one of philosophy, psychology, political science or sociology approved by the Department.

FOURTH YEAR — SENIOR

Bus 489.2 Business Policy
Elective — half course
Elective — full course
Elective — full course
Elective — full course
Elective — full course

2. General Program in Accounting

FIRST YEAR — FRESHMAN

Mat 113.0 Mathematics for Commerce Students
Elective — full course
Elective — full course
Elective — full course
Elective — full course

SECOND YEAR — SOPHOMORE

Bus 203.1 (.2) Introductory Quantitative Methods for Commerce
Bus 204.1 (.2) Introductory Statistics for Commerce
Bus 240.0 Principles of Financial and Managerial Accounting
Bus 280.0 Principles of Management
Eco 201.1 and 202.2 Principles of Economics
Egl 200.0

THIRD YEAR AND FOURTH YEAR

Bus 321.1 (.2) Introduction to Computers
Bus 341.1 Intermediate Financial Accounting — Part I
Bus 342.2 Intermediate Financial Accounting — Part II
Bus 346.1 (.2) Introductory Cost Accounting
Bus 348.1 (.2) Planning and Control
Bus 360.1 Business Finance — Part I
Bus 361.2 Business Finance — Part II
Cml 301.1 Legal Aspects of Business — Part I
Cml 302.2 Legal Aspects of Business — Part II

BUSINESS ADMINISTRATION

A non-commerce elective in one of philosophy, psychology, political science or sociology approved by the Department.

Elective — half course
Elective — full course
Elective — full course
Elective — full course
Elective — full course

(Electives must include the equivalent of one full course from Bus 323.2, 324.2, 425.1, 443.1, 444.2, 449.1 (.2), 450.1 (.2), 453.1, 455.2).

A Commerce graduate who has followed the accounting concentration and obtained the required grades is normally in a position to sit for the uniform final examinations of the Institute of Chartered Accountants of Canada two years after receiving the Commerce degree.

Commerce graduates may receive exemption from many of the courses and examinations conducted by the Atlantic Provinces Association of Chartered Accountants. 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 Department of Business Administration.

Arrangements for exemption from courses and examinations also exist with the Institutes of Chartered Accountants in other provinces.

Exemptions from courses and examinations are also granted by the Society of Industrial Accountants to Commerce graduates who register in the industrial accounting course sponsored by the Society.

Honors Program in Business Administration

This program requires 20 full course credits beyond the first (freshman) year. After the Commerce freshman year, the program outline is as follows:

SOPHOMORE

Bus 203.1 (.2) Introductory Quantitative Methods for Commerce
Bus 204.1 (.2) Introductory Statistics for Commerce
Bus 240.0 Principles of Financial and Managerial Accounting
Bus 280.0 Principles of Management
Eco 201.1 and 202.2 Principles of Economics
Egl 200.0

JUNIOR

Bus 370.1 (.2) Introduction to Marketing
Bus 360.1 Business Finance — Part I
Bus 361.2 Business Finance — Part II
Bus 317.1 (.2) Introduction to Production
Bus 321.1 (.2) Introduction to Computers
Bus 382.0 Organizational Behavior
Cml 301.1 (.2) Legal Aspects of Business
A non-commerce elective in one of philosophy, psychology, political science or sociology approved by the Department.

SENIOR

Bus 307.2 Statistical Analysis for Business
Eco 300.1 Intermediate Microeconomic Theory
Eco 301.2 Intermediate Macroeconomic Theory
Elective — half course
Elective — full course
Elective — full course
Elective — full course (non-business)

HONORS

Bus 489.2 Business Policy
Bus 591.1 (.2) Business Research
Elective — full course
Elective — full course
Elective — full course
Elective — full course (non-business)

Note: Electives must be chosen so as to complete functional specialization in two of the following areas: accounting, economics, finance, general management, management science, marketing. Functional specialization in an area means two and one-half (2 1/2) courses (or equivalent) at the 300 or 400 level in that area. A listing of courses which will satisfy the specialization requirements in each of the six areas is prepared annually by the Department of Business Administration.

Note: courses offered by the Department are grouped under the following subject areas:

Quantitative Methods (00 - 09)
Production (10 - 19)
Computers (20 - 29)
Accounting (40 - 59)
Finance (60 - 69)
Marketing (70 - 79)
Management (80 - 89)
Other (90 - 99)

BUSINESS ADMINISTRATION

QUANTITATIVE METHODS (00 - 09)

203.1 (.2) INTRODUCTORY QUANTITATIVE METHODS FOR COMMERCE
$^1/_2$ credit

Prerequisite: Mat 113.0 or Grade XII Mathematics.

The purpose of this course is to provide an overview of calculus with an emphasis on application, an upgrading of algebraic techniques and an introduction to various other quantitative techniques for commerce.

Classes 3 hrs. a week. 1 semester.

204.1 (.2) INTRODUCTORY STATISTICS FOR COMMERCE
$^1/_2$ credit

Prerequisite: Mat 113.0 or Grade XII Mathematics.

An introduction to probability and statistics with emphasis on business and economic applications.

Classes 3 hrs. a week. 1 semester.

Note: this is the same course as Economics 204.2.

301.1 (.2) OPERATIONS RESEARCH
$^1/_2$ credit

Prerequisite: Bus 203.1 (.2) and 204.1 (.2).

This course is designed for students who require a deeper understanding of the concepts and mathematical model building techniques in management than that provided in Bus. 203. It will extend the material covered in Bus. 203 by examining standard O.R. techniques in some detail with stress on both their values and limitations as management tools.

Classes 3 hrs. a week. 1 semester.

302.1 PRINCIPLES OF MATHEMATICAL PROGRAMMING
$^1/_2$ credit

Prerequisite: Bus 301.1 (.2) and 321.1 (.2).

The course extends the student's knowledge of linear programming to include integer and mixed-integer programming, postoptimality and sensitivity analysis, decomposition principle, etc. Further topics in dynamic programming are also covered. Emphasis will be placed on the application of mathematical programming techniques in management.

Classes 3 hrs. a week. 1 semester.

307.2 STATISTICAL ANALYSIS FOR BUSINESS
$^1/_2$ credit

Prerequisite: Bus 204.1 (.2).

A further study of statistics and its application to the solution of business problems; analysis of variance, sampling, correlation, index numbers, time service analysis, seasonal index forecasting, and Baysian statistics will form the foundation of the course.

Classes 3 hrs. a week. 1 semester.

308.1 (.2) MULTIVARIATE ANALYSIS
$^1/_2$ credit

Prerequisite: Bus 307.2 and 321.1 (.2).

This course is designed for those students who wish to extend their knowledge of the techniques used in applied statistics. Topics covered include analysis of variance and multiple regression as well as other more advanced techniques such as factor analysis and discriminant analysis. Emphasis is placed upon use of the computer to facilitate the analysis of data.

Classes 3 hrs. a week. 1 semester.

409.1 (.2) SEMINAR IN OPERATIONS RESEARCH AND STATISTICS
$^1/_2$ credit

Prerequisite: Bus 301.1 (.2), 307.2, and 321.1 (.2).

This is a seminar course which will examine specific research and/or application areas within O.R. and Statistics. Its content will vary depending on the interests of the students and professor.

Classes 3 hrs. a week. 1 semester.

PRODUCTION (10 - 19)

317.1 (.2) INTRODUCTION TO PRODUCTION MANAGEMENT
$^1/_2$ credit

Prerequisite: Bus 280.0 and Mat 113.0.

An introduction to the production function and process, including coverage of the systems concept and the basic techniques for decision making in the areas of planning and control.

Classes 3 hrs. a week. 1 semester.

BUSINESS ADMINISTRATION

318.2 TECHNIQUES OF PRODUCTION MANAGEMENT

$^1/_2$ credit

Prerequisite: Bus 203.1 (.2), 317.1 and 321.1 (.2).

A more advanced course in the study of the production function, making extensive use of case analysis. The course covers the production system, planning models and process models.

Classes 3 hrs. a week. 1 semester.

COMPUTERS (20 - 29)

321.1 (.2) INTRODUCTION TO COMPUTERS

$^1/_2$ credit

Prerequisite: Bus 240.0, Mat 113.0 or equivalent.

Introduction to computer concepts; computer programming, using Fortran IV; study of computer systems, information systems, and data processing functions, systems analysis and flowcharting.

Classes 3 hrs. a week. 1 semester.

323.2 INFORMATION SYSTEMS I

$^1/_2$ credit

Prerequisite: Bus 321.1 (.2).

The study of computer-based data processing and information systems, management problems of computers in business such as organization, control and feasibility.

Classes 3 hrs. a week. 1 semester.

324.2 THE USE OF COBOL IN DATA PROCESSING

$^1/_2$ credit

Prerequisite: Bus 321.1 (.2).

Cobol program organization, file organization, description and accessing, edit, sort, file maintenance and report writing programs, arrayed data, integration concepts, multi-programming concepts.

Classes 3 hrs. a week. 1 semester.

425.1 INFORMATION SYSTEMS II

$^1/_2$ credit

Prerequisite: Bus 323.2.

Systems theory, data-based integrated data processing, management information systems in the various functional areas of business including accounting, credit, marketing, sales, inventory, production. The control, privacy and audit of information.

Classes 3 hrs. a week. 1 semester.

ACCOUNTING (40 - 59)

240.0 PRINCIPLES OF FINANCIAL AND MANAGERIAL ACCOUNTING

1 credit

A study of basic accounting concepts, and their application to business transactions and financial statements. An introductory consideration of asset and liability accounts, and the managerial uses of accounting data.

Classes 4 hrs. a week. 2 semester.

341.1 INTERMEDIATE FINANCIAL ACCOUNTING PART I

$^1/_2$ credit

Prerequisite: Bus 240.0.

Part I of a two course series which provides a comprehensive study of financial accounting and financial reporting to shareholders. This course is to be followed by Intermediate Financial Accounting Part II.

Classes 3 hrs. a week. 1 semester.

342.2 INTERMEDIATE FINANCIAL ACCOUNTING PART II

$^1/_2$ credit

Prerequisite: Bus 341.1.

Part II of a two course series which provides a comprehensive study of financial accounting and financial reporting to shareholders.

Classes 3 hrs. a week. 1 semester.

BUSINESS ADMINISTRATION

346.1 INTRODUCTORY COST ACCOUNTING
$^1/_2$ credit

Prerequisite: Bus 240.0.

This is a basic course in cost accounting principles, techniques and procedures. Product costing, non-manufacturing costs with emphasis on managerial uses of cost accounting techniques.

Classes 3 hrs. a week. 1 semester.

348.2 PLANNING AND CONTROL
$^1/_2$ credit

Prerequisite: Bus 240.0 and 280.0.

Covers concepts and techniques of planning and control such as profit planning, financial forecasting, budgets, performance measurements, management control systems, analysis of performance.

Classes 3 hrs. a week. 1 semester.

443.1 ADVANCED FINANCIAL ACCOUNTING I — CORPORATE ACCOUNTING
$^1/_2$ credit

Prerequisite: Bus 342.2.

An advanced study of mergers and acquisitions, consolidated financial statements, branch accounting for foreign operations, and other selected corporate accounting topics.

Classes 3 hrs. a week. 1 semester.

444.2 ADVANCED FINANCIAL ACCOUNTING II — SPECIAL TOPICS
$^1/_2$ credit

Prerequisite: Bus 342.2.

An advanced study of special topics including partnerships, fiduciary accounting, fund accounting, price level changes and receivership and liquidations.

Classes 3 hrs. a week. 1 semester.

449.1 (.2) MANAGEMENT CONTROL SYSTEMS
$^1/_2$ credit

Prerequisite: Bus 348.1 (.2).

An advanced study of the management control system which examines problems of effective and efficient control from the perspective of the total system: expense centers, profit centers, investment centers, programming planning, budgeting, performance appraisal.

Classes 3 hrs. a week. 1 semester.

450.1 (.2) AUDITING
$^1/_2$ credit

Prerequisite: Bus 342.2.

A study of the basic concepts and theory of auditing including the auditing environment; the auditor's role; the structure of the profession; responsibilities of auditors; nature and theory of evidence; the auditor's report and other related material.

Classes 3 hrs. a week. 1 semester.

453.1 TAXATION
$^1/_2$ credit

Prerequisite: Bus 342.2 or 361.2.

An introductory study of the theory and procedures of taxation at all levels of government.

Classes 3 hrs. a week. 1 semester.

455.2 ACCOUNTING SEMINAR
$^1/_2$ credit

Prerequisite: Bus 342.2.

An intensive study of the problems of income determination, asset valuation and liability and equity measurement, a study of the accounting theory that is proposed as a framework for the resolution of these problems; investigation of the relationship of financial accounting to such areas as finance, motivation system of the firm, operations research, management information system.

Classes 3 hrs. a week. 1 semester.

FINANCE (60 - 69)

360.1 BUSINESS FINANCE — PART I
$^1/_2$ credit

Prerequisite: Bus 240.0, 280.0, 203.1 (.2) and 204.1 (.2).

A basic course in business finance introducing the student to the Canadian financial environment, instruments of finance, external financing, capital budgeting. This course is to be followed by Business Finance — Part II.

Classes 3 hrs. a week. 1 semester.

BUSINESS ADMINISTRATION

361.2   BUSINESS FINANCE — PART II

¹/₂ credit

Prerequisite: Bus 360.1.

The second course of a two course series in business finance. The course covers financial analysis, cost of capital, sources of capital, dividend policy, lease financing, management of assets.

Classes   3 hrs. a week. 1 semester.

463.1   FINANCIAL MANAGEMENT

¹/₂ credit

Prerequisite: Bus 361.2.

Managerial in emphasis, the course covers problems of capital structure and valuation of a firm, the cost of capital in relation to financing problems, dividend policies and their relation to retained earnings, mergers and reorganizations.

Classes   3 hrs. a week. 1 semester.

464.2   CORPORATION FINANCE

¹/₂ credit

Prerequisite: Bus 463.1.

A study of current literature in corporation finance emphasizing empirical findings and application of theory to practice with the help of case studies.

Classes   3 hrs. a week. 1 semester.

466.1   INVESTMENTS

¹/₂ credit

Prerequisite: Bus 361.2.

The analysis of investment values, study of stock and bond markets, evaluation of investment techniques, investment analysis by industries, management of personal finance and portfolio.

Classes   3 hrs. a week. 1 semester.

467.2   PORTFOLIO MANAGEMENT

¹/₂ credit

Prerequisite: Bus 466.1.

A comprehensive analysis of the decision-making process of port-folio management. Major subject areas include the definition of objectives to accord with the preferences, plans, and obligations of major classes of investors, analysis of the likely risks and gains of investments, individually and by class of security, the selection of portfolios which appear most likely to satisfy stated investment objectives.

Classes   3 hrs. a week. 1 semester.

MARKETING (70 - 79)

370.1 (.2)   INTRODUCTION TO MARKETING

¹/₂ credit

Prerequisite: Bus 280.0, Eco 201.1 and Eco 202.2.

A study of principles and fundamental concepts of marketing and marketing management: pricing, promotion, merchadising, distribution structure and marketing research.

Classes   3 hrs. a week. 1 semester.

371.2   MARKETING MANAGEMENT

¹/₂ credit

Prerequisite: Bus 370.1 (.2).

Managerial in focus, this course is devoted to analyzing opportunities, studying marketing activity and its organization, planning the marketing program and controlling the marketing effort.

Classes   3 hrs. a week. 1 semester.

372.2   MARKETING COMMUNICATION AND ADVERTISING

¹/₂ credit

Prerequisite: Bus 370.1 (.2).

An introduction to the study of advertising principles and practices, including advertising strategies, media presentation and evaluation of effectiveness.

Classes   3 hrs. a week. 1 semester.

BUSINESS ADMINISTRATION

373.1 MANAGEMENT OF MARKETING CHANNELS

$^1/_2$ credit

Prerequisite: Bus 370.1 (.2).

A study of the marketing distribution system, retailing and wholesaling, merchandising, and relevant legislation.

Classes 3 hrs. a week. 1 semester.

374.2 SALES MANAGEMENT

$^1/_2$ credit

Prerequisite: Bus 370.1(.2).

A study of the managerial problems involved in sales management, including the recruitment, training, compensation and motivation of sales personnel and the control and integration of the individual selling effort.

Classes 3 hrs. a week. 1 semester.

375.1 INTERNATIONAL MARKETING

$^1/_2$ credit

Prerequisite: Bus 370.1 (.2).

An introduction to the nature and environment of international marketing including the study of the international consumer, product policy, distribution, promotion, research and management.

Classes 3 hrs. a week. 1 semester.

376.1 (.2) CONSUMER BEHAVIOR

$^1/_2$ credit

Prerequisite: Bus 370.1 (.2).

A study of the nature of consumer behavior, the foundation of consumer research, consumer market segments, consumer attitudes.

Classes 3 hrs. a week. 1 semester.

377.1 (.2) INDUSTRIAL MARKETING

$^1/_2$ credit

Prerequisite: Bus 370.1 (.2).

A study of the marketing functions of industrial producers whose products are employed in the manufacture of other products or become part of other goods and services, behavior of industrial, governmental and institutional buyers.

Classes 3 hrs. a week. 1 semester.

378.1 MARKETING RESEARCH

$^1/_2$ credit

Prerequisite: Bus 204.1 (.2) and 370.1 (.2).

An introductory course in the nature, methods, procedures and application of marketing research.

Classes 3 hrs. a week. 1 semester.

MANAGEMENT (80 - 89)

280.0 PRINCIPLES OF MANAGEMENT

1 credit

A study of fundamental concepts of management, decision making, management planning, organizing, motivating and controlling. A prime objective of this course is to introduce the systems concept as a foundation for further study in the program.

Classes 3 hrs. a week. 2 semesters.

382.0 ORGANIZATIONAL BEHAVIOR

1 credit

Prerequisite: Bus 280.0.

An introductory study of human behavior in formal organizations, with emphasis on patterns and theories of behavior in industry. The course exposes the student to concepts of behavioral science through readings, classroom sessions, and application of course concepts to the analysis of cases.

Classes 3 hrs. a week. 2 semesters.

385.1 (.2) PERSONNEL MANAGEMENT

$^1/_2$ credit

Prerequisite: Bus 280.0.

A study of the conceptual and practical aspects of the personnel function in organizations, with a special emphasis on business organizations. The course focuses on the major issues, procedures and problems involved in manpower planning, recruitment and selection, compensation, training and development, and maintenance of human resources.

Classes 3 hrs. a week. 1 semester.

BUSINESS ADMINISTRATION

386.1 (.2)   INDUSTRIAL RELATIONS
$^1/_2$ credit

Prerequisite: Bus 280.0.

An introduction to the field of industrial relations, a study of union structure and operation, collective bargaining and allied material.

Classes   3 hrs. a week. 1 semester.

388.1   BUSINESS AND ITS ENVIRONMENT
$^1/_2$ credit

Prerequisite: Bus 280.0, Eco 201.1, and Eco 202.2.

Business and its economic and political environment, the social responsibilities of business.

Classes   3 hrs. a week. 1 semester.

481.1 (.2)   ORGANIZATION THEORY: STRUCTURE, PROCESS, ANALYSIS AND DESIGN
$^1/_2$ credit

Prerequisite: Bus 382.0.

In a systems context, the first phase of the course will expose the student to different concepts of formal organization. The second phase will involve the application of concepts using various design approaches and configurations.

Classes   3 hrs. a week. 1 semester.

483.1 (.2)   INTERPERSONAL BEHAVIOR I
$^1/_2$ credit

Prerequisite: Bus 382.0.

This course studies and attempts to improve the kinds of interpersonal competence that can contribute to the effectiveness of an administrator. By focusing on the causes of misunderstandings between persons and reducing the causes of such misunderstandings, the course attempts to improve an individual's interpersonal skills as a member of an organization.

Classes   3 hrs. a week. 1 semester.

484.2   INTERPERSONAL BEHAVIOR II
$^1/_2$ credit

Prerequisite: Bus 483.1 (.2).

The course is designed to give further understanding of interpersonal behavior in an organizational context. It will give students the opportunity to practice interpersonal skills and gain further theoretical insights.

Classes   3 hrs. a week. 1 semester.

487.1 (.2)   SMALL BUSINESS MANAGEMENT
$^1/_2$ credit

Prerequisite: Bus 361.2 and 370.1 (.2).

The objective of the course is to stimulate informed interest in creating and managing a small business; the course includes the investigation of new business opportunities, capital requirements and sources, information systems, marketing and tax considerations.

Classes   3 hrs. a week. 1 semester.

489.2   BUSINESS POLICY
$^1/_2$ credit

Prerequisite: Bus 361.2, 370.1 (.2) and one additional full credit in Business Administration at the 300 level or above.

The perspective of top management, sizing up situations, formulating policies, discovering opportunities and planning programs of action, organizing administrative personnel and putting plans into action, control, follow up and appraisal, day to day administrative problems, the business leader and public responsibility.

Classes   3 hrs. a week. 1 semester.

OTHER (90 - 99)

591.1 (.2)   BUSINESS RESEARCH
$^1/_2$ credit

The student will undertake an original investigation of a business problem and submit a report on his findings and recommendations.

Classes and independent study. 1 semester.

BUSINESS ADMINISTRATION

COMMERCIAL LAW

301.1 (.2)   LEGAL ASPECTS OF BUSINESS
               PART I

$^{1}/_{2}$ credit

An introduction to the essential legal aspects of commerce: contracts, some special contracts, corporations, and special areas, such as anti-combines, tax and tariff legislation.

Classes   3 hrs. a week. 1 semester.

302.2   LEGAL ASPECTS OF BUSINESS
               PART II

$^{1}/_{2}$ credit

Prerequisite: Cml 301.1 (.2).

A further examination of some of the legal aspects of commerce; areas included are impeachment of contract, the requirement of writing, discharge of contracts, assignment of contracts, bailment, insurance, guarantee, and landlord and tenancy.

Classes   3 hrs. a week. 1 semester.

BUSINESS ADMINISTRATION

COMMERCIAL LAW

301.1 (.2)   LEGAL ASPECTS OF BUSINESS
              PART I

¹/₂ credit

$^1/_2$ credit

An introduction to the essential legal aspects of commerce: contracts, some special contracts, corporations, and special areas, such as anti-combines, tax and tariff legislation.

Classes   3 hrs. a week. 1 semester.

302.2   LEGAL ASPECTS OF BUSINESS
         PART II

$^1/_2$ credit

Prerequisite: Cml 301.1 (.2).

A further examination of some of the legal aspects of commerce; areas included are impeachment of contract, the requirement of writing, discharge of contracts, assignment of contracts, bailment, insurance, guarantee, and landlord and tenancy.

Classes   3 hrs. a week. 1 semester.

BUSINESS ADMINISTRATION

PROGRAM FOR DEGREE OF MASTER IN BUSINESS ADMINISTRATION

PROGRAM OBJECTIVES

The primary objective of the Master of Business Administration Program is to provide an intellectual and social environment in which the student can discover how to develop potential for effective management. Both business and government are increasingly demanding that professional administrators possess *specialist* competence as a prerequisite for middle management employment, plus *generalist* competence from those who aspire to more senior management positions. The program at Saint Mary's University is designed to satisfy both these demands.

Since many young M.B.A. students* can realistically expect to hold middle line or staff management positions before moving on to more senior levels later in their careers, the program is designed to:

a. satisfy long-term educational needs by providing *generalist* concepts in anticipation of potential to succeed to more general and senior management positions later;

b. satisfy short-term educational needs by providing *specialist* concepts and techniques applicable to a particular line or staff area. This part of the program provides a functional identity which the student can exploit during the early years of a career to acquire middle management experience.

*The arrangements for a General Management Program, which may be of interest to students with substantial work experience, are outlined on page 78.

PROGRAM STRUCTURE

YEAR I COURSES

Both *generalist* and *specialist* management education, as with medicine, ideally requires a blend of knowledge in the basic disciplines, (the social and behavioral sciences and mathematics), and their applications to the functional areas of management. Therefore the first year of the program necessarily consists of foundation courses in both the basic disciplines and each of the functional areas

of management. It also shows the student how the concepts and techniques developed by the basic disciplines are used to enhance managerial effectiveness, and enables an informed choice to be made of an area of specialization in the second year of studies.

Basic Disciplines
- Economics of the Enterprise and its Environment
- Management Science I
- Systems, Computers and Management
- Organizational Behavior

Functional Areas
- Accounting — a. Financial
                b. Managerial
- Managerial Finance
- Marketing Management
- Operations Management

YEAR II COURSES

The second year of the program consists of:

a. a two-semester course in Management Policy and Strategy Formulation designed to integrate the material covered elsewhere in the program and to further the student's longer term *generalist* needs;

b. a number of *Structured Modules* in particular functional areas of management to further the *specialist* needs of students. They are designed to reflect the faculty's perception of management educational needs within each area over the next decade.

Students will normally select one of the following Modules based upon previous academic qualifications, employment experience, and in anticipation of immediate career aspirations:

- Management of Technology/Operations Management
- Financial Management Planning and Control
- Marketing Management
- Management of Human Resources

In addition, students are required to undertake a Management Research Project involving the practical application of concepts and techniques in the selected area.

BUSINESS ADMINISTRATION

The objectives of the *Structured Modules* and their individual courses are discussed in more detail on page 80.

Students are also required to complete the equivalent of two full credits* (which could be a second Module) from the remainder of the second year program.

*Students who select the Marketing Management Module are required to complete only $1^1/_2$ credits from the remainder of the second year program.

GENERAL MANAGEMENT PROGRAM

It is recognized that some students, particularly some of those enrolled in the program on a part-time basis, may already have substantial management experience and be aspiring towards general management positions soon after graduation. Such students could be offered the opportunity of following a General Management Program specifically suited to their needs. In their second year of studies, they would be required to complete the Management Research Project and Policy and Strategy Formulation course plus the equivalent of four full courses from the remainder of the second year program.

TEACHING METHODOLOGY

The program is neither discipline nor case oriented, but courses embrace combinations of lectures, case discussions, seminars, and assignments according to the requirements of the individual subjects. Since the faculty has extensive business as well as academic experience, attention is focused on both the practical and the academic aspects of the materials covered during the program.

The faculty believes that management education is essentially a process of personal development which must be student-centered. Therefore, to facilitate individual academic and management development throughout the program, a personal advisor is assigned to assist each student to discover and develop his or her management potential.

ADMISSION REQUIREMENTS

Admission to the program is open to students with a bachelor's degree from a recognized university, whose scholarly records indicate that they are capable of studying management and administration at the graduate level, and who obtain a satisfactory score in the ATGSB.

An official transcript of such records is required by the Director of Admissions who processes all applications.

APPLICATION INFORMATION

Applications for admission to the M.B.A. program should be made as early as possible, preferably by May 30th, for entry the following September.

APPLICATION PROCEDURE

a. Complete an application form (including the names of referees) and return to:
    Coordinator of MBA Program
    Saint Mary's University
    Halifax, Nova Scotia B3H 3C3

b. Arrange for official transcripts and supporting documents to be sent directly to the University from the undergraduate institution attended.

c. Arrange for ATGSB results to be sent directly to the University. (To obtain further details of this test, write to The Educational Testing Service, Princeton, New Jersey 08540. Note — the code number for the Faculty of Commerce, Saint Mary's University, is R0958).

d. An overseas student whose native language is not English is additionally required to complete a test in English. These tests are administered by the University of Michigan, the College Entrance Board and the University of Cambridge, England.

e. Remit a non-returnable application fee of $5.00.

NOTE: The best M.B.A. programs include substantial mathematical and statistical material. Many students, particularly those with a liberal arts background, fear that they will be unable to comprehend such material, and that consequently their academic performances may fail to reflect their true potential. The faculty is empathetic to the learning difficulties faced by such students. Students who feel that their mathematical background needs to be 'up-dated' to cope with the quantitative courses, are offered the opportunity to complete a special course in mathematics immediately prior to admission.

FINANCIAL AID

In addition to Canada Student and other loans, financial aid is available through university scholarships and assistantships.

BUSINESS ADMINISTRATION

PART-TIME BASIS

The program will be available on a part-time basis for students who wish to complete it in part, or whole, while remaining in full-time employment. At least two courses from each year of the program will be offered in sequence in evening classes each semester. Subject to satisfactory enrolment, at least one course from each year of the program will be offered during the summer sessions. Consequently, a student may complete the whole program on a part-time basis within four years.

PLACEMENT PROGRAM

The University offers a special placement service to graduating M.B.A. students. Also assistance is available through Canada Manpower offices on campus.

TEACHING FACILITIES

The School is located in a new academic building in the center of the University campus, close to the Main Library, Student Center and university residences. A Management Science Laboratory provides access to electric calculating machines, 'off-line' card punches, etc. and computing facilities include access to I.B.M. 1130 and CDC 6400 computers.

COURSES OFFERED — YEAR I
BASIC DISCIPLINES

MBA 502.0   ECONOMICS OF THE
ENTERPRISE AND ITS
ENVIRONMENT

1 credit

An examination of the economic behavior of the consumer and the firm, including market demand and structure and the pricing and employment of factor inputs. The course also studies the determinants of and changes in the level of national income, monetary and fiscal theory, and international trade and finance theory and policy.

MBA 505.0   MANAGEMENT SCIENCE I

1 credit

This course acquaints the student with the concepts relevant to the use of the systems approach and mathematical models in management. It deals with the application of operations research techniques and statistical analysis to decision making in business.

MBA 521.1 (.2)   SYSTEMS, COMPUTERS AND
MANAGEMENT

$^1/_2$ credit

This course acquaints the student with concepts relevant to the use of computers in management. It studies programming and systems with emphasis on the use of the computer as a decision-making tool.

MBA 584.0   ORGANIZATIONAL BEHAVIOR

1 credit

An investigation of behavioral science theories and concepts that apply to organizations. This course helps the student to diagnose, understand and predict the behavior of people as individuals, in interpersonal relationships, in groups and in complex organizations.

FUNCTIONAL AREAS

MBA 516.1 (.2)   OPERATIONS MANAGEMENT

$^1/_2$ credit

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.

MBA 540.1 (.2)   FINANCIAL ACCOUNTING

$^1/_2$ credit

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 reports and also with an appreciation of the limitations inherent in published financial data.

MBA 548.1 (.2)   MANAGERIAL ACCOUNTING

$^1/_2$ credit

The primary objective of this course is to provide the student with a knowledge of the various types of accounting data 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. Financial forecasting, budgeting, profit-planning and performance measurement make up the major portion of the course content.

BUSINESS ADMINISTRATION

MBA 561.1 (.2) BUSINESS FINANCE

$^1/_2$ credit

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.

MBA 571.1 (.2) MARKETING MANAGEMENT: AN OVERVIEW

$^1/_2$ credit

A course providing managerial introduction to the fundamentals of marketing with primary focus on the planning, organizing, and controlling of product, price, distribution, promotion, and public policy strategies, in both domestic and international markets.

COURSES OFFERED — YEAR II
REQUIRED COURSES

MBA 689.0   MANAGEMENT POLICY AND STRATEGY FORMULATION

1 credit

This course focuses attention on the role of the senior management function to develop and implement strategy in the context of the resources, values and aspirations of the corporation. It draws upon case material based on companies of differing sizes, technologies and degrees of diversification. By providing an insight into the problems and responsibilities faced by general management at the senior level, it seeks to provide an overall perspective for the remainder of the program.

MBA 691.1 (.2) MANAGEMENT RESEARCH PROJECT

$^1/_2$ credit

Each student is required to complete a project, normally on an 'in-company' basis, involving the practical application of the concepts and techniques learned in a specialist area, under the direct supervision of a faculty member in that area.

STRUCTURED MODULES
MANAGEMENT OF TECHNOLOGY/ OPERATIONS MANAGEMENT MODULE

This group of courses is designed for students with a relatively strong mathematical background at undergraduate level, (particularly those with bachelor degrees in the mathematical sciences or engineering), and is based on the following considerations:

a. many students with the above backgrounds are seeking management careers in technology-based organizations in which they can exploit both their bachelor and M.B.A. degree backgrounds;

b. the increasing employment demands for graduates in functions demanding a flexible capacity to solve organizational and managerial problems in a technological environment.

The overall objective is to provide an education for students contemplating careers initially as managers of operations, in the manufacturing and service industries and public administration. Such managers must be able to make decisions based on informed evaluations of technological, financial and behavioral aspects of problem situations; and to communicate and implement these decisions expeditiously. Therefore, the courses are designed to analyze the nature of the managerial task in such situations and the implications of changing technology on industry, the public service and contemporary society.

MBA 605.0   MANAGEMENT SCIENCE II

1 credit

This course builds on the material covered in the first year, to extend the student's grasp of mathematical model building techniques as they apply to the analysis and design of administrative systems. It particularly emphasizes the practical application of these techniques to management problem situations by substantial use of case material already developed specifically for this purpose.

MBA 616.1 (.2) MANAGEMENT OF PRODUCTION SYSTEMS

$^1/_2$ credit

A thorough understanding of the nature of operations/production systems and their related managerial problems is provided in this course. An interdisciplinary approach is adopted throughout to identify, examine and apply relevant theory and techniques from both the behavioral and management sciences that have been taught elsewhere in the program.

BUSINESS ADMINISTRATION

MBA 630.1 (.2) MANAGEMENT OF SCIENCE AND TECHNOLOGY

$^1/_2$ credit

An examination of the problems of 'managing technology' at both the company level and in its effect on the socio-political, economic, physical and ecological environments. It draws on the expanding body of literature in this area.

FINANCIAL MANAGEMENT MODULE

The Financial Management Module has been designed for those students who wish to pursue a management career in the area of financial administration. It focuses on the financial decisions facing a business practitioner and on analytical methods and techniques available as aids to such decisions.

The student is introduced to the principles and practices of finance through the development theory and its subsequent application to simulated business situations. Following a survey of the features and mechanics of the macro-financial systems, the student is introduced to the factors determining financial yields and the problems which managers encounter in developing fiscal policies within their organizations.

The Module develops thorough analytic treatment of principles and techniques in the following areas:

a. the management of corporate funds, including cash and capital budgeting, the selection of alternative financing sources, and the financial adaptation of the firm to its economic environment;

b. the role of capital markets, and in particular the implications of changes in the markets for raising long and short-term funds;

c. the methods underlying investment and security analysis and investment policies of individuals and financial institutions;

d. the measurement and communication of the results of economic transactions entered into by the business entity;

e. the design of systems and the establishment of practices which will enhance the organization's opportunity to achieve desired objectives.

MBA 641.1 (.2) FINANCIAL REPORTING: PROBLEMS AND ISSUES

$^1/_2$ credit

This course focuses on the problems inherent in the process of communicating financial information to various interested groups outside the business organization. Commencing with an examination of the basic objectives of financial statements and the information requirements of various financial statement users, the course provides an opportunity to evaluate generally accepted accounting principles currently in use. Alternative asset valuation and income measurement models are considered as well as current financial reporting issues.

MBA 648.1 (.2) MANAGEMENT CONTROL SYSTEMS

$^1/_2$ credit

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.

MBA 660.0 MANAGERIAL FINANCE

1 credit

The object of this course is to expose the student to in-depth analysis of areas related to financial management. The course builds upon the introductory business finance course taken in the first year and considers such areas as investment value, cost of capital, capital budgeting, mergers and acquisitions, and long-term financial planning. In addition, the student is acquainted with the organization and regulation of money and capital markets in the Canadian economy.

MARKETING MANAGEMENT MODULE

This group of integrated courses is designed to prepare an individual to meet the complex challenges of a marketing management career. The basic objective is to provide students with a foundation upon which can be developed the capability of confronting the dynamic controllable and uncontrollable variables of the marketing function. To accomplish this, a course frame-work based on the following criteria is formulated:

BUSINESS ADMINISTRATION

a. A Decision-Making Orientation — a recognition that the major function of a marketing executive is to make decisions. Thus, emphasis is placed on the different types of decisions involved in the specification of objectives and the allocation of resources, for the pursuit of market place opportunity.

b. An Analytical Approach — an emphasis on analyzing the interrelationships of marketing decision variables, rather than describing solutions to past marketing problems.

c. An Interdisciplinary Perspective — a problem solving application of relevant behavioral science, economic and quantitative concepts and theories.

MBA 672.1 (.2) MARKETING COMMUNICATIONS: PLANNING AND STRATEGY
$^1/_2$ credit

A study of communications theory as it applies to the role of interpersonal and mass communication media in marketing. Emphasis is placed on the formulation, coordination and evaluation of the effectiveness of advertising, personal selling, sales promotional, and public relations strategies.

MBA 673.1 (.2) MARKETING DISTRIBUTION: PLANNING AND STRATEGY
$^1/_2$ credit

A systematic analysis of the decision-making factors underlying the development of effective distribution policies and strategies. The course focuses on the institutions and functions of the marketing channel with emphasis placed on distribution regulation, direct selling, retail, wholesale and physical distribution functions.

MBA 676.1 (.2) CONSUMER BEHAVIOR: DECISION-MAKING APPLICATIONS
$^1/_2$ credit

An examination of the buying behavior of individuals as it is affected by psychological and sociological influences. Emphasis is placed on the understanding of how such behavioral science concepts as social class, reference group, perception, attitude, motivation, personality and learning can contribute to the improvement of marketing decision-making.

MBA 678.1 (.2) MARKETING RESEARCH
$^1/_2$ credit

A study of the decision-making application of marketing research techniques and procedures. Emphasis is placed on research design, sampling, data collection, analysis and presentation.

MBA 679.1 (.2) MARKETING POLICY
$^1/_2$ credit

A comprehensive, integrated study of marketing management. Primary focus is placed on the analysis and solution of complex marketing problem situations. The course also includes several seminar discussions on contemporary issues such as multinational marketing, consumerism, and marketing regulation.

MANAGEMENT OF HUMAN RESOURCES MODULE

The overall objective of this group of courses is to provide an education for students who are contemplating careers intitially concerned with the human aspects of organizations. The first year courses will have provided students with the general tools necessary to understand organizational behavior. The second year courses are designed to give the student the expertise to perform effectively in the personnel/labor relations management functions and to promote organizational responsiveness and adaptability to its changing internal and external environment.

MBA 683.1 (.2) MANAGEMENT OF INTERPERSONAL RELATIONS
$^1/_2$ credit

This course aims at improving the individual's ability to interact productively with others in two-person and small group relationships. It seeks to develop an individual's awareness of how his behavior affects and is affected by that of others.

MBA 684.1 (.2) MANAGEMENT OF ORGANIZATIONAL DESIGN AND DEVELOPMENT
$^1/_2$ credit

A study of the evolution of organizational design and the use of current techniques in organizational development. Emphasis is placed upon understanding how the evolution of organizational structures has affected our present ones and how current research can be utilized to improve and develop them in the future.

BUSINESS ADMINISTRATION

MBA 685.1 (.2) PERSONNEL ADMINIATRATION

$^1/_2$ credit

An investigation of the role of the personnel manager and the changes in the nature of responsibilities brought about by changes in the legal and technological environments of organizations. The course deals mainly with manpower planning, selection and compensation and the development of the human resources of the organization.

MBA 686.1 (.2) LABOR-MANAGEMENT RELATIONS

$^1/_2$ credit

An examination of the role of the labor-management functions in the organization and the changing interplay between management, union and public policy, focusing on some of the main legal, behavioral and institutional issues in collective bargaining.

The following courses in the Master in Business Administration program will be offered in 1976-77:

MBA 502.0	MBA 605.0	MBA 678.1
MBA 505.0	MBA 616.1	MBA 679.1
MBA 516.1	MBA 630.1	MBA 683.1
MBA 521.1	MBA 641.1	MBA 684.1
MBA 540.1	MBA 648.1	MBA 685.1
MBA 548.1	MBA 660.0	MBA 686.1
MBA 561.1	MBA 672.1	MBA 689.0
MBA 571.1	MBA 673.1	MBA 691.1
MBA 584.0	MBA 676.1	

CHEMISTRY

Chairman, Associate Professor   D. H. Davies
Professors   J. W. Murphy, S.J., A. T. Sabean
Associate Professors   J. Ginsburg, K. Vaughan,
         J. C. O'C. Young
Assistant Professor   C. M. Elson

The program of the Department of Chemistry is designed to satisfy two functions:

a) Fulfill requirements for the general degree of Bachelor of Science, the degree of Bachelor of Science with major, and the degree of Bachelor of Science with 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 idea 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 senior undergraduates are expected and encouraged to contribute to these projects. Some jobs, both during the term and in the summer, are available for senior undergraduates.

The core program for a major in chemistry consists of Che 101.0, 201.0, 241.0, 311.0, 321.0, 331.0, and one of 342.0, 411.0, or 441.0. Students may take two additional chemistry courses of their choice.

The core program for an honors degree in chemistry consists of Che 101.0, 201.0, 241.0, 311.0, 321.0, 331.0, 411.0, 441.0, 500.0 and one of 511.0, 513.0, 531.0, or 541.0. Students are required to take one to three additional chemistry courses of their choice.

NOTE: Students failing to complete a laboratory course prior to the date of examination will not be eligible to write the examination.

101.0   INTRODUCTION TO CHEMISTRY

1 credit

The fundamental laws and principles of chemistry are explored and applied in the study of selected nonmetals, metals and their compounds.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

201.0   GENERAL CHEMISTRY FOR PHYSICAL SCIENCES

1 credit

Prerequisite: Che 101.0, Mat 200.0 to be taken concurrently.

An introduction to the chemistry of gases, liquids, solids and solutions.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

202.0   GENERAL CHEMISTRY FOR LIFE SCIENCES.

1 credit

Prerequisite: Che 101.0, Mat 200.0 to be taken concurrently.

A practical introduction for students in life sciences to the chemical behavior of gases, liquids, solids and solutions.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

203.0   GENERAL CHEMISTRY FOR ENGINEERS

Prerequisite: Che 101.0, Mat 200.0 to be taken concurrently.

A practical introduction for engineering students to the chemical behavior of gases, liquids, solids and solutions.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

209.0   THE CHEMISTRY OF LIFE: THE HUMAN ELEMENT

1 credit

Prerequisite: Sophmore standing.

A course designed for non-science students. Chemical concepts fundamental to understanding the nature of molecules occurring in living systems will be presented. To gain insight into the process of scientific inquiry and how the scientist as a human being affects the course of scientific development, critical stages in the development of atomic and molecular theory and events leading to the formulation of the structure of DNA will be discussed. The unifying theme is that science is not the advance of a monolithic juggernaut but the gradual accomplishment of human endeavor.

This course will not normally be used as credit towards a science degree.

Classes   3 hrs. a week plus tutorials. 2 semesters.

CHEMISTRY

241.0   INTRODUCTION TO ORGANIC CHEMISTRY

1 credit

Prerequisite: Che 201.0 (may be taken concurrently).

An introduction to the major classes or organic compounds, their simple reactions and methods of preparation, physical properties and the nomenclature of organic chemistry.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

311.0   INTRODUCTORY PHYSICAL CHEMISTRY

1 credit

Prerequisite: Che 201.0, Mat 311.0 (may be taken concurrently).

Fundamental thermodynamics, electrochemistry, kinetic theory of matter, surface chemistry and catalysis.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

321.0   INORGANIC CHEMISTRY

1 credit

Prerequisites: Che 201.0.

Fundamental inorganic chemistry including: atomic and molecular structure, aqueous and non-aqueous chemistry, chemistry of main group and transition elements, organometallic compounds, inorganic chemistry in biological systems.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

331.0 (Geo 355.0)   ANALYTICAL CHEMISTRY FOR CHEMISTS AND GEOLOGISTS

1 credit

Prerequisite: Che 210.0.

An integrated lecture-laboratory course with emphasis on basic analytical methods, e.g., titrimetry, gravimetric analysis, colorimetry. The practical application of analytical methods will be stressed by analyzing geological samples, metals and alloys, and samples from the environment.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

342.0   BIOCHEMISTRY

1 credit

Prerequisite: Che 201.0 and 241.0.

An introduction to the organic chemistry of compounds of biological importance: vinyl and condensation polymers, polysaccharides, lignins, amino acids, proteins, nucleic acids, enzymes and co-enzymes, heterocyclic compounds, sugars, alkaloids, steriods, and terpenes.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

343.0   ELEMENTARY ORGANIC CHEMISTRY

1 credit

Prerequisite: Che 202.0.

A comprehensive treatment of organic chemistry for non-chemistry majors. The principal functional classes, reaction mechanisms, stereo-chemistry and physical methods are discussed in the lectures and illustrated in the laboratory.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

371.0   INTRODUCTION TO ENVIRONMENTAL CHEMISTRY

1 credit

Prerequisite: Che 101.0.

Chemical and energy cycles in nature, the energetics of environmental change, the significance and measurement of environmental quality parameters, selected pollution topics and research studies.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

372.0   MARINE CHEMISTRY

1 credit

Prerequisite: Che 201.0 and Mat 200.0

Introducing chemical oceanography, the study of the ocean viewed as a chemical system, an outline is presented of the nature and behavior of aqueous electrolytic regimes. Topics to be discussed include the chemical composition of sea water and analytical techniques for its examination. Students will carry out research projects on farming the oceans to produce new food supplies.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

CHEMISTRY

411.0 PHYSICAL CHEMISTRY
1 credit

Prerequisite: Che 311.0, Mat 311.0.

Basic quantum theory, statistical thermodynamics, chemical kinetics and reaction mechanisms.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

431.0 ANALYTICAL CHEMISTRY
1 credit

Prerequisite: Che 331.0.

An instrumental course in which emphasis is placed on modern electrochemical and spectroscopic techniques and in which an introduction to various separation techniques will be presented.

Classes 3 hrs. and lab. 3 hrs. a week. 2 semesters.

441.0 INTERMEDIATE ORGANIC CHEMISTRY
1 credit

Prerequisite: Che 241.0 or 343.0.

A study of aliphatic, aromatic and heterocyclic compounds with emphasis on modern methods and concepts in stereochemistry, reaction mechanisms and physical properties.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

500.0 RESEARCH THESIS
1 credit

Prerequisite: restricted to final year students in the honors program.

The student will carry out a research project under the direction of one of the members of the Department and will prepare a thesis on his work. The thesis is presented orally.

Lab 6 hrs. a week (minimum). 2 semesters.

511.0 ADVANCED TOPICS IN PHYSICAL CHEMISTRY
1 credit

Prerequisite: Che 411.0.

A course on special topics selected from advanced areas of physical chemistry.

Classes 3 hrs. a week. 2 semesters.

513.0 QUANTUM CHEMISTRY
1 credit

Prerequisite: Che 411.0, Phy 221.0 and Mat 311.0.

Techniques for generating approximate solutions of atomic and molecular wave equations (Hartree-Fock method, perturbation theory, configuration interaction). Interpretation and properties of probability distributions. The use of symmetry in quantum chemistry. Theoretical basis of spectroscopy.

Classes 3 hrs. a week. 2 semesters.

531.0 SELECTED TOPICS IN INSTRUMENTAL ANALYSIS
1 credit

Prerequisite: Che 431.0.

A lecture-seminar-laboratory course designed to present topics in electronic circuits, chromatography, spectroscopy and electrochemistry.

Classes and lab 5 hrs. a week. 2 semesters.

541.0 ADVANCED ORGANIC CHEMISTRY
1 credit

Prerequisite: Che 441.0 and Che 411.0 (may be taken concurrently).

Selected topics in stereochemistry, heterocyclic compounds, natural products and polymers. In the laboratory the student will perform selected synthesis and characterize structure by spectroscopic methods.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

The following courses in Chemistry will be offered in 1976-77:

Che 101.0	Che 311.0	Che 371.0	Che 500.0
Che 201.0	Che 321.0	Che 372.0	Che 511.0
Che 202.0	Che 331.0	Che 411.0	Che 513.0
Che 203.0	Che 342.0	Che 431.0	Che 531.0
Che 241.0	Che 343.0	Che 441.0	Che 541.0

The following courses will not be offered in 1976-77:
Che 209.0   Che 372.0

CLASSICS

Assistant Professors   G. T. Thomas, V. McB. Tobin

To obtain a major in classics a student must complete at least six courses, four of which must be at the 300 level.

Students who are seriously interested in classical studies are strongly advised to do some work in at least one of the classical languages. Although the department does not strictly require linguistic studies, students should realize the importance of Latin and Greek as tools which can give direct access to the ancient world. Knowledge of at least one of these languages is required for entrance into the classics program of any graduate school.

A student's program must be approved by a member of the Department. Appropriate supporting courses in other departments will be suggested.

The following courses are recommended as core courses for a major in classics:
Cla 301.0 — Classics in Translation
Cla 303.0 — History of Greece
Cla 304.0 — History of Rome
Cla 305.0 — Hellenistic History
Cla 310.0 — History of Israel

LATIN

100.0   INTRODUCTION TO LATIN
1 credit

A course in the essentials of Latin for students who have not completed matriculation Latin.

Text: DeWitt, *College Latin*.

Classes   4 hrs. a week. 2 semesters.

Thomas

201.0   INTRODUCTION TO LATIN EPIC POETRY
1 credit

Emphasis is placed on the exact rendering of the thought content of certain selections into idiomatic English. Prose composition stresses the exact rendering of English into idiomatic Latin.

Texts: Vincent and Mountford, *Outline of Latin Prose Composition*. Vergil, *Aeneid* (Books II and IV will be studied from the Latin text; the remainder of the *Aeneid* will be considered in English).

Classes   3 hrs. a week. 2 semesters.

301.0   THE POETRY OF HORACE
1 credit

A critical analysis and appreciation of Horace's art and ideals. Prose composition.

Texts: Horace, *Odes, Satires, Arts Poetica*.

Classes   3 hrs. a week. 2 semesters.

403.0   ADVANCED LATIN
1 credit

A tutorial course on Cicero (*De Amicitia. De Senectute*) and Lucretius (*De Rerum Natura*).

404.0   ADVANCED LATIN
1 credit

A tutorial course, the content of which may be varied according to the needs and interests of the student. Directed readings and research.

GREEK

101.0   INTRODUCTORY GREEK
1 credit

An introductory course covering the major grammatical points of the Greek language. This course will be followed in succeeding years by more advanced courses in the reading and interpretation of classical authors.

Classes   3 hrs. a week. 2 semesters.

Tobin

201.0   SECOND YEAR GREEK
1 credit

Prerequisite: Gre 101.0.

An application of the major grammatical points of the Greek language through the reading of the selected works of classical authors:

   i. Homer, *Iliad*
   ii. Xenophon, *Anabasis*
   iii. the dramatists
   iv. lyric poetry

Classes   3 hrs. a week. 2 semesters.

Tobin

CLASSICS

CLASSICAL LITERATURE

301.0   CLASSICS IN TRANSLATION

1 credit

The classical literature of Greece and Rome in translation. This course is especially recommended to all Arts students who are not taking Latin in their program, and also to students of ancient history.

Texts: *Various selections from the Classical writers of Greece and Rome.*

Classes   3 hrs. a week. 2 semesters.

Tobin

GREEK PHILOSOPHY

250.0 (Phi 250.0) GREEK PHILOSOPHY

1 credit

This course is designed to introduce students to Greek philosophy through a consideration of the major figures and schools within the context of their overall historical movement by studying and discussing in detail a few basic Greek philosophical works, and by allowing students to follow their own individual interests through independent work.

Text: Works by Plato, Aristotle, and other Greek authors.

Classes   3 hrs. a week. 2 semesters.

CLASSICAL HISTORY

120.0   THE CLASSICAL CIVILIZATIONS OF GREECE AND ROME

1 credit

A general introduction to the civilizations of ancient Greece and Rome with particular regard to political organization and cultural contribution to modern western society.

Classes   3 hrs. a week. 2 semesters.

Thomas

303.0   HISTORY OF GREECE

1 credit

A concentrated study of selected topics dealing with the main features of Greek history, stressing both the greatness and the weakness of ancient Greek society. This course is designed as a companion and parallel to Classics 304.0, which deals in the same manner with the history of Rome. This course may also be used as a history credit.

Classes   3 hrs. a week. 2 semesters.

Thomas

304.0   HISTORY OF ROME

1 credit

A concentrated study of selected topics dealing with the main features of Roman history, stressing both the greatness and weakness of the Roman world. This course is designed as a companion and parallel to Classics 303.0, which deals in the same manner with the history of Greece. This course may also be used as a history credit.

Classes   3 hrs. a week. 2 semesters.

Thomas

305.0   HELLENISTIC HISTORY

1 credit

Prerequisite: one course in classics or history.

This course considers the characteristics of the Hellenistic world from Alexander the Great until the arrival of Pompey in the East (334 B.C. to 63 B.C.). This is the period of the expansion of Greek culture over the Eastern world (Hellenism), giving the rise to a highly complex historical era, one containing many of the problems and features of 20th century life. This course may also be used as a history credit.

Classes   3 hrs. a week. 2 semesters.

Thomas

CLASSICS

310.0   HISTORY OF ISRAEL

1 credit

A study of the history of the ancient Hebrew kingdoms of Israel and Judah from the earliest settlements in Palestine to the fall of Jerusalem in 70 A.D.

Classes   3 hrs. a week. 2 semesters.

Tobin

334.0   ROMAN HISTORY:
         PRIMARY SOURCE MATERIAL

1 credit

Prerequisite: Cla 120.0 or 304.0.

A study of selected topics in Roman history based on readings from various authors and dependent upon some knowledge of the chronological development of Rome.

Classes   3 hrs. a week. 2 semesters.

Thomas

The following courses in Classics will be offered in 1976-77:

| Gre 101.0 | Cla 120.0 | Cla 303.0 |
| Gre 201.0 | Cla 301.0 | Cla 310.0 |

The following courses in Classics will not be offered in 1976-77:

Lat 100.0	Lat 403.0	Cla 250.0	Cla 305.0
Lat 201.0	Lat 404.0	Cla 304.0	Cla 334.0
Lat 301.0			

ECONOMICS

Chairman, Assistant Professor   J. Schulman
Professor Emeritus   S. Swianiewicz
Professor   J. J. Vorstermans
Associate Professors   E. J. Doak, R. D. Foster,
       D. MacFarlane, W. T. McGrath
Assistant Professor   D. Milne

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 important 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 100 or 200 level. Entrance into higher level courses ordinarily requires a full-year of principles of economics, but this may be waived at the discretion and 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 listed areas and associated courses:

Money and Banking, Eco 307.0, 320.1
Public Finance, Eco 318.1, 419.2
International, Eco 313.1, 314.2
Quantitative, Eco 302.1, 303.1, 309.2
Urban-Regional, Eco 230.1, 330.1, 350.2, 360.1
Comparative Systems, Eco 315.1, 323.1
History and Development, Eco 304.1, 305.1, 310.1, 311.1, 321.1
Labor, Eco 339.1, 340.2
Industrial Organization, Eco 316.1
Other theory courses, Eco 312.1, 440.1, 441.2

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) B.A. with a major in economics; and (2) B.Comm. with a major in economics. In either case, the following courses are required:

1. Egl 200.0 and Mat 113.0, or its equivalent;
2. One course in the humanities or a language;
3. One natural science, university mathematics or computer course;
4. One course from the social sciences outside economics.

ECONOMICS REQUIREMENTS:

Eco 201.1, 202.2
Eco 203.1(.2), 204.1(.2)
Eco 300.1(.2), 301.1(.2)
plus six additional half-credit economics electives at the 300 level or above.

In addition, students must satisfy conditions set down by the faculty in which they enrol.

Generally recommended programs are those shown above.

Suggested courses leading to a B.A. with a major in Economics
FIRST YEAR
Eco 101.0 or 200.1 (.2)
Mat 113.0
Social science other than economics (e.g. political science, history, anthropology, sociology, geography, psychology)
Elective
Elective

SECOND YEAR
Eco 201.1 and 202.2
Eco 203.1(.2) and 204.1(.2)
Egl 200.0
Elective
Elective

ECONOMICS

THIRD YEAR
Eco 300.1 and 301.2
Eco elective
Natural science, mathematics or computers
Elective
Humanities or language (e.g. philosophy, religious studies, English, French)

FOURTH YEAR
Eco elective
Eco elective
Elective
Elective
Elective

Suggested courses leading to a B.Comm. with a major in Economics
FIRST YEAR
Eco 100.0 or 200.1(.2)
Mat 113.0
Social science other than economics (e.g., political science, history, anthropology, sociology, geography, psychology)
Elective
Elective

SECOND YEAR
Eco 201.1 and 202.2
Eco 203.1 and 204.2
Bus 240.0
Bus 280.0
Egl 200.0

THIRD YEAR
Eco 300.1 and 301.2
Natural science, mathematics or computers
Eco elective
Legal Aspects of Business 301.1
Humanities or language (e.g., philosophy, religious studies, English, French)
Elective (1/2 credit)

FOURTH YEAR
Eco elective
Eco elective
Elective
Elective
Elective

HONORS PROGRAM IN ECONOMICS
1. Admission requirements:

a) a 2.6 average in economics courses;
b) junior year or higher standing.

2. Requirements for Honors Degree:

a) ten full-year courses or equivalent in economics;
b) no grade below C (2.0) in these ten courses (a student may receive a grade lower than C, but it cannot be counted in the ten required courses);
c) a minimum average of 3.0 in the ten economics courses presented for honors;
d) the student must meet the requirements for a major in economics;
e) eight of the ten courses must be on or above the 300.0 level:
   i) a student may substitute a course from another department which is below or above the 300.0 level with the permission of the Department of Economics
   ii) these substitutes will normally be in the Mathematics Department.
f) the eight courses on or above the 300.0 level (or equivalent) must contain at least one of the following:
   i) Mathematical Economics (Eco 302.1)
   ii) Introduction to Econometrics (Eco 309.1)
   iii) Intermediate Economic Statistics (Eco 303.1 or 303.2)
   iv) Advanced Microeconomics (Eco 440.1)
   v) Advanced Macroeconomic Theory (Eco 441.2)
g) the student will be expected to complete university requirements for graduation.
h) twenty full courses, or equivalent, beyond the freshman year are required.

101.0   ECONOMIC HISTORY OF EUROPE
1 credit

An introduction to European economic history. Stages of economic growth, birth of European civilization, medieval economic society, mercantilism, the first industrial revolution, laissez-faire and industrial capitalism, and Europe since 1914.

Classes   3 hrs. a week. 2 semesters.

Vorstermans

ECONOMICS

200.1 (.2) INTRODUCTION TO CURRENT ECONOMIC ISSUES

$^1/_2$ credit

A course which introduces the student to the discipline of economics through a survey of major economic issues of the 1970's. Specific topics will include unemployment and inflation, multinational corporations, energy and natural resources, rural and urban poverty, regional economic disparities, environmental problems, the farm problem. An introductory course open to freshmen and also designed for those non-commerce students who are not planning to major in economics.

Classes   3 hrs. a week. 1 semester.

201.1 PRINCIPLES OF ECONOMICS: MICRO

$^1/_2$ credit

General price theory, theory of the firm, market structure, production, cost, revenue and profit maximization, theory of distribution.

Classes   3 hrs. a week. 1 semester.

Staff

202.2 PRINCIPLES OF ECONOMICS: MACRO

$^1/_2$ credit

National income determination, national accounting, business fluctuations, money and banking, international economics, economic growth.

Classes   3 hrs. a week. 1 semester.

Staff

203.1 (.2) [Bus 203.1 (.2)] INTRODUCTORY MATHEMATICS FOR ECONOMISTS

$^1/_2$ credit

Prerequisite: Mat 113.0 or equivalent.

An introduction to certain basic mathematical tools of interest to students of commerce and economics. The course surveys the rudiments of algebra, calculus and matrix theory together with applications in business and economics.

Classes   3 hrs. a week. 1 semester.

Schulman

204.1 (.2) [Bus 204.1 (.2)] INTRODUCTORY STATISTICS FOR ECONOMISTS

$^1/_2$ credit

Prerequisite: Mat 113.0 or equivalent.

Functions of statistical methods, collection, analysis and interpretation of data, frequency distribution, measures of central tendency and dispersion, probability, binomial, normal, and sampling distributions, hypothesis testing, estimation of parameters, regression and correlation.

Classes   3 hrs. a week. 1 semester.

Schulman

230.1 (SS) THE ATLANTIC ECONOMY

$^1/_2$ credit

Economic history of the Atlantic region within Confederation; structural and statistical description of the Atlantic economy; major hypotheses that have been developed to explain regional economic growth; policies adopted by other countries with regional economic problems; DREE policies towards Atlantic Canada; regional impact of federal monetary, fiscal, and manpower policies.

300.1 INTERMEDIATE MICROECONOMIC THEORY

$^1/_2$ credit

Prerequisite: Eco 202.2 and 203.1.

Theory of consumer behavior and demand; theory of production and cost, behavior of the firm under different market structures; theory of income distribution, general equilibrium, welfare economics.

Classes   3 hrs. a week. 1 semester.

301.2 INTERMEDIATE MACROECONOMIC THEORY

$^1/_2$ credit

Prerequisite: Eco 202.2 and 203.1.

National income accounting, models of aggregate demand and income determination, theory of prices, wages and employment, models of economic growth, international aspects.

Classes   3 hrs. a week. 1 semester.

ECONOMICS

302.1 MATHEMATICAL ECONOMICS
¹/₂ credit

Prerequisite: Eco 203.1 or equivalent.

An introduction of the role of mathematics in static and dynamic economic analysis. Mathematical topics include partial differentiation, matrix theory, integration, and difference and differential equations.

Classes 3 hrs. a week. 1 semester.

Schulman

303.1 (.2) [Bus 307.1 (.2)] INTERMEDIATE ECONOMICS STATISTICS
¹/₂ credit

Prerequisite: Eco 204.2 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 distributions, statistical inference, simple and multiple regression and related topics.

Classes 3 hrs. a week. 1 semester.

Schulman

304.1 ECONOMIC HISTORY OF NORTH AMERICA
¹/₂ credit

Prerequisite: Eco 201.1 and 202.2.

This course acquaints students with the leading events and processes in the economic history of North America in general, and of Canada in particular. Among the topics to be discussed are the development of agriculture, industry and trade, the economic conditions which shaped banking developments, the colonial links and incentives, industrial and financial capitalism, twentieth century developments of industry, labor organizations, investments and trade patterns.

Classes 3 hrs. a week. 1 semester.

305.2 THE DEVELOPMENT OF THE MODERN EUROPEAN ECONOMY
¹/₂ credit

Prerequisite: Eco 201.1 and 202.2.

A study of the economic history of the rise of Europe from the Middle Ages to the present, with special emphasis on the rise of capitalism and the industrial revolution in Great Britain, France and Germany.

Classes 3 hrs. a week. 1 semester.

307.0 MONEY AND BANKING
1 credit

Prerequisite: Eco 201.1 and 202.2.

Money: its standards, supply and value; monetary theory, Canadian and other banking systems, public finance, and international monetary problems.

Classes 3 hrs. a week. 2 semesters.

Vorstermans

309.1 INTRODUCTION TO ECONOMETRICS
¹/₂ credit

Prerequisite: Eco 203.1 and 303.1 or equivalent.

Theory and applications of econometric models and the methods for their estimation. Topics covered will include classical linear regression and extensions, generalized least squares and its applications, distributed lags, simultaneous equations and identification.

Classes 3 hrs. a week. 1 semester.

310.1 DEVELOPMENT ECONOMICS
¹/₂ credit

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.

Classes 3 hrs. a week. 1 semester.

ECONOMICS

311.2   ISSUES IN ECONOMIC DEVELOPMENT
$^1/_2$ credit

Prerequisite: Eco 201.1 and 202.2 or 310.1.

Specific problems in economic development; emphasis on government policies, foreign aid, foreign trade and their impact on underdeveloped countries.

Classes   3 hrs. a week. 1 semester.

312.1   DEVELOPMENT OF ECONOMIC IDEAS
$^1/_2$ credit

Prerequisite: Eco 201.1 and 202.0.

The course traces the development of economic ideas from the middle ages to the present. Students will be introduced to the theories of the main economic schools, especially in the light of their contribution to contemporary economic thinking.

Classes   3 hrs. a week. 1 semester.

313.1   INTERNATIONAL FINANCE
$^1/_2$ credit

Prerequisite: Eco 201.1 and 202.2.

An introduction to the theory, institutions, and history of international finance: balance of payments, foreign exchange rates, instruments, and markets, international banking, adjustment mechanisms, stablization policy.

Classes   3 hrs. a week. 1 semester.

314.2   INTERNATIONAL TRADE
$^1/_2$ credit

Prerequisite: Eco 201.1 and 202.0.

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.

Classes   3 hrs. a week. 1 semester.

315.2   COMPARATIVE ECONOMIC SYSTEMS
$^1/_2$ credit

Prerequisite: Eco 201.1 and 202.2.

An examination of economic ideology from mercantilism to contemporary welfare economics both capitalist and socialist. Specifically, the necessary conditions and implications of a Pareto-optimium will be evaluated and contrasted with Marxian value theory. Several post-Marx socialist models will be studied in light of Schumpeterian capitalism. Impirical economic systems will be contrasted such as welfare socialism, e.g., Scandinavian countries and the United Kingdom; managed capitalism, e.g., Canada, U.S., and France; centralized socialism, e.g., Russia; decentralized socialism, e.g., Yugoslavia.

Classes   3 hrs. a week. 1 semester.

McGrath

316.1   INDUSTRIAL ORGANIZATION
$^1/_2$ credit

Prerequisite: Eco 201.1, 202.2 and 301.2.

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 location.

Classes   3 hrs. a week. 1 semester.

MacFarlane

318.1   INTRODUCTION TO
PUBLIC FINANCE
$^1/_2$ credit

Prerequisite: Eco 201.1 and 202.2.

An introduction to the theory of public finance. Emphasis is placed on the classical approach of governmental spending and taxing powers affecting the distribution of income, the allocation of resources and the stabilization of national income.

Classes   3 hrs. a week. 1 semester.

ECONOMICS

320.1 THE CANADIAN FINANCIAL SYSTEM

$^1/_2$ credit

Prerequisite: Eco 201.1 and 202.2.

General nature of the financial system, historical trends in financial institutions and ideas, elements of financial theory, private financial institutions, government financial institutions.

Classes 3 hrs. a week. 1 semester.

Doak

321.2 CANADIAN ECONOMY SEMINAR

$^1/_2$ credit

Prerequisite: Eco 201.1 and 202.2.

A course on current economic issues in Canada: population and labor force, unemployment, inflation, international trade, balance of payments and foreign exchange rates, regional economic disparities, poverty, the business cycle, monetary and fiscal policy. Some treatment is also given to selected aspects of Canadian economic history.

Classes 3 hrs. a week. 1 semester.

Doak

323.1 SOVIET-TYPE ECONOMIES

$^1/_2$ credit

Prerequisite: Eco 201.1 and 202.2.

This course includes: development of Soviet economics — historical background, institutional framework, the rate of growth, the problems of saving, investment and central planning; the origin of the Soviet bloc — Communist international economics, the problems of economic integration in Eastern and Western Europe, East-West trade, economic reforms in Eastern Europe; Soviet-type economies in Asia.

Phi 209.0 Marxist Philosophy is an appropriate supporting humanities elective for this course.

Classes 3 hrs. a week. 1 semester.

McGrath

330.1 REGIONAL ECONOMICS

$^1/_2$ credit

Prerequisite: Eco 201.1 and 202.2.

An examination of the problems of the regional economy and the government programs and policies to deal with regional problems. Location theory, central place theory and growth pole theory will be used to study regional problems in the Maritimes, Canada and the U.S.

Classes 3 hrs. a week. 1 semester.

Milne

339.1 LABOR ECONOMICS

$^1/_2$ credit

Prerequisite: Eco 201.1 and 202.2.

Factors affecting wages, working conditions and employment in industrial societies; role of market forces and collective bargaining in wage determination; development of labor unions in Canada, Europe and the United States and their effects on the economy.

Classes 3 hrs. a week. 1 semester.

Milne

340.2 HUMAN RESOURCE ECONOMICS

$^1/_2$ credit

A study of structure and changes in the labor force, nature of the labor market, manpower programs and policies, and how these interact with inflation and the general health of the economy.

Classes 3 hrs. a week. 1 semester.

Milne

350.2 URBAN ECONOMICS

$^1/_2$ credit

Economics of an urban economy: why it grows and how it copes with this growth. Urban policies for transportation, housing, labor markets and public services are examined.

Classes 3 hrs. a week. 1 semester.

Milne

ECONOMICS

360.1 ECONOMICS OF NATURAL RESOURCES POLICY
$^1/_2$ credit

Prerequisite: Eco 201.1 and 202.2

This is a course in the economics of public policy relating to the development, management and utilization of natural resources. Attention will focus on the identification of policy problems in the natural resources sector of the Canadian economy, the impact of the natural resources sector on the rest of the economy, public investment criteria and project analysis. Specific topics will include rent and location theory, regional economics and benefit-cost analysis as they apply to public policy problems.

Classes   3 hrs. a week. 1 semester.

419.2 ISSUES IN PUBLIC FINANCE
$^1/_2$ credit

Prerequisite: Eco 318.1 or Eco 300 and 301.

Selected topics relating to the economic effects of fiscal policy. The process of governmental decision-making is investigated through the use of economic analysis. This course is also an introduction to modern welfare economics.

Classes   3 hrs. a week. 1 semester.

440.1 ADVANCED MICROECONOMICS
$^1/_2$ credit

Prerequisite: Eco 300.1.

Treatment of the major topics in microeconomic theory at an advanced level. Topics covered will include the theory of the firm, consumer behavior and distribution theory. Other topics which could be covered at the discretion of the instructor may include: welfare economics, theories of capital and interest, game theory and decision-making models.

Classes   3 hrs. a week. 1 semester.

441.2 ADVANCED MACROECONOMIC THEORY
$^1/_2$ credit

Prerequisite: Eco 301.2.

Treatment of some major topics in macroeconomic theory at an advanced level. Topics may include welfare economics, static macroeconomic models, demand for and supply of money, theories of interest, inflation, economic growth and business cycles.

Classes   3 hrs. a week. 1 semester.

447.1 (.2) DIRECTED STUDY
$^1/_2$ credit

Prerequisite: Eco 201.1 and 202.2 and consent 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.

Staff

1. The following courses in Economics will be offered in 1976-77:

Eco 101.0	Eco 300.1	Eco 315.1	Eco 330.1
Eco 200.1	Eco 301.2	Eco 316.1	Eco 339.1
Eco 201.1	Eco 303.1	Eco 318.1	Eco 340.2
Eco 202.2	Eco 307.0	Eco 323.1	Eco 350.2
Eco 203.1	Eco 309.2		Eco 360.1
Eco 204.2	Eco 310.1		Eco 441.2

2. The following courses in Economics will not be offered in 1976-77:

Eco 230.1	Eco 311.1	Eco 314.2	Eco 419.2
Eco 302.1	Eco 312.1	Eco 320.2	Eco 440.1
Eco 304.1	Eco 313.1	Eco 321.1	Eco 447.1
Eco 305.1			

EDUCATION

Associate Professors   M. MacMillan
F. Dockrill, J. Haysom,
F. Phillips, D. Weeren
Assistant Professors   B. E. Davis, B. Hanrahan

The philosophy and structure of the Bachelor of Education program are described on page 41 of this Calendar.

Within several of the Bachelor of Education courses (Education 501.0 through Education 550.0) a choice of sections, each with a particular emphasis in content and/or a particular instructional approach, is available. Information on the sections to be offered in 1976-77 will be issued to prospective students by the Faculty of Education prior to registration.

501.0 PHILOSOPHY OF EDUCATION
1 credit

A study of fundamental questions about the nature and aims of education.

Classes   3 hrs. a week. 2 semesters.

Davis, Hanrahan

502.0 PSYCHOLOGY OF EDUCATION
1 credit

A study of the nature, equipment, growth, development, evaluation, and adjustment of the learner.

Classes   3 hrs. a week. 2 semesters.

Dockrill and Staff

503.0 GENERAL METHODS OF TEACHING
1 credit

The application of basic principles derived from the philosophy, psychology and history of education to classroom teaching, and an examination of teaching strategies in the light of classroom experience and of research on teaching.

Classes   3 hrs. a week. 2 semesters.

Haysom and Staff

504.0 HISTORY OF EDUCATION
1 credit

A study of facets of our educational heritage aimed at assisting in the formation of sound educational principles and practices.

Classes   3 hrs. a week. 2 semesters.

Phillips, Weeren

505.0 PRACTICE TEACHING
1 credit

Practice teaching sessions will consist of observation and practice teaching in the public school system. The extent and dates of these sessions will be arranged by the Education staff.

550.0 DYNAMICS OF CURRICULUM THROUGH PHILOSOPHY
1 credit

Prerequisite: Professional teaching experience.

An examination of key philosophical ideas that underpin curriculum will provide an initial survey of its possibilities for teachers. Several promising examples of creative development of curriculum will be analyzed and the successful principles that they embody will be used to devise new lesson and unit schemes.

Summer session.

Hanrahan

CONTENT AND METHODS OF SPECIFIC FIELDS
520 through 549

The courses within this range of numbers discuss the concepts and competencies to be developed in the various teaching fields at the junior and senior high school level, and methods conducive to that development. Normally, these courses carry a half course credit, and B.Ed. candidates select two to make up the full credit required of them. The present repertory includes the courses listed below. The definitive list of offerings for 1976-77 is issued by the Faculty of Education prior to registration.

520.1 VALUES
$1/2$ credit

Special methods in the teaching of human and religious values, whether as a course or as a dimension of another subject, e.g., English.

Classes $1^1/2$ hrs. a week. 2 semesters.

Staff

EDUCATION

521.1   SECONDARY READING

¹/₂ credit

An introductory course in reading principles and methodology that can be utilized by a secondary school teacher in a content area (e.g., English, social studies, mathematics, science).

Classes   1¹/₂ hrs. a week. 2 semesters.

Staff

522.1   SCIENCE
¹/₂ credit

Objectives, programs, methods in junior and senior high school science.

Classes   1¹/₂ hrs. a week. 2 semesters.

Staff

523.1   MATHEMATICS
¹/₂ credit

Objectives, programs, methods in junior and senior high school mathematics.

Classes   1¹/₂ hrs. a week. 2 semesters.

Staff

524.1   SECOND LANGUAGE I
¹/₂ credit

Principles and techniques of current methodology for teaching of French, and other modern languages.

Classes   1¹/₂ hrs. a week. 2 semesters.

Staff

525.1   SECOND LANGUAGE II
¹/₂ credit

Further specilization in second language teaching. Students enrolled in this section take Second Language I concurrently, thereby fulfilling the requirement of two courses in the Content and Methods category.   ·

Classes   1¹/₂ hrs. a week. 2 semesters.

Staff

526.1   FRENCH PHONETICS
¹/₂ credit

Prerequisite: Fre 310.1 or an equivalent course in French phonetics.

This course is designed to assist the practicing teacher to deal with problems of pronunciation encountered by students learning French as a second language. These problems will be analyzed systematically by comparing French and English phonetics. The basic knowledge of the phonetic structures of the two languages will be used to devise remedial exercises, drills, and teaching methods.

Summer Session.

Patterson

530.1   GEOGRAPHY
¹/₂ credit

Objectives, programs, methods in junior and senior high school geography.

Classes   1¹/₂ hrs. a week. 2 semesters.

Staff

531.1   HISTORY
¹/₂ credit

Objectives, programs, methods in junior and senior high school history.

Classes   1¹/₂ hrs. a week. 2 semesters.

Staff

532.1   JUNIOR HIGH SCHOOL SOCIAL STUDIES
¹/₂ credit

This section focuses on history and civics at the junior high level.

Classes   1¹/₂ hrs. a week. 2 semesters.

Staff

533.1   SOCIAL STUDIES: CONTEMPORARY EMPHASIS
¹/₂ credit

Objectives, programs, methods for senior high school courses in modern world problems, economics, political science, sociology.

Classes   1¹/₂ hrs. a week. 2 semesters.

Staff

EDUCATION

534.1 SOCIAL STUDIES: AN INTERDISCIPLINARY APPROACH

½ credit

Objectives, programs, methods for senior high school social studies courses that integrate a variety of fields — geography, history, economics, sociology, political science, etc. The 'local studies' approach is a principal focus.

Classes 1½ hrs. a week. 2 semesters.

Staff

539.0 ASIAN STUDIES

1 credit

Prerequisite: Professional teaching experience and a university course in history or one of the social sciences.

This course is designed to assist teachers to incorporate Asian studies content into school programs. The first half will involve an interdisciplinary study of salient aspects of selected Asian countries. The second half will seek to formulate models of curriculum units for teaching Asian studies at various school levels.

Summer session.

Staff

540.1 ENGLISH: JUNIOR HIGH LEVEL

½ credit

Objectives, programs, methods for junior high school English.

Classes 1½ hrs. a week. 2 semesters.

Staff

541.1 ENGLISH: SENIOR HIGH LEVEL

½ credit

Objectives, programs, methods for senior high school English.

Classes 1½ hrs. a week. 2 semesters.

Staff

610.0 RESEARCH TECHNIQUES AND DESIGN OF EXPERIMENTS

1 credit

An introduction to methodology, interpretation and use of educational research. Subjects covered will include general methods of research, hypotheses, and hypothesis testing, design of experiments, surveys and case studies, questionnaires, historical research, elementary statistics, evaluation of theses in progress. Credit for this course will be given on completion of a thesis.

Classes 1½ hrs. a week. 2 semesters.

Staff

620.1 (.2) CURRICULUM STUDIES

½ credit

An examination of the basic assumptions underlying the study of curriculum, attempting to provide students with a theoretical understanding of curriculum studies. It is normally taken in conjunction with 632.1 Theories of Mental Development.

Classes 3 hrs. a week. 1 semester.

621.1 (.2) PROBLEMS IN CURRICULUM

½ credit

Prerequisite: Edu 620.1 or 620.2 or equivalent or permission of instructor.

A course covering problems in the field of curriculum, focussing where possible upon the application of the theory of curriculum to practical concerns in the field of education.

Haysom

622.1 and 623.2 CURRICULUM IN HISTORICAL PERSPECTIVE

1 credit

These two half-courses address historical questions that need to be raised about today's curricula and current attempts at curriculum reform, e.g., origins of today's curricula, justification for departures from earlier practices, changes in the teacher's role in curriculum development. 622.1 draws on the history of western education generally, while 623.2 draws on the history of education in Nova Scotia, to shed light on current curricular issues.

Summer session.

Dr. Weeren, in association with Dr. Morrison

EDUCATION

630.1 (.2) PSYCHOLOGICAL PRINCIPLES OF LEARNING

$^1/_2$ credit

Prerequisite: Psy 301.0 and Edu 502.0 or permission of instructor.

Discussions of the basic tenets of modern learning theory as developed through the findings of experimental psychology. Topics include: development of learning theory, conditioning, reinforcement, stimulus control of behavior, punishment and memory.

Classes 3 hrs. a week. 1 semester.

Dockrill

631.1 (.2) SPECIAL ASPECTS OF THE PSYCHOLOGY OF LEARNING

$^1/_2$ credit

Prerequisite: Edu 630.1 (.2) or equivalent, or permission of instructor.

A seminar course discussing topics dealt with by current learning studies which have particular relevance to school learning. The following are examples of areas dealt with: concept learning, creativity, intelligence, perceptual learning and transfer of training.

Classes 3 hrs. a week. 1 semester.

Dockrill

632.1 (.2) PSYCHOLOGICAL THEORIES OF MENTAL DEVELOPMENT

$^1/_2$ credit

Prerequisite: minimally, Edu 502.2 or equivalent, or permission of instructor.

A course dealing with the main theories in the fields of intellectual, emotional, social and moral development. The application of these theories to school and community situations will be examined, with particular emphasis on Piaget's ideas on intellectual development and their relevance to curriculum studies.

This course is designed to be taken conjointly with Edu 620.1 — Curriculum Studies and Edu 621.1 — Problems in Curriculum.

Classes 3 hrs. a week. 1 semester.

Staff

633.1 (.2) PSYCHOPATHOLOGY OF DEVELOPMENT AND EDUCATION

$^1/_2$ credit

Prerequisite: Edu 502.0; desirably Edu 630.1 or 631.2, and Edu 632.1, or their equivalent, or permission of instructor.

A study of problems in the development of personality organization, character and learning, in the light of dynamic psychology, and an examination of their effects on behavior in school and other social situations.

Classes 3 hrs. a week. 1 semester.

Staff

640.1 (.2) PHILOSOPHY OF EDUCATION: PHILOSOPHICAL CRITIQUE OF MOTIVATION (I)

$^1/_2$ credit

An examination of the cultural significance of the metaphysics of motivation. As a study of social exigencies in the learning situation, the course involves the reading and discussion of such philosophical sources as Plato, Aristotle, Buber, Fromm, Johann, Marcel, on the nature of love, and more precisely, a consideration of the nature of the affective relation between student and teacher.

Classes 3 hrs. a week. 1 semester.

Hanrahan

641.1 (.2) PHILOSOPHY OF EDUCATION: PHILOSOPHICAL CRITIQUE MOTIVATION (II)

$^1/_2$ credit

The course is a problematic approach to the affective features of concrete learning situations. Some of the works used are *Education and Ecstasy, Freedom to Learn,* and *Existential Encounters for Teachers*.

Classes 3 hrs. a week. 1 semester.

Hanrahan

644.1 (.2) DEVELOPMENTS IN THE SCIENCE AND PHILOSOPHY OF LANGUAGE

$^1/_2$ credit

An introduction to transformational grammar, logic, and logical structures in English, semantics, and some of the results of descriptive linguistics. Developments in philosophy relevant to the scientific investigation of language are stressed.

Classes 3 hrs. a week. 1 semester.

Davis

UNIVERSITY DIARY

1976-1977

1976
SEPTEMBER

13	Monday	Orientation for new students.
14	Tuesday	
15	Wednesday	
	9:00-11:30 a.m.	(a) New freshmen and new sophomore students
	2:00- 4:30 p.m.	(b) Transfer students
	7:00- 8:30 p.m.	(c) New and returning part-time students.
16	Thursday	
	9:00-11:30 a.m.	(a) Returning senior* and junior* students.
	2:00- 4:30 p.m.	(b) Bachelor of Education students.
	7:00- 8:30 p.m.	(c) New and returning part-time students except those in graduate programs.
		(d) Masters degree candidates in **all** faculties, both full and part time.
17	Friday	
	9:00-11:30 a.m.	(a) Returning sophomores*.
	2:00- 4:30 p.m.	
	7:00- 8:30 p.m.	(b) New and returning part-time students except those in the graduate programs.
20	Monday	Classes begin.
27	Monday	Final date for: (a) late registration in a first semester course and (b) adding or dropping a first semester course (i.e., designated .1)

OCTOBER

1	Friday	Last day for filing applications for degree to be awarded in May 1977.
4	Monday	(a) Final date for adding or dropping a full credit course (i.e., designated .0)
		(b) Final date for late registration in full semester course.
11	Monday	Thanksgiving Day. No classes.
29	Friday	Last day for withdrawing from a first semester course. See ''Withdrawing from a Course'' section of this **Calendar**.

NOVEMBER

11	Thursday	Remembrance Day. No classes.

DECEMBER

8	Wednesday	Patronal Feast of the University. No classes.
10	Friday	Last day of classes.
13-21	Monday-Tuesday	Final examinations in first semester courses and mid-year examinations in full year courses.
21	Tuesday	First semester ends.

*Seniors are those having 13.0 or more course credits; Juniors have 8.0 to 12.5; Sophomores 3.0 to 7.5, and Freshmen 0.0 to 2.5.

1977
JANUARY

3	Monday	Classes resume.
3-12	Monday-Wednesday	Payment of fees for second semester.
7	Friday	Last day for withdrawing from a full course. See "Withdrawing from a Course" section of this **Calendar.**
10	Monday	Last day for adding or dropping a second semester course (i.e., designated .2) or for late registration in a .2 course.

FEBRUARY

15	Tuesday	Last day for withdrawing from a second semester course. See "Withdrawing from a Course" section of this **Calendar.**
21-27	Monday-Sunday	Mid-year study break. No classes.

MARCH

11	Friday	Charter Day. Extracurricular activities cease.

1976

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        S M T W T F S                    S M T W T F S
JAN             1  2  3     JUL                 1  2  3
      4  5  6  7  8  9 10          4  5  6  7  8  9 10
     11 12 13 14 15 16 17         11 12 13 14 15 16 17
     18 19 20 21 22 23 24         18 19 20 21 22 23 24
     25 26 27 28 29 30 31         25 26 27 28 29 30 31

FEB   1  2  3  4  5  6  7   AUG    1  2  3  4  5  6  7
      8  9 10 11 12 13 14          8  9 10 11 12 13 14
     15 16 17 18 19 20 21         15 16 17 18 19 20 21
     22 23 24 25 26 27 28         22 23 24 25 26 27 28
     29                           29 30 31

MAR   1  2  3  4  5  6      SEPT            1  2  3  4
      7  8  9 10 11 12 13          5  6  7  8  9 10 11
     14 15 16 17 18 19 20         12 13 14 15 16 17 18
     21 22 23 24 25 26 27         19 20 21 22 23 24 25
     28 29 30 31                  26 27 28 29 30

APR             1  2  3     OCT                   1  2
      4  5  6  7  8  9 10          3  4  5  6  7  8  9
     11 12 13 14 15 16 17         10 11 12 13 14 15 16
     18 19 20 21 22 23 24         17 18 19 20 21 22 23
     25 26 27 28 29 30            24 25 26 27 28 29 30
                                  31

MAY                   1     NOV    1  2  3  4  5  6
      2  3  4  5  6  7  8          7  8  9 10 11 12 13
      9 10 11 12 13 14 15         14 15 16 17 18 19 20
     16 17 18 19 20 21 22         21 22 23 24 25 26 27
     23 24 25 26 27 28 29         28 29 30
     30 31

JUN          1  2  3  4  5  DEC             1  2  3  4
      6  7  8  9 10 11 12          5  6  7  8  9 10 11
     13 14 15 16 17 18 19         12 13 14 15 16 17 18
     20 21 22 23 24 25 26         19 20 21 22 23 24 25
     27 28 29 30                  26 27 28 29 30 31
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1977

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        S M T W T F S                    S M T W T F S
JAN                   4     JUL                   1  2
            4  5  6  7  8          3  4  5  6  7  8  9
      9 10 11 12 13 14 15         10 11 12 13 14 15 16
     16 17 18 19 20 21 22         17 18 19 20 21 22 23
     23 24 25 26 27 28 29         24 25 26 27 28 29 30
     30 31                        31

FEB          1  2  3  4  5  AUG    1  2  3  4  5  6
      6  7  8  9 10 11 12          7  8  9 10 11 12 13
     13 14 15 16 17 18 19         14 15 16 17 18 19 20
     20 21 22 23 24 25 26         21 22 23 24 25 26 27
        28                        28 29 30 31

MAR          1  2  3  4  5  SEPT            1  2  3
      6  7  8  9 10 11 12          4  5  6  7  8  9 10
     13 14 15 16 17 18 19         11 12 13 14 15 16 17
     20 21 22 23 24 25 26         18 19 20 21 22 23 24
     27 28 29 30 31               25 26 27 28 29 30

APR                1  2     OCT                      1
      3  4  5  6  7  8  9          2  3  4  5  6  7  8
     10 11 12 13 14 15 16          9 10 11 12 13 14 15
     17 18 19 20 21 22 23         16 17 18 19 20 21 22
     24 25 26 27 28 29 30         23 24 25 26 27 28 29
                                  30 31

MAY   1  2  3  4  5  6  7   NOV          1  2  3  4  5
      8  9 10 11 12 13 14          6  7  8  9 10 11 12
     15 16 17 18 19 20 21         13 14 15 16 17 18 19
     22 23 24 25 26 27 28         20 21 22 23 24 25 26
     29 30 31                     27 28 29 30

JUN             1  2  3  4  DEC                1  2  3
      5  6  7  8  9 10 11          4  5  6  7  8  9 10
     12 13 14 15 16 17 18         11 12 13 14 15 16 17
     19 20 21 22 23 24 25         18 19 20 21 22 23 24
     26 27 28 29 30               25 26 27 28 29 30 31
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APRIL

7	Thursday	Last day of classes.
8	Friday	Good Friday.
12-23	Tuesday-Saturday	Final examinations in second semester and in full courses.

MAY

9	Monday	Spring Convocation.
11	Wednesday	Registration for First Summer Session.**
12	Thursday	First Summer Session begins.

JUNE

| 24 | Friday | Final examinations for First Summer Session. |

JULY

| 4 | Monday | Registration for Second Summer Session. |
| 5 | Tuesday | Second Summer Session begins. |

AUGUST

| 17 | Wednesday | Final examinations for Second Summer Session. |

PLEASE NOTE

(a) Students in the Bachelor of Education program are advised that this Academic Calendar Year is subject to change in order to accommodate the special needs of their program.

(b) EARLY REGISTRATION will take place as soon as the timetable is available. This will involve the selection of courses, and payment of fees (in the case of part-time students) and partial payment of fees in the case of full time students.

**more details available in the summer school calendar.

Saint Mary's University
Campus Guide

TOWER ROAD

INGLIS STREET

GORSEBROOK AVENUE

ROBIE STREET

E
N — S
W

Artist Chisson

1. Rice Residence
2. Vanier House
3. Loyola Residence
4. Loyola Building
5. McNally Building (Administration)
6. Gymnasium
7. Theatre Auditorium
8. Science Building
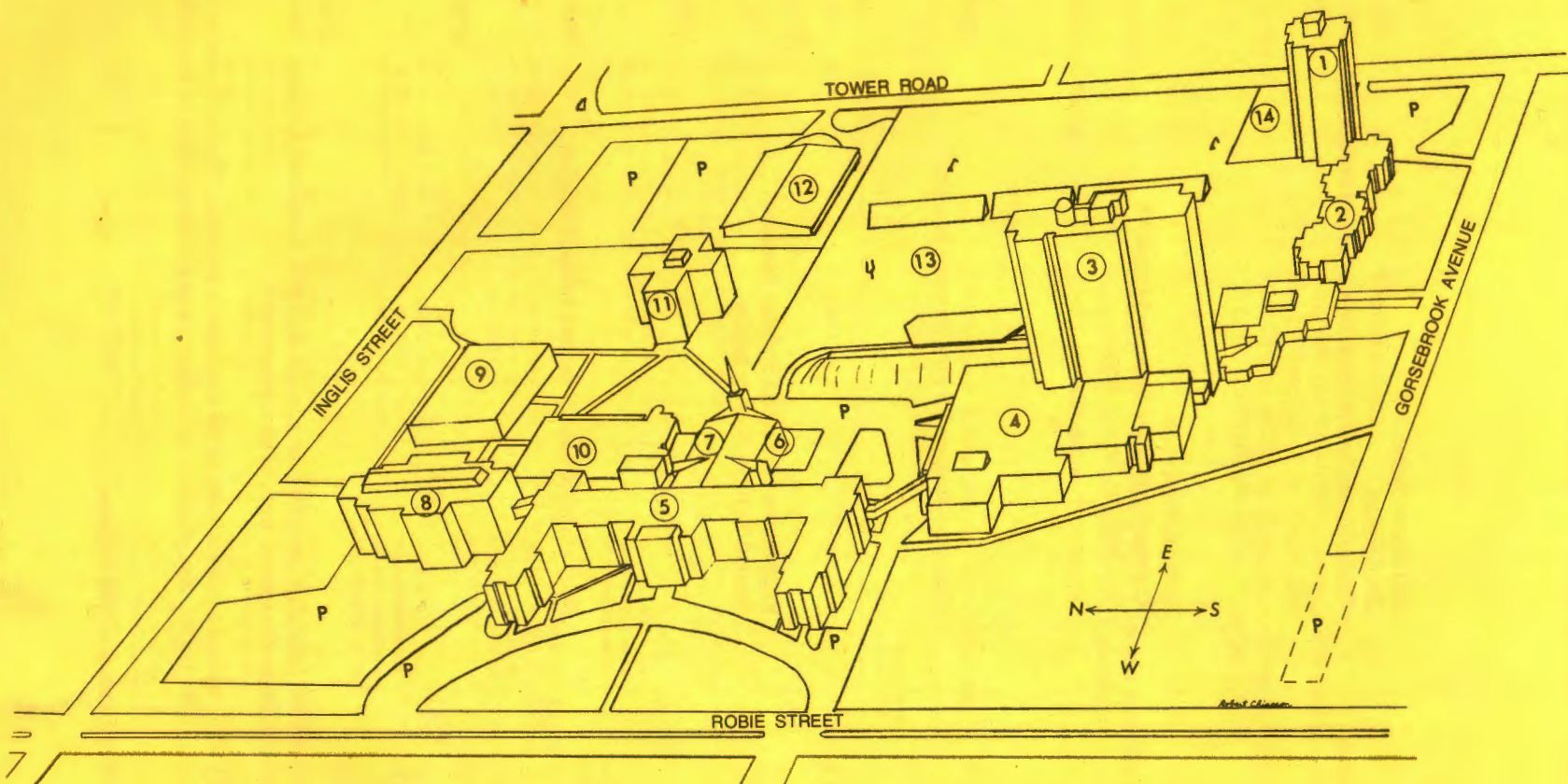
9. Bishop Burke Education Centre
10. Library
11. Student Centre
12. Alumni Arena
13. Huskies Stadium
14. Tennis Courts
15. Parking

EDUCATION

645.1 (.2)　　PROBLEMS IN THE
　　　　　　　PHILOSOPHY OF LANGUAGE

$1/2$ credit

Investigation of selected issues in the philosophic study of language.

Classes　3 hrs. a week. 1 semester.

Davis

646.1 (.2)　　APPLICATIONS OF THE SCIENCE
　　　　　　　AND PHILOSOPHY OF LANGUAGE
　　　　　　　TO THE TEACHING OF ENGLISH

$1/2$ credit

Prerequisite:　Edu 644.1 (.2) or equivalent, or permission of instructor.

A consideration of the results of scientific and philosophical investigations of language and their application toward improvement of the English curriculum.

Classes　3 hrs. a week. 1 semester.

Davis

647.1 (.2)　　PHILOSOPHY OF EDUCATION:
　　　　　　　THEORY OF KNOWLEDGE (I)

$1/2$ credit

A lecture and seminar course based on Lonergan's Insight and directed towards developing an epistemology inherent in the learning process. The course sets out from the point of view of a personal self-appropriation of one's own dynamic cognitive structure.

Sources: Lonergan, *Insight;* Buford, *Toward a Philosophy of Education;* Vandenberg, *Being and Education; Essays in Existential Phenomenology*.

Classes　3 hrs. a week. 1 semester.

Hanrahan

648.1 (.2)　　PHILOSOPHY OF EDUCATION:
　　　　　　　THEORY OF KNOWLEDGE (II)

$1/2$ credit

Consideration of the question, "What kind of student activity do I look for and recognize as the result of teaching?" In addition to personal cases discussed, some references involving such a question will be Plato, Meno; Holt, *How Children Fail;* Hutchins, *The Learning Society;* Postman and Weingartner, *Teaching as a Subversive Activity*.

Classes　3 hrs. a week. 1 semester.

Hanrahan

650.1 (.2)　　INTRODUCTION TO
　　　　　　　COMPARATIVE EDUCATION

$1/2$ credit

This course examines the principal characteristics of education in a number of countries and areas outside Nova Scotia, the methodology and bibliographical tools of comparative education, and the utility of comparative education for the practising teacher and administrator.

Classes　3 hrs. a week. 1 semester.

Phillips, Weeren

651.1 (.2)　　PROBLEMS IN
　　　　　　　COMPARATIVE EDUCATION

$1/2$ credit

Prerequisite:　Edu 650.1 (.2) or equivalent, or permission of instructor.

Selected educational problems will be examined with the aid of the discipline of comparative education.

Classes　3 hrs. a week. 1 semester.

Phillips, Weeren

660.1 (.2)　　INTRODUCTION TO
　　　　　　　EDUCATIONAL ADMINISTRATION

$1/2$ credit

The general theory of administration, covering such topics as decision-making, planning, role of authority, attempting to develop in students techniques and procedures of analyzing and meeting administrative problems.

Classes　3 hrs. a week. 1 semester.

MacMillan

661.1 (.2)　　PROBLEMS IN
　　　　　　　ADMINISTRATION

$1/2$ credit

A practical application of the principles examined in Edu 660.1 (.2) with particular consideration of administrative problems relating to personnel, pupils, buildings, instructional materials and financing.

Classes　3 hrs. a week. 1 semester.

MacMillan

EDUCATION

662.1 (.2)   INTRODUCTION TO SUPERVISION

¹/₂ credit

A study of the part played by supervisors in building an efficient administrative organization, together with such topics as leadership, changing concepts of supervision, teacher expectations of supervisors, and problems relating to teachers.

Classes   3 hrs. a week. 1 semester.

MacMillan

663.1 (.2)   PROBLEMS IN SUPERVISION

¹/₂ credit

An examination of problems arising in the field of supervision including such topics as visits to classrooms, analysis of pupils' needs, individual and group conferences and development of instructional materials.

Classes   3 hrs. a week. 1 semester.

MacMillan

690.1 (.2)   INDIVIDUAL STUDY

¹/₂ credit

Prerequisite: registration is only by permission of the professor and the Dean of Education.

The course provides an opportunity for a student to undertake special directed study in a disciplinary area or topic relevant to his program, especially in the event a course in the subject is not offered during the current session at Saint Mary's or at another university in the metropolitan area. This individual study course may be taken more than once, if the syllabus is different.

The following courses at the Bachelor of Education level will be offered in 1976-77:

Edu 501.0	Edu 504.0
Edu 502.0	Edu 505.0
Edu 503.0	Edu 520 through 549

The courses to be offered at the Master of Arts level in 1976-77 will be announced by the Faculty of Education.

ENGINEERING

Director, Division of Engineering, Associate Professor
D. L. Mulrooney
Dean Emeritus, Professor   J. L. Ryan
Associate Professor   W. P. Boyle
Assistant Professor   R. M. Diwan
Adjunct Professor   D. A. Roy
Lecturer   D. B. Van Dyer

106.1   ENGINEERING DESIGN GRAPHICS
$^1/_2$ credit

Engineering drawing and sketching. Working drawings, standards and conventional practices. Projection Theory. Orthographic oblique and isometric drawing and sketching. Introduction to perspective drawing. The engineering design process and its relationship to engineering graphics. Flow measurement techniques.

Text: James H. Earle, *Engineering Design Graphics* (Addison Wesley); Earle, Cleland, Stark, Mason, Bardell, Vogel and Guerard, *Engineering Graphics and Design Problems* (Addison Wesley).

Classes   2 hrs. and lab 3 hrs. a week. 1 semester.

Van Dyer

107.2   DESIGN AND DESCRIPTIVE GEOMETRY
$^1/_2$ credit

Principles and applications of descriptive geometry. Application to problems such as roadway cut and fill, contour maps, design of dams, outcrops of mineral veins, clearances and drawing developments of shapes. Plotting graphs and curve fitting.

Text: *Engineering Design Graphics* as for Engineering 106.1; Earle, Cleland, Stark, Mason, Bardell, Vogel and Guerard, *Design and Descriptive Geometry Problems* (Addison Wesley).

Classes   2 hrs. and lab 3 hrs. a week. 1 semester.

Diwan

108.1   PRINCIPLES OF ENGINEERING
$^1/_2$ credit

This is an introductory course for freshmen involving basic concepts of energy, thermodynamics, stress analysis, electricity, economics and human factors, and how these concepts are used by engineers in the solution of problems. The course also includes an introduction to computer programming.

Text: Daitch, *Introduction to College Engineering* (Addison Wesley Publishing Co. 1973).

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

Boyle

113.1   SURVEYING
$^1/_2$ credit

A course covering the theory and practices involved in surveying for engineering projects. The topics included are: surveying instruments, measurement of distance, difference in elevation, direction angles, area and earthwork calculations, circular curves, photogrammetry and mapping.

Text: Breed et al, *Surveying* 3rd Ed. (Wiley).

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

Mulrooney

120.0   TECHNOLOGY AND SOCIETY
1 credit

This course is designed for the non-engineering student.

The complaint against technology, history of technological change, response to technological change, predictions of disaster, the question of adequate precautions, the interrelations of technology with science, industry and government.

Text: N. deNevers, ed., *Technology and Society* (Addison Wesley).

Classes   3 hrs. a week. 2 semesters.

Mulrooney.

ENGINEERING

203.2 ENGINEERING MECHANICS (STATICS)

½ credit

Prerequisite: Eng. 106.1-107.2, Mat 200.0 (concurrently).

Fundamental concepts and principles of mechanics, statics of particles, equivalent force systems, equilibrium of rigid bodies, analysis of structures, friction, distributed forces, centroids, center of gravity, moments of inertia.

Text: Beer and Johnson, *Vector Mechanics for Engineers* (McGraw-Hill).

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

Boyle

204.1 COMPUTER SCIENCE

½ credit

Prerequisite: Mat 100.0.

Introduction to the digital computer and the computing process. Computer organization, information representation, and matching language. Basic data types, operations and expressions. Structure of algorithms and their flowchart representation. Repetitive calculations and arrays. Structure and control of subprocedures. Program optimization. Errors in numerical computation. FORTRAN IV language. Introduction to the terminal and the basic language. Introduction to logical operations and logic circuits.

Text: Booth & Chien, *Computing Fundamentals and Applications,* (Hamilton).

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

Van Dyer

212.2 ENGINEERING MEASUREMENTS

½ credit

Prerequisite: Mat 200.0 (concurrently).

This course presents the theory of measurements and applications of probability and statistics to measurements. Analysis of experimental data is included. The generalized measurement system is discussed and examples are presented. Lab work emphasizes ingenious use of measurement systems involving creativity, synthesis and analysis.

Text: Holman, *Experimental Methods for Engineers* (McGraw-Hill); Crandall and Seabloom, *Engineering Fundamentals in Measurements, Probability, Statistics and Dimensions* (McGraw-Hill).

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

Diwan

220.0 POLLUTION CONTROL

1 credit

Prerequisite: Second year standing. This course is open to non-engineering students of all faculties.

An introduction to the fundamental concepts of water, air, soil, noise, solid wastes and nuclear pollutants and their control. An investigation of the world as a finite system. Finally a review of growth trends in the world system. This course is designed specifically for non-technical students.

Text: Masters *Introduction to Environmental Science and Technology* (Wiley).

Classes   3 hrs. a week. 2 semesters.

302.0 ENGINEERING MECHANICS (DYNAMICS)

1 credit

Prerequisite: Mat 100.0 and 311.0 (concurrently), Eng 203.

Equations of motion in rectangular and polar coordinates, relative motion, rectilinear, curvilinear and rotational motion of particles and rigid bodies, oscillating motion, moments of inertia, work, energy and power, impulse and momentum.

Text: Beer and Johnson, *Vector Mechanics for Engineers* (McGraw-Hill).

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

Boyle

303.2 FLUID MECHANICS

½ credit

Prerequisite: Mat 100.0.

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.

Text: Victor L. Streeter, *Fluid Mechanics, 4th Edition* (McGraw-Hill).

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

Boyle

ENGINEERING

304.2 MECHANICS OF DEFORMABLE BODIES
$^1/_2$ credit

Prerequisite: Eng 203.2, Mat 200.0.

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 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.

Text: Higdon, Olsen, Stiles and Weese, *Mechanics of Materials, 2nd edition* (John Wiley).

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

Mulrooney

306.1 ENGINEERING THERMODYNAMICS
$^1/_2$ credit

Prerequisite: Phy 221.0, Mat 200.0.

Energy and the first law, ideal gas, gas equation, macroscopic properties of pure substances, properties and state, energy analysis of thermodynamic systems, principles of statistical thermodynamics, entropy and the second law, general chemical equilibrium, thermodynamic relations, kinetic theory applications, gaseous mixtures, consequences and applications of second law, thermodynamic systems.

Text: Holman, J. P. *Thermodynamics, 2nd edition*.

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

Diwan

308.0 SYSTEM DYNAMICS (ELECTRIC CIRCUITS)
1 credit

Prerequisite: Phy 221.0, Mat 311.0 (concurrently).

The analysis of linear systems is dealt with in some detail and considerable emphasis is placed upon their practical applications. Topics include fundamental laws of electrical engineering circuit parameters, network theorems, impedance, solution of DC and AC network problems, magnetic circuits, transformers, introduction to electromechanical energy conversion, semiconductor electronics.

Text: Vincent Del Toro, *Electrical Engineering Fundamentals* (Prentice-Hall, 1972).

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

Roy

314.1 ENGINEERING MATERIALS
$^1/_2$ credit

Prerequisite: Che 203.0, Phy 221.0, Mat 100.0.

Electrons and bonding, atomic packing, crystal structure, imperfections in crystals, non-crystalline solids, the shapes and distributions of phases in solids, equilibrium diagrams, non-equilibrium diagrams, non-equilibrium phase transformations, macroscopic properties of materials.

Text: Moffatt, Pearsall and Wulff, *The Structure and Properties of Materials, Volume I* (John Wiley); J. E. Gordon, *The New Science of Strong Materials* (Penguin Books).

Classes   3 hrs. a week. 1 semester.

Diwan

The following courses in Engineering will be offered in 1976-77.

Eng 106.1	Eng 203.2	Eng 302.0	Eng 306.1
Eng 107.2	Eng 204.1	Eng 303.1	Eng 308.0
Eng 108.1	Eng 212.2	Eng 304.2	Eng 314.1
Eng 113.1	Eng 220.0		

ENGLISH

Chairman, Associate Professor — K. MacKinnon
Professor — J. G. Harrison
Associate Professors — R. H. Crowther, L. Falk, T. E. Flynn, G. B. Hallett, R. Perkyns, J. Power, S.J.
Assistant Professors — J. Baker, C. J. Byrne, D. P. Healy, M. J. Larsen, D. Pigot, A. T. Seaman, C. J. Terry, K. R. Tudor, T. A. Whalen.

The Introductory Program:

Egl 200.0, Introductory English, is designed to meet the various needs of students entering the University from Junior or Senior Matriculation. It satisfies the requirement for an English course stipulated by the Faculties of Arts, Commerce and Science. The course is divided into many sections to ensure as much individual attention to each student as possible. Students are urged to make use of the language tutorials, which are an adjunct to the course designed to help them with particular problems of reading and writing at the university level.

The Non-Major Program:

After Egl 200.0, students who do not wish to major in English may select courses from the 300-320 range, or at other levels in consultation with the Department. The 300-320 courses are designed specifically for non-majors.

The Major Program:

An English major is required to complete six courses beyond Egl 200.0. The core of the English major program comprises the following three courses: Egl 340.0 — The Study of Poetry; Egl 341.0 — A Study of The Novel, and Egl 354.0 — Elizabethan and Jacobean Drama. A student will normally take these courses after successful completion of Egl 200.0.

Students receiving a mark of A in Egl 200.0 or the recommendation of their professor may be permitted, at the discretion of the Chairman, to by-pass a core requirement. The core courses may be taken simultaneously or over two consecutive years.

Additionally, an English major should complete three further English courses as electives. English majors may elect more than one course from the 300-320 range for their degree but only one course from this range may be included in a student's minimum requirement for a major.

Students will normally follow either of two schemes:

Three Year Degree	Four Year Degree
First Year:	First Year:
Egl 200.0	Egl 200.0
Second Year:	Second Year:
Egl 340.0	Egl 340.0
Egl 341.0	Egl 341.0
Egl elective	
Third Year:	Third Year:
Egl 354.0	Egl 354.0
Egl elective	Egl elective
Egl elective	
	Fourth Year:
	Egl elective
	Egl elective

The Honors Program

All prospective honors students should refer to the section of this calendar pertaining to honors degrees and apply to the Registrar's Office for enrolment in honors after their first year in the University.

The following is a list of honors requirements in recommended order:
1. Egl 200.0
2. Egl 340.0 or, see (a) below
3. Egl 341.0 or, see (a) below
4. Egl 356.0
5. Egl 354.0
6. Egl 352.0
7. Egl 552.0
8. 400 level elective — see (b) below
9. 400 level elective
10. 400 level elective

(a) Egl 340.0 and 341.0 may be by-passed for a higher level (i.e., 350+ or 400+) course after consultation with the departmental honors advisor and permission of the Chairman.

ENGLISH

(b) 400 level electives must be chosen in consultation with the departmental honors advisor.

(c) No 300-320 elective will count towards the student's minimum requirements for honors.

(d) All prospective honors students must consult the Chairman about admission to the program; after admission each candidate will report to the Chairman who will assign an advisor; each course elective or course change must be approved by the departmental honors advisor.

(e) Honors English candidates must maintain an average of B (3.0) in their English courses.

200.0   INTRODUCTORY ENGLISH

1 credit

A course designed to establish and refine basic skills of critical reading and writing through the close study of selected prose, fiction, drama and poetry. Accreditation will depend on a pass in both course work and a final 'Use of English' examination.

Classes   3 hrs. a week and tutorials. 2 semesters.

Staff

300.0   COMPARATIVE LITERATURE: EUROPE
1 credit

Prerequisite: Egl 200.0

A seminar course examining some of the characteristics of West European literature and a consideration of whether or not it is worth reading. Details of texts will be posted.

Classes   3 hrs. a week. 2 semesters.

Terry

301.0   THE MODERN NOVELLA

1 credit

Prerequisite: Egl 200.0.

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.

Texts: Hamalian and Volpe, *Ten Modern Short Novels; R. Paulson, The Modern Novelette*.

Classes   3 hrs. a week. 2 semesters.

Flynn

302.0   CONTEMPORARY CANADIAN LITERATURE

1 credit

Prerequisite: Egl 200.0.

Though the purpose of this course is to create an exploratory and experimental atmosphere, it also includes an effort to study works which illustrate both regional differences in Canada today and the wide variety of forms in which our literature is now being expressed. Writers studied include: Callaghan, MacLennan, Ross, Riguet, Buckler, Garner, Richler, Moore, Atwood, Laurence, Nowlan, Purdy, Layton and others.

Classes   3 hrs. a week. 2 semesters.

Baker

304.0   THE DEVELOPMENT OF DRAMA IN THE THEATRE

1 credit

Prerequisite: Egl 200.0.

This course will trace in outline the history of drama in relation to the living theatre from its inception to contemporary styles, with particular reference to the Greek and Roman classical theatre; the religious origins and secularization of English Drama; the Elizabethan Playhouse; the development of the private theatre and proscenium stage; the clash of Puritanism with the Restoration and 18th century theatre: pioneers of the new stage craft in the later 19th and 20th centuries.

Classes   3 hrs. a week. 2 semesters.

Perkyns

305.0   INTRODUCTION TO LINGUISTICS

1 credit

Prerequisite: Egl 200.0.

The course surveys past and present approaches to linguistic science with reference to phonetics, phonemics, morphology, syntax, semantics, and classification of languages.

Classes   3 hrs. a week. 2 semesters.

Falk

ENGLISH

306.0 DRAMA AND RELIGION
1 credit

Prerequisite: Egl 200.0 or equivalent.

A close reading of great plays from world literature, emphasizing Greek tragedy, Shakespeare, and the modern stage. The course strives for an awareness of religious dimensions in the fictional universe which every play creates, and of the mythical character of the play's central action. Attention is drawn to the origin of both classical and modern drama in religious ritual, and to the dramatic essence of Judaism and Christianity as religions of event.

Classes 3 hrs. a week. 2 semesters.

Stiegman

308.0 LITERATURE IN ATLANTIC CANADA
1 credit

Prerequisite: Egl 200.0.

This course will examine the literature and literary background of Atlantic Canada. Emphasis in the first semester will be on the 19th and early 20th centuries; in the second semester on contemporary writing.

Classes 3 hrs. a week. 2 semesters.

309.0 LITERATURE BETWEEN THE WARS: 1918-1939
1 credit

Prerequisite: Egl 200.0.

An examination of the way in which poets, novelists and critics responded to war, post-war disjointedness, Fascism, Communism, and the Depression.

Classes 3 hrs. a week. 2 semesters.

310.0 MODERN ENGLISH LANGUAGE
1 credit

Prerequisite: Egl 200.0.

The course will examine the nature of modern English, with reference to its syntax, grammar and vocabulary. Contemporary approaches to grammatical description and to problems of usage and lexicography will be discussed. Recommended for prospective teachers of English.

Classes 3 hrs. a week. 2 semesters.

Falk

311.0 (CE) CONTEMPORARY AMERICAN FICTION
1 credit

Prerequisite: Egl 200.0.

A study of American fiction since World War II. Special attention will be paid to such writers as Ellison, Malamud, Bellow, O'Connor, Barth and Heller, partly because they interpret some important aspects of the national experience during the last three decades and partly because they raise basic questions about the aesthetics of fiction.

Larsen

312.0 (CE) CHILDREN'S LITERATURE
1 credit

Prerequisite: Egl 200.0.

This course will examine some of the concepts of childhood in English-speaking cultures through an exploration of the types of literature for children produced in different historical periods. A variety of literature written for or read by children will be studied in an attempt to establish modes of evaluation appropriate to such material.

313.0 (SS) INTRODUCTION TO FOLKLORE
1 credit

Prerequisite: Egl 200.0 or equivalent.

This course will survey the various types of folklore (tale, song, riddle, proverb, etc.) within a context of ethnic and regional traditions. It will examine further (a) the relationship between folklore and written literature, (b) the problems of diffusion, collection, classification, and evaluation of folklore, and (c) background materials from European and North American traditions.

314.0   SCIENCE FICTION

1 credit

Prerequisite: Egl 200.0.

Under the general designation of science fiction, this course will explore aspects of the *visionary* or *speculative* literature which has developed out of the recognition that scientific thought and technology are the most distinctive characteristics of modern time and culture. The usual themes of evolution in space-time, the possibilities of extraterrestrial life, the threatened conquest of man by his machines, and the sense of the *uncanny* or *weird* which the awareness of scientific knowledge forces upon us will be considered in the work of such classic science-fiction authors as Poe, Verne, H. G. Wells, Zamyatin, Capek, and in contemporary writers like Asimov, Bradbury, Miller, Heinlein, Hoyle, Arthur C. Clarke, John Wyndham, and others. The scientific or *science-fiction* elements in the writing of more standard authors like Huxley, Orwell, Burgess, D. Lessing, Vonnegut, Pynchon will also be considered.

Classes   3 hrs. a week. 2 semesters.

Snyder

340.0   THE STUDY OF POETRY

1 credit

Prerequisite: Grade of C in Egl 200.0.

A study of methods and problems in poetics and the reading and analysis of English poetry for the purpose of preparing students for advanced work. The study will be conducted within the context of a chronological presentation of English poetry. In addition, the work of one poet will be studied in close detail.

Classes   3 hrs. a week. 2 semesters.

Harrison, Whalen

341.0   A STUDY OF FICTION

1 credit

Prerequisite: Grade of C in Egl 200.0.

A close study of representative and important fiction from the 18th to 20th century. The course is designed to introduce students to major writers of fiction as well as to the analytical concepts necessary for critical appreciation and judgment.

Classes   3 hrs. a week. 2 semesters.

Hallett, Larsen, Tudor

350.0   HISTORY OF THE ENGLISH LANGUAGE
1 credit

Prerequisite: Egl 340.0 and 341.0 (may be taken concurrently).

A course designed to acquaint the student with the nature of language and its growth. The student will be instructed in the basic techniques of linguistic analysis.

Classes   3 hrs. a week. 2 semesters.

Falk

352.0   CHAUCER AND THE 14TH CENTURY
1 credit

Prerequisite: Egl 340.0 and 341.0 (may be taken concurrently).

This course will deal primarily with the poetry of Chaucer which will be studied in the original Middle English. Students will be required to do outside reading on literary influences and on life in 14th century England.

Texts: F. N. Robinson, ed., *The Works of Chaucer; The Age of Chaucer,* Pelican Guide to English Literature, Volume 1.

Classes   3 hrs. a week. 2 semesters.

Pigot

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ENGLISH

353.0 TUDOR POETRY AND PROSE
1 credit

Prerequisite: Egl 340.0 and 341.0 (may be taken concurrently).

A study of the poetry and prose mainly of the Tudor era. Major emphasis will be given to the works of Wyatt, Surrey, Sidney, and Spenser.

Classes 3 hrs. a week. 2 semesters.

Power

354.0 ELIZABETHAN AND JACOBEAN DRAMA
1 credit

Prerequisite: Egl 200.0 and enrolment as English major.

Shakespearean drama will be the major subject of study in this course. Due attention will be given Shakespeare's predecessors and successors so that the student will become aware both of the development of Elizabethan and Jacobean drama and of Shakespeare's relation to that drama and the age. Supplementary reading will be required in such areas as Greek tragedy, Medieval drama, and Renaissance poetry.

Classes 3 hrs. a week. 2 semesters.

Whalen

356.0 17TH CENTURY POETRY AND PROSE: 1600-1660.
1 credit

Prerequisite: Egl 340.0 and 341.0 (may be taken concurrently).

An enquiry into the change of civilization in England during the 17th century, with comparative reference to some European sources. The inquiry will include the questions: Is the poetry and prose of this period worth reading? What is worth reading in it? Why (or why not) is it worth reading?

Classes 3 hrs. a week. 2 semesters.

400.0 RESTORATION AND 18TH CENTURY POETRY AND PROSE: 1666-1780
1 credit

Prerequisite: Egl 340.0 and 341.0 (may be taken concurrently)

A study of the central works in the Neo-Classic era. Major attention is given to Dryden, Swift, Pope and Johnson.

Classes 3 hrs. a week. 2 semesters.

Power

401.0 THE NOVEL: DEFOE TO AUSTEN
1 credit

Prerequisite: Egl 340.0 and 341.0 (may be taken concurrently).

The study of major novelists of the 18th century. Special emphasis will be placed on Defoe, Richardson, Fielding, Goldsmith and Austen. Sterne, Burney and the Gothic novelists may also be studied.

Classes 3 hrs. a week. 2 semesters.

402.0 THE 19TH CENTURY NOVEL
1 credit

Prerequisite: Egl 340.0 and 341.0 (may be taken concurrently).

Is it true and does it matter to us now, that the 19th century novelists 'held up the mirror to life' and created a fresh form of expression which employed the strength and scope of English dramatic poetry? The course will pursue these questions by examining in detail two novels by each of the following: Austen, Eliot, Bronte, Dickens, Hardy, and James.

Classes 3 hrs. a week. 2 semesters.

Flynn

403.0 ROMANTIC POETRY
1 credit

Prerequisite: Egl 340.0 and 341.0 (may be taken concurrently).

A study of 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.

Classes 3 hrs. a week. 2 semesters.

Seaman

ENGLISH

404.0   VICTORIAN POETRY AND PROSE
1 credit

Prerequisite: Egl 340.0 and 341.0 (may be taken concurrently).

The course is designed to acquaint students with the attitudes and ideas of writers in the Victorian period. Arnold, Browning and Tennyson are studied in depth.

Classes   3 hrs. a week. 2 semesters.

Harrison.

405.0   19TH CENTURY NORTH AMERICAN LITERATURE
1 credit

Prerequisite: Egl 340.0 and 341.0 (may be taken concurrently).

A study of major writers of the 19th century. Critical readings of works by Cooper, Hawthorne, Melville, Emerson, Thoreau, Whitman, Dickinson, James.

Classes   3 hrs. a week. 2 semesters.

Snyder

406.0   20TH CENTURY NORTH AMERICAN LITERATURE
1 credit

Prerequisite: Egl 340.0 and 341.0 (may be taken concurrently).

A review of representative figures in the modernist tradition. A consideration of the work and place of such writers as Dreiser, Hemingway, Faulkner, Fitzgerald, Mailer, Pynchon.

Classes   3 hrs. a week. 2 semesters.

407.0   MODERN ENGLISH POETRY
1 credit

Prerequisite: Egl 340.0 and 341.0 (may be taken concurrently).

A study of the major poets of the modern era. Authors will include Hardy, Hopkins, Eliot, Pound, Yeats, and Auden. The course will also include reference to English poetry of the fifties and sixties.

Classes   3 hrs. a week. 2 semesters.

408.0   20TH CENTURY DRAMA
1 credit

Prerequisite: Egl 340.0 and 341.0 (may be taken concurrently).

A study of the major dramatists from the late 19th century to contemporary movements. Dramatists to be studied include Ibsen, Chekhov, Strindberg, Shaw, Synge, O'Casey, O'Neill, Pirandello, Brecht, Wilder, Williams, Miller, Beckett, Ionesco, Pinter, Osborne and Albee.

Classes   3 hrs. a week. 2 semesters.

Perkyns

409.0   LITERATURE, THOUGHT AND ART 1880-1930
1 credit

Prerequisite: Egl 340.0 and 341.0 (may be taken concurrently).

An exploration of the relationship between the cultural background of the period and its effect on imaginative works. This is not a course in the history of ideas.

Classes   3 hrs. a week. 2 semesters.

410.0   THE MODERN NOVEL
1 credit

Prerequisite: Egl 340.0 and 341.0.

An examination of the early 20th century novel in terms of a close critical analysis of representative works and in the light of certain cultural, philosophic and socio-political tendencies which have played a decisive part in determining the response of the modern imagination to emotional, moral and social experience.

Classes   3 hrs. a week. 2 semesters.

Terry

411.0   THEORY AND PRACTICE OF CRITICISM
1 credit

Prerequisite: Egl 340.0 and 341.0. Students may select the course only if they have the approval of the Department.

A course offering practice in individual judgement of various literary forms, with introduction to the principles of criticism.

Classes   3 hrs. a week. 2 semesters.

Crowther

ENGLISH

412.0 THE DEVELOPMENT OF ENGLISH CANADIAN LITERATURE

1 credit

Prerequisite: Egl 340.0 and 341.0 (may be taken concurrently).

Some background reading in Canadian intellectual and cultural history is required. The main literary and historical themes are imperialism, sectarianism, and regionalism. Besides poets like Roberts, Lampman, Pratt, F. R. Scott, Birney, and Layton, other writers to be studied include McCulloch, Haliburton, Susanna Moodie, Sara Duncan, Leacock, Callaghan, MacLennan.

Classes 3 hrs. a week. 2 semesters.

MacKinnon

413.0 MODERN ANGLO-IRISH LITERATURE
1 credit

Prerequisite: Egl 340.0 and 341.0 (may be taken concurrently).

A study of the contradictions and fissures in modern Ireland as these are seen through the imagination of her writers. An attempt will be made to relate this study to the social and intellectual background of the Atlantic area which is beset by many of the same problems as Ireland and blessed with similar advantages as well. 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, P. U. Kavanaugh, Padraic Colum, Sean O'Faolain, James Stephens, J. B. Kane, and Brian Freele.

Classes 3 hrs. a week. 2 semesters.

Byrne

414.0 DRAMA & SOCIETY- RESTORATION TO LATE 19TH CENTURY
1 credit

Prerequisite: Egl 340.0 and 341.0 (may be taken concurrently).

A course which traces the fortunes of drama over two centuries in relation to the society of the age. The Comedy of Manners is studied with special attention to Congreve, Wycherley, Sheridan and Wilde. The decline of tragedy is traced from the heroic tragedy of Dryden to the rise of the 19th century melodrama. The theatrical revival in the 19th century centers on social drama, particularly by Ibsen, Strindberg, Pinero, and Shaw.

Classes 3 hrs. a week. 2 semesters.

415.0 THEORY OF GRAMMATICAL ANALYSIS

1 credit

Prerequisite: Egl 310.0, 350.0 or Fre 311.1 or Ant 390.0.

A comparative cross-disciplinary study of the leading theories and methods of grammatical analysis, with special emphasis on the structural and transformational-generative approach. Strongly recommended for prospective English and language teachers.

Classes 3 hrs. a week. 2 semesters.

Falk

450.0 SPECIAL AUTHOR

1 credit

Prerequisite: permission of the department.

A tutorial course open to students who wish to study a particular author largely through independent reading. Students are required to discuss their special interest with a member of the department during the preceding academic year.

Tutorials by arrangement with supervisor. 2 semesters.

451.0 SPECIAL SUBJECT

1 credit

Prerequisite: permission of the department.

A tutorial course open to students who wish to study a particular subject largely through independent reading. Students are required to discuss their special interest with a member of the department during the preceding academic year.

Tutorials by arrangement with supervisor. 2 semesters.

550.0 SPECIAL AUTHOR

1 credit

Prerequisite: enrolment in the English honors program, or special recommendation of the department.

This course will provide the opportunity to study a particular author in considerable depth and detail, and will require some measure of independence and initiative in the student.

Tutorials by arrangement with supervisor. 2 semesters.

ENGLISH

551.0 SPECIAL SUBJECT
1 credit

Prerequisite: enrolment in the English honors program, or special recommendation of the department.

This course will provide 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 LITERATURE AND CRITICISM SEMINAR
1 credit

Prerequisite: enrolment in the English honors program, or special recommendation of the department.

A seminar course aimed towards an understanding of the general foundations of literature and criticism, and an appreciation of the links between literature and other disciplines. The course will use material from a wide variety of periods and sources.

Classes 2 hrs. a week. 2 semesters.

Terry

The following courses in English will be offered in 1976-77:

Egl 200.0	Egl 313.0	Egl 403.0	Egl 413.0
Egl 300.0	Egl 314.0	Egl 404.0	Egl 414.0
Egl 301.0	Egl 340.0	Egl 406.0	Egl 450.0
Egl 302.0	Egl 341.0	Egl 407.0	Egl 451.0
Egl 304.0	Egl 352.0	Egl 410.0	Egl 550.0
Egl 308.0	Egl 354.0	Egl 411.0	Egl 551.0
Egl 311.0	Egl 356.0	Egl 412.0	Egl 552.0
Egl 312.0	Egl 402.0		

The following courses in English will not be offered in 1976-77:

Egl 305.0	Egl 310.0	Egl 400.0	Egl 408.0
Egl 306.0	Egl 350.0	Egl 401.0	Egl 409.0
Egl 309.0	Egl 353.0	Egl 405.0	Egl 415.0

GEOGRAPHY

Chairman, Associate Professor   D. Day
Assistant Professors   R. McCalla, H. Millward, B. Robinson

General Information

In its broadest sense geography studies the interaction between man and his environment. It derives much of its educational value from its interdisciplinary approach to man-environment 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 two 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.

Departmental Policy

NOTE: Students who have taken geography courses formerly offered, or presently cross-listed by anthropology are not permitted to take for credit the same course under geography.

(1) The Department regards Gpy 200.0, 201.0, and 203.0 both as *service* courses for the university in general and basic introductory courses for geography majors and honors students. With the exception of Gpy 300.1 and 330.2 higher level courses are designed 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 preresquisite: for example, economics students may be admitted to Gpy 301.0 and 400.1; similarly anthropology and history majors may be allowed to take Gpy 340.0 and 409.0.

(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) 300 and 400 level courses are not open to students in their first year at university.

General requirements for majors

(1) To obtain a major in geography a student must complete the equivalent of seven university credits in geography.

(2) Students must normally complete three geography courses at the 200 level and four courses at the 300 level or above. Gpy 306.0 must be taken by all majors.

(3) In order to graduate with a major in geography, a student must obtain a quality point average of at least 2.0 in geography courses.

(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.

(6) All majors should purchase a copy of *Goode's World Atlas* or the *Oxford World Atlas* (paperback version).

Honors Program

To be admitted to the honors program a student must have a B standing in geography courses and have completed one year at the university. The candidate must have obtained satisfactory grades in non-geography courses.

Applications for admission to the honors program in geography must be submitted to the departmental chairman and approved by the department. After admission to the program, a student will be assigned an advisor. In order to complete an honors program a student must receive an overall grade point average of 3.0 in geography courses. All candidates must complete the following courses: Gpy 200.0 or 201.0, 203.0, 206.0, 306.0, 506.1, 516.2, and 526.0. If a student opts to take Gpy 201.0, he would be required to take an advanced regional geography course at the 300 level. In addition to these required courses, a student must complete the equivalent of six other full-credit courses in geography. The combination of electives chosen must be approved by the departmental chairman. Complete details regarding the program and the honors thesis requirements are contained in *Notes and Guidelines for Geography Students,* available from the departmental secretary.

GEOGRAPHY

200.0 GEOGRAPHY OF CANADA

1 credit

A study of the geography of Canada with special emphasis on the Atlantic Provinces. Topics considered will include the influence of the physical environment on human activity, the utilization of resources, the spatial distribution of industrial and tertiary sector development, population distribution and movement, regional problems, interregional relationships and the geographical background to national development problems. The course will include an examination of government attempts to promote change through various regional development and planning programs.

Classes   3 hrs. a week. 2 semesters.

Day

201.0 MAN AND THE ENVIRONMENT
(formerly 152.0)

1 credit

Course focuses on man's adaptation to, and impact upon, the physical environment. The physical characteristics of the world's natural environments are reviewed, and the human use of the land is then considered in relation to environmental resources and limitations. Planning problems and resource conservation are discussed.

Classes   3 hrs. and lab 1 hr. a week. 2 semesters.

McCalla, Millward, Robinson.

203.0 PHYSICAL GEOGRAPHY

1 credit

A study of the physical environment of man through an examination of the character and processes of its major components. The course includes: a systematic study of the origin, nature and distribution of landforms; a discussion of the physical principles of climate and weather and methods of delimiting world climatic regions; a study of the spatial characteristics of the world's oceans, soil and vegetation zones. Laboratory work will include the geomorphic intepretation of maps and air photos, the interpretation of weather maps and climatic data and examination of soil profiles.

Classes   3 hrs. and lab or field work 3 hrs. a week. 2 semesters.

McCalla

206.0 METHODS OF LOCATIONAL ANALYSIS

1 credit

Prerequisite: Mat 100.0 or equivalent and 200-level geography (may be taken concurrently)

Students will be introduced to methods and problems in the collection, description and analysis of geographic data. The course includes a review of descriptive and inferential statistics as applied to locational problems, computer mapping, location-allocation problems, and methods of regional optimisation.

Classes   2 hrs. and lab 2 hrs. a week. 2 semesters.

Millward

300.1 THE ATLANTIC PROVINCES

1/2 credit

NOTE: This course is not open to students in their first year at university.

A regional analysis of the Atlantic Provinces including a study of the spatial structure of social and economic development, the geographical distribution of resource activities, manufacturing and tertiary sector development, population distribution, migration patterns, urban development, regional and sub-regional problems.

Classes   3 hrs. a week. 1 semester.

Day

301.0 ELEMENTS OF ECONOMIC GEOGRAPHY

1 credit

Prerequisite: a 200 level geography course or permission of instructor.

The course considers the principles determining the geographical organization of economic activities. It will include consideration of international and regional variations in the level and structure of economic development and models of the location of production and trade patterns in agriculture, forestry, fishing, mining, manufacturing and tertiary activities. Attention will be given to the geographical relationships between population growth and economic development, to regional economic interaction and to efforts to promote the geographical reorganization of economic activity.

Classes   3 hrs. a week. 2 semesters.

McCalla

GEOGRAPHY

302.0   SETTLEMENT GEOGRAPHY

1 credit

Prerequisite: a 200 level geography course or permission of instructor.

An introduction to the study of rural and urban settlement patterns. Attention is focused on the following topics: locational analysis of site and situation; the spatial organization of settlements; the development and functioning of settlement systems; the internal spatial structure and functioning of settlements; factors influencing the evolution of regional settlement patterns. Case studies will be drawn from North America, Europe and parts of the less developed world.

Classes   3 hrs. a week. 2 semesters.

Millward

304.0   GEOGRAPHY OF THE SEAS

1 credit

Prerequisite: Gpy 201.0 or 203.0.

A study of the spatial characteristics of the world's oceans, the land-sea interface and the human use of the sea. Topics include the physical framework of the oceans, regional variations in marine resources and intensity of resource use, the spatial structure and characteristics of oceanic shipping, factors affecting the arrangement of human activities in coastal areas, seaports and seaport terminals, and the political geography of the seas.

Classes   3 hrs. a week and field work. 2 semesters.

Day

306.0   GEOGRAPHICAL TECHNIQUES
(formerly 300.0)

1 credit

Prerequisite: two lower level geography courses preferably, including 203.0.

A techniques course designed primarily for geography majors. The course will study aspects of the geography of Halifax-Dartmouth and the Atlantic Provinces primarily through the use of basic geographical techniques such as mapping, map interpretation, air photo interpretation, surveys and field work.

Classes   3 hrs. a week and lab 3 hrs. a week. 2 semesters.

Day

309.0   CULTURAL GEOGRAPHY
(formerly 220.0)

1 credit

Prerequisite: a lower level geography course.

Course ranges from peasant societies to modern urban systems. It is concerned with the total cultural imprint of man on the world's landscapes and the basis of man's understanding of space and time.

Classes   3 hrs. a week. 2 semesters.

Robinson

310.0   GEOGRAPHY OF THE UNITED STATES

1 credit

Prerequisite: a 200 level geography course or permission of instructor.

A geographical analysis of the United States. The first part of the course will discuss the following topics: the physical framework, population distribution and trends, the location of economic activities and regional interaction in the United States. This will be followed by an analysis of geographical patterns and characteristics of selected regions. The course will include a discussion from the viewpoint of geography, of some of the major problems of present-day U.S.A.

Classes   3 hrs. a week. 2 semesters.

319.0 (Ant 319.0)   CULTURAL ECOLOGY
(formerly 209.0)

1 credit

Prerequisite: a 200-level geography course.

Introduction to the study of the relationship between man and his environment, ranging from hunting and gathering societies to modern commercial societies. The course considers men as functional entities in ecosystems and the various strategies and information sources used by societies in their interaction with environments.

Classes   3 hrs. a week. 2 semesters.

Robinson

320.0   GEOGRAPHY OF EUROPE
(SS)

1 credit

Prerequisite: a lower level geography course.

A study of the physical, economic, social and political geography of contemporary Europe and its major regions with particular reference to the European Economic Community.

GEOGRAPHY

324.0   PORTS AND SHIPPING

1 credit

Prerequisite: Gpy 200.0 or Gpy 201.0.

A study of the seaport as a modern transport node and the spatial dynamics of the world shipping industry. Topics discussed will include: ports as "gateways" and industrial locations; port approaches and port layouts; the process of hinterland penetration and foreland development; port competition and planning; the oceanic shipping trade; break-bulk and bulk cargo traffic; the impact on time-space relationships of increasing ship size, new types of ships and the intermodal transfer of seaborne cargo.

Classes   3 hrs. a week. 2 semesters.

McCalla

330.2   REGIONAL DEVELOPMENT IN THE ATLANTIC PROVINCES
(formerly 400.2)

½ credit ~~1 credit~~

Prerequisite: Gpy 300.1 or permission of instructor.

A study of federal and provincial government efforts to reorganize the spatial pattern of social and economic development in the Atlantic region. The course includes a critical appraisal of both government efforts to modernize Newfoundland's society and economy in the post-1949 era and the aims and achievements of the A.D.A., A.R.D.A., A.D.B., F.R.E.D., and D.R.E.E. programs in the Maritimes.

Classes: 3 hrs. a week. 1 semester.

Day

340.0 (Ant 331.0)   CULTURAL GEOGRAPHY OF CHINA

1 credit

Prerequisite: a lower level geography course.

The course will cover the following topics: physical foundations, hydraulic agriculture, the nomad frontier, origins in the loess, Chinese expansion to the south, China's marketing and administrative geography, the Communist revolution.

Classes   3 hrs. a week. 2 semesters.

Robinson

400.1   REGIONAL DEVELOPMENT

½ credit

Prerequisite: Gpy 301.0, 302.0 or 330.0.

Consideration of the spatial dimensions of regional development problems and government policies designed to alleviate them. The foundations of regional development theory will be critically assessed in the light of recent experience.

Classes   3 hrs. a week. 1 semester.

Day

402.0   URBAN ANALYSIS AND URBAN PLANNING

1 credit

Prerequisite: Gpy 206.0, 301.0 or 302.0.

An examination of the theories, models and research procedures used in the spatial analysis of urban areas and a critical review of efforts to plan urban development and redevelopment. Topics include urban systems and functions, urban land use and land values, spatial economic processes, urban growth, the rural-urban fringe, individual spatial behavior, intra-urban circulation, the spatial framework of public and private decision-making and an appraisal of North American and European attempts at urban planning.

Classes   3 hrs. a week and field work. 2 semesters.

Millward

406.1   FIELD STUDIES

½ credit each

NOTE: This same course description applies to 416.1, 426.1, 436.1, and 446.1.

Prerequisite: a geography course and permission of instructor.

This course will introduce students to the methods and scope of fieldwork in geography. It will include lectures, group discussions, and individual or group analysis of selected problems in the field camp area. Readings will be assigned before and after the course. All students must submit a comprehensive field studies report within one month of the end of the course.

3 weeks, including 8-10 days in a field camp area.

Staff

GEOGRAPHY

409.0   THE BIRTH OF THE CITY

1 credit

Prerequisite: Gpy 309.0, 319.0 or 340.0.

Cross-cultural study of the processes that gave rise to the evolution of cities. The processes assessed involve the cosmo-magical, ecological, demographic and technological bases of urban forms. The primary examples will be from early China, Mesopotamia and Mesoamerica. Secondary consideration will be given to West Africa and South-East Asia. In addition to the obvious neolithic causal sequence, attention will also be paid to such consequences as the relation between urbanization and the state.

Classes   3 hrs. a week. 2 semesters.

Robinson

410.0   REGIONAL ANALYSIS

1 credit

Prerequisite: Gpy 301.0, 302.0 or 330.2.

Study of contemporary methods and techniques of regional analysis and their application in regional development and planning. Consideration will be given to methods of examining spatial changes in various sectors of the economy at the regional and subregional levels and to the ways in which intraregional and interregional linkages affect regional growth.

Classes   3 hrs. a week. 2 semesters.

412.2   URBAN TRANSPORTATION

$^1/_2$ credit

Prerequisite: Gpy 206.0, 301.0 or 302.0.

Course will consider urban transportation networks in relation to underlying principles of spatial behavior. Topics covered will include urban transportation space, traffic generation, trip origins and trip destinations, transit systems, the impact of changes in the structure of the urban transportation network, urban transportation problems and planning, forecasting network needs. There will be some discussion of Halifax-Dartmouth urban transportation problems.

Classes   3 hrs. a week. 1 semester.

McCalla

506.1   SEMINAR IN THEORETICAL GEOGRAPHY

$^1/_2$ credit

Prerequisite: honors standing in geography.

Honors students will be made familiar with major advances in theoretical and philosophical aspects of geography.

Classes   3 hrs. a week. 1 semester.

Staff

516.2   SEMINAR IN APPLIED GEOGRAPHY

$^1/_2$ credit

Prerequisite: honors standing 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.

Classes   3 hrs. a week. 1 semester.

Staff

526.0   HONORS RESEARCH PROJECT

1 credit

Prerequisite: honors standing in geography.

Honors students will be assigned to a research adviser 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 of the research findings.

Staff

The following courses in Geography will be offered in 1976-77:

Gpy 200.0	Gpy 301.0	Gpy 330.2
Gpy 201.0	Gpy 302.0	Gpy 340.0
Gpy 203.0	Gpy 306.0	Gpy 436.1
Gpy 206.0	Gpy 309.0	Gpy 446.1
Gpy 300.1	Gpy 324.0	Gpy 526.0

The following courses in Geography will not be offered in 1976-77:

Gpy 304.0	Gpy 320.0	Gpy 412.2
Gpy 310.0	Gpy 400.1	Gpy 506.1
Gpy 319.0	Gpy 410.0	Gpy 516.2

GEOLOGY

Chairman, Associate Professor C. A. R. de Albuquerque
Professor   D. Hope-Simpson
Associate Professor   Q. A. Siddiqui
Assistant Professor   J. Dostal
Visiting Assistant Professor   C. Stehman

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.

The courses of the core program are those numbered 211.1, 213.2, 222.1, 224.2, 311.0, 322.0, 324.0, 413.0.

Registration in other 400-level geology courses is open as an elective to students enrolled for the science degree.

Students enrolled in the geology major program will normally take courses numbered 450 to 499, with a choice of specialization in the field of 'hard rock' or 'soft rock' geology. Registration in these courses is normally contingent on completion of the core program. Some prerequisites may be waived with the consent of the Department.

Students should seek advice from the Department as to their electives and supporting courses. For example, students wishing to specialize in 'soft rock' geology should choose supporting courses in biology, while those in 'hard rock' should give their preference to chemistry.

Senior students are encouraged to participate in research projects being carried out in the Department.

111.0   INTRODUCTION TO GEOLOGY
1 credit

The earth as a planet; minerals and rocks, surface and deep-seated processes. Structural evolution of North America with special reference to the Maritime area. Historical geology. Economic geology.

Classes   3 hrs. a week plus lab and field work. 2 semesters.

Hope-Simpson

201.1 (.2)   PRINCIPLES OF GEOLOGY
$1/2$ credit

Prerequisite: permission of the Department.

Physical geology; rock forming minerals, igneous, metamorphic and sedimentary rocks. Diastrophism, geological processes. Introduction to earth history, identification of rock forming minerals and rock types. Interpretation of geological and topographic maps and aerial photographs.

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

Albuquerque

202.2 (.1)   GEOLOGY OF ATLANTIC CANADA
$1/2$ credit

Prerequisite: Geo 111.0 or Geo 201.1 (.2) or equivalent.

The Precambrian shield of Eastern Canada. Evolution and structure of the Appalachians. Lithology and geological history of the Atlantic Provinces. Field trips to selected localities in the Atlantic Provinces for observation of rock types and structures.

Classes   3 hrs. a week plus field trips. 1 semester.

Hope-Simpson

204.0   THE FACE OF THE EARTH
1 credit

The earth's upper mantle and crust. The development of continents and ocean basins. Continental drift. The evolution of North America. Special topics will be presented in seminars. Intended for non-science students.

Classes   3 hrs. a week. 2 semesters.

Siddiqui

211.1   INTRODUCTION TO MINERALOGY AND PETROLOGY
½ credit

Prerequisite: Che 101.0 or Phy 101.0

The earth and the planets. Earth's materials; crystalline and amorphous solids, rocks and rock-forming minerals. Igneous rocks and igneous activity. Metamorphism and metamorphic rocks. The rock cycle. The earth's interior.

Classes   3 hrs. a week and lab. 1 semester.

GEOLOGY

213.2 PETROGRAPHY

¹/₂ credit

Prerequisite: Geo 211.1.

Optical properties of minerals. Determinative mineralogy with emphasis on the optical methods of mineral identification. Physical properties of minerals. Crystal symmetry.

Classes 3 hrs. a week and lab. 1 semester.

222.1 FIELD METHODS

¹/₂ credit

An integrated lecture-laboratory-field work course. Field mapping. Map interpretation. It is strongly recommended that students attend the Maritime Universities Geological Field School early in May following this course.

1 semester.

Dostal

224.2 HISTORICAL GEOLOGY

¹/₂ credit

Geological cycle. Geological time scale. Principles of stratigraphic interpretation. Continental evolution. Paleoenvironments and the evolution of life.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

311.0 MINERALOGY AND PETROLOGY

1 credit

Prerequisite: Geo 213.2.

Atomic structure of the minerals. Chemical mineralogy. The phase rule and phase diagrams. The origin of magmas and igneous rocks. Igneous processes in the crust and mantle. Metamorphic processes and metamorphic rocks. Metasomatism.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

Albuquerque

322.0 PALEONTOLOGY

1 credit

Prerequisite: Geo 224.1 or 201.0.

Fossils, their nature and mode of preservation. The morphology, classification and stratigraphic ranges of the main groups of invertebrate fossils. Elementary vertebrate paleontology.

Text: R. Moore, *Invertebrate Fossils;* Raup and Stanley, *Principles of Paleontology.*

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

Siddiqui

324.0 STRATIGRAPHY

1 credit

Prerequisite: Geo 224.1 or 201.0.

Principles of stratigraphy. Tectonic evolution of North America. Principles of stratigraphic paleontology; paleoecology; facies; faunal and floral assemblages.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

Hope-Simpson

355.0 (Che 331.0) ANALYTICAL CHEMISTRY FOR CHEMISTS AND GEOLOGISTS

1 credit

Prerequisite: Che 201.1 and Geo 201.0.

An integrated lecture-laboratory course at the intermediate level with emphasis on analytical methods of importance to chemists and geochemists.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

411.0 PETROLOGY

1 credit

The optical properties of minerals. The description and interpretation of igneous sedimentary and metamorphic rocks.

Text: Turner and Verhoogen, *Igneous and Metamorphic Petrology.*

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

Albuquerque

GEOLOGY

413.0 STRUCTURAL GEOLOGY
1 credit

Prerequisite: Geo 224.2 or 201.0.

Primary and secondary structures of rocks; rock deformation; continental evolution; tectonics.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

453.0 IGNEOUS AND METAMORPHIC PETROLOGY
1 credit

Modern concepts and theories of petrogenesis. Study of selected suites of igneous rocks and metamorphic complexes. Igneous rocks, lunar rocks and meteorites.

Text: Turner and Verhoogen, *Igneous and Metamorphic Petrology;* Winkler, *Petrogenesis of Metamorphic Rocks.*

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

Albuquerque

455.0 GEOCHEMISTRY
1 credit

Principles of distribution of elements; geochemical features of geological processes; chemistry of igneous rocks, lunar rocks and meteorites.

Text: K. H. Wedepool, *Geochemistry.*

Classes 3 hrs. a week. 2 semesters.

Albuquerque

457.0 ECONOMIC GEOLOGY
1 credit

The occurrence and classification of ore-deposits; theories of origin; field and laboratory investigations; surface and underground mapping problems.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

462.0 MICROPALEONTOLOGY
1 credit

Principles of Micropaleontology: major groups of micro-fossils and their use in the petroleum industry. Paleoecology and correlation. Techniques of collection, preparation and identification.

Text: F.P.C.M. Van Morkhoven, *Post Palaeozoic Ostracoda;* J. A. Cushman, *Foraminifera.*

Classes 2 hrs. and lab. 3 hrs. a week plus field work. 2 semesters.

Siddiqui

464.0 SEDIMENTOLOGY
1 credit

Minerology, petrography and petrogenesis of the main groups of sedimentary rocks.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

466.0 PETROLEUM GEOLOGY
1 credit

The origin, migration and accumulation of oil and natural gas. Types of oil bearing structures, basic principles in oil exploration, geological and geographical distribution of oilfields.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

513.1 TECTONICS
$1/2$ credit

Prerequisite: 5th year honors standing.

Major geologic structures and tectonic patterns. Ocean basins, ridges and trenches. Plate tectonics. Geosynclines and continental shields. Evolution of the earth.

Classes 2 hrs. and lab 1 hr. a week. 1 semester.

517.0 ADVANCED ECONOMIC GEOLOGY
1 credit

Prerequisite: 5th year honors standing.

Selected topics in economic geology such as physical and chemical aspects of ore formation. Principles of geochemistry in mineral exploration. Detailed studies of well-known examples of mineral deposits, in particular Canadian deposits.

Classes 3 hrs and lab. 3 hrs. a week. 2 semesters.

Dostal

GEOLOGY

519.0   PRECAMBRIAN GEOLOGY

1 credit

Prerequisite: 5th year honors standing or permission of Department.

General characteristics of Precambrian rocks throughout the world. The lithology, tectonics and chronology of the Canadian Precambrian shield. Evolution of the early crust of the earth. Special problems of Precambrian geology.

Classes   3 hrs. and lab. 3 hrs a week. 2 semesters.

Albuquerque, Dostal

540.1   SPECIAL TOPICS IN GEOLOGY

$1/2$ credit

Prerequisite: 5th year honors standing and 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   3 hrs. a week. 1 semester.

Staff

550.0   HONORS PROJECT

1 credit

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.

Staff

The following courses in Geology will be offered in 1976-77:

Geo 111.0	Geo 211.1	Geo 224.2	Geo 457.0
Geo 201.1	Geo 213.2	Geo 311.0	Geo 517.0
Geo 202.2	Geo 222.1	Geo 324.0	Geo 519.0
			Geo 550.0

The following courses in Geology will not be offered in 1976-1977:

Geo 204.0	Geo 411.0	Geo 455.0	Geo 466.0
Geo 322.0	Geo 413.0	Geo 462.0	Geo 513.1
Geo 355.0	Geo 453.0	Geo 464.0	Geo 540.1

HISTORY

Chairman, Assistant Professor   W. Mills
Professors   S. Bobr-Tylingo, J. R. MacCormack
Associate Professors   R. Bollini, M. Sun
          G. F. W. Young
Assistant Professors   R. H. Cameron, E. Haigh
          C. Howell, B. Kiesekamp
          R. Twomey

Departmental Policy
To obtain a major concentration in history, a student must have at least six university courses in history. The program 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's Office for enrolment in that program after their first year at the University.

All students majoring in history are strongly advised to take two university courses in a foreign language. In the case of students concentrating in Canadian History, French is specified as the recommended language.

General Course Description

(a) All history courses are full year courses with one credit.

(b) History courses numbered on the 100 and 200 levels are survey courses open to students with no university credits in the subject. They are normally lecture courses; some combine lectures with small tutorial group meetings.

(c) To register for a course on the 300 level, a student must normally have at least one university course in history, though it need not necessarily be in the same area of the discipline. 300 level courses are usually structured to consist of both lectures and seminars.

(d) History courses on the 500 level are normally seminar courses designed for advanced work by history majors and honors students in their junior and senior years, and for M.A. candidates.

(e) History courses on the 600 level are graduate courses. Courses on the 300 level may often be taken for graduate credit and are designated as having two numbers in the Calendar; for example, 340.0 (640.0). Graduate students taking such courses will be expected to attain a higher level of achievement and may be required to do additional assignments.

120.0   HISTORY OF CIVILIZATION

1 credit

A survey of world history from the origin of civilization, ca. 3000 B.C. to the 20th century A.D. The course will focus on the macro-historical development of such civilizations as the ancient Egyptian and Mesopotamian, Greco-Roman and Persian, Islamic and European; on their interaction with each other and with their 'barbarian' frontiers.

Classes   3 hrs. a week. 2 semesters.

Young

121.0   CIVILIZATION IN THE WEST

1 credit

A course designed to explore the origins and development of the characteristic political, legal, and cultural institutions of western civilizations and their impact on other cultures.

Young

122.0   SURVEY OF THE HISTORY OF CANADA

1 credit

A survey course from the earliest times to the present with emphasis on the French regime, its rivalry with Great Britain for control of the Continent, British colonial rule, Confederation, and the development of Dominion status.

Kiesekamp

123.0   SURVEY OF THE HISTORY OF THE UNITED STATES

1 credit

A survey of U.S. history from its colonial beginnings to the present. Attention will be given to central themes from the Revolution to World War II.

Howell

124.0   A HISTORY OF BRITAIN- 1066 TO THE PRESENT

1 credit

This course is a general survey of British civilization from the Anglo-Saxon period to the present. The emphasis falls on significant themes rather than narrative history.

Cameron

HISTORY

203.0   THE TWENTIETH CENTURY
1 credit

An historic 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.

MacCormack, Mills

204.0   EUROPE 1890-1945
1 credit

An introduction to 20th century Europe with particular emphasis on the diplomatic and military background of the first and second world wars.

Bobr-Tylingo

209.0   MODERN EAST ASIA
1 credit

China and Japan in the 19th and 20th centuries as they confront the modern west, with special emphasis on the contrast between China's response and that of Japan.

Sun

210.0   A SURVEY OF THE HISTORY OF LATIN AMERICA
1 credit

A survey of Latin American history from the pre-Columbian Amerindian civilizations to the present day. Such topics as the era of exploration and discovery, the colonial society, the independence, the 19th century, and the political and social revolutions of the 20th century will be considered.

Young

211.0   ~~Origins of~~ HISTORY OF SCIENCE

212.0   THE HISTORY OF RUSSIA AND THE SOVIET UNION, 882 TO THE PRESENT
1 credit

An introductory survey beginning with the establishment of the Rurik dynasty, with emphasis on Russia's social situation and the way it shaped political developments.

Haigh

218.0 (Phi 318.0)   SCIENCE IN THE WEST SINCE 1500 A.D.
1 credit

A philosophical and historical examination of the major aspects of western science represented in some texts from the 16th century onwards. The roots of modern scientific and technological society will be examined in an interdisciplinary way.

Haigh (and Ansell)

220.0   BRITISH EMPIRE-COMMONWEALTH
1 credit

A study of trends in 18th and 19th century Britain with special emphasis on the practice and theory of imperialism.

Mills

291.0   HISTORY OF INDIA, A.D. 1500 TO PRESENT
1 credit

This course surveys the history of India from A.D. 1526 to 1947. It studies several themes including the rise and fall of the Moghul and the British Empires in India. It examines the impact of the alien cultures and rule on India, the evolution of Indian nationalism, and the uniqueness of the Indian struggle for freedom.

Summer session.

302.0 (602.0)   THE ENLIGHTENMENT
1 credit

The aim of the course is the study of the intellectual revolt which we know as the Scientific Revolution of Western Europe. The point is to examine man's reinterpretation of the natural universe in the context of the philosophical, cultural and social milieu of the 16th, 17th and 19th centuries.

Classes   3 hrs. a week. 2 semesters.

Haigh

303.0 (603.0)   TUDOR AND STUART ENGLAND
1 credit

The history of England, 1485-1660 with special emphasis on the development of the English parliament.

MacCormack

HISTORY

304.0 (604.0)   EUROPE 1815-1945
1 credit

Particular emphasis will be placed on the history of France, the 1848 revolution, the unification of Italy and Germany, and the events leading to World Wars I and II.

Bobr-Tylingo

306.0 (606.0)   MONARCHY AND REVOLUTION
1 credit

Prerequisite: a course in history.

Between 1648 and 1815, the West made its greatest efforts to build a consensus from the remnants of medieval policy and the strengths of the new, analytical ideal. As the culmination of these efforts, the Atlantic revolutions of the last quarter of the 18th century are at the center of this course.

Bollini

311.0 (611.0)   MEDIEVAL ENGLAND
1 credit

The course attempts to trace the evolution and continuity of ideas and institutions in the great formative period of English history.

Cameron

312.0 (612.0)   MEDIEVAL EUROPE
1 credit

The main currents of medieval European history with special emphasis on the intellectual and cultural aspects.

Cameron

315.0 (615.0)   19TH CENTURY BRITAIN
1 credit

A study of society and values in the leading world power of the age.

Cameron

316.0 (616.0)   FOUNDATIONS OF AMERICAN HISTORY: COLONIAL PERIOD TO 1789.
1 credit

A course which is concerned with the founding of the American nation. Attention will be given to colonization, the growth of the Thirteen Colonies, their relationship with Great Britain culminating in the Revolution, and the establishment of the United States of America.

317.0 (617.0)   AMERICA IN THE 19TH CENTURY
1 credit

A course which discusses the growth of the United States from an agrarian, importing nation to an industrial, exporting nation. Emphasis will be on the internal problems of developing the country, the expansion into the West, the Civil War, and the triumphs of the industrialists.

318.0 (618.0)   AMERICA IN THE 20TH CENTURY
1 credit

A course concerned with the rise of financial capitalism and its relationship to the development of the United States as a world power.

Howell

319.0 (619.0)   CANADIAN-AMERICAN RELATIONS
1 credit

This course will examine basic developments in Canadian-American relations. Political as well as social, economic, and religious trends will be analyzed. Some opportunity will be afforded students to use the vast quantity of primary source material at the Public Archives of Nova Scotia.

Howell

320.0 (620.0)   THE ATLANTIC PROVINCES AND NEW ENGLAND 1534-1974
1 credit

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.

Classes   3 hrs. a week. 2 semesters.

Howell

321.0 (621.0)   AFRICA IN THE 19TH AND 20TH CENTURIES
1 credit

A look at some African societies and their values, with some examination of the phenomena of European intrusions, conquests and colonialism, and their impact on African societies.

Mills

129

HISTORY

322.0 (622.0)   SOUTH AFRICA
                                        1 credit
A study of the complex relationships and conflicts arising from different cultures, religions, and skin colors from the 17th century to the "apartheid" state of the mid-20th century.

Mills

323.0 (623.0)   DYNASTIC HISTORY OF
                 CHINA 618-1911
                                        1 credit
A study of society, government and intellectual development in China during the T'ang, Sung, Ming and Ch'ing dynasties, with special attention to factors affecting the rise and decline of dynasties.

Sun

324.0 (624.0)   CULTURAL HISTORY OF
                 JAPAN, 710-1868
                                        1 credit
A study of the evolution of Japanese society and culture from the Nara period to the Tokugawa shogunate in the 19th century. Special emphasis will be placed on the transition from the period of imitation of the Chinese model to the emergence of a characteristically Japanese culture.

Sun

326.0 (626.0)   A HISTORY OF
                 SPAIN AND PORTUGAL
                                        1 credit
A study of the history of Spain and Portugal from their Roman foundations to the present. Special emphasis will be devoted to the period of Spanish imperial preponderance in the 16th Century, and to the ideological conflicts of the 20th Century.

Classes   3 hrs. a week. 2 semesters.

Young

327.0 (627.0)   A HISTORY OF NEW FRANCE
                 TO 1791
                                        1 credit
This course will involve a study of the cultural, social, political, and economic development of the French regime in America. In addition, it will attempt to deal with the immediate consequences of the Conquest insofar as they were reflected in this development.

328.0 (628.0)   A HISTORY OF BRITISH
                 NORTH AMERICA 1763-1867
                                        1 credit
This course will examine the major political, social, economic, religious, and intellectual trends evident in British North America in the period following the Treaty of Paris, 1763. Special attention will be given to the historiography of this period.

329.0 (629.0)   HISTORY OF CANADA 1849-1920
                                        1 credit
This course deals with the problems arising from the attempt to build a British North American nation in the age of Macdonald and Laurier.

Kiesekamp

330.0 (630.0)   NORTH AMERICAN
                 INTELLECTUAL HISTORY
                                        1 credit
An examination of the origins and continuing impact on the North American experience of several key ideas, e.g., the frontier, the character of a good ruler, a sense of national destiny, and nativism.

Classes   3 hrs. a week. 2 semesters.

331.0 (631.0)   THE AMERICAN
                 REVOLUTION, 1763-1789
                                        1 credit
A consideration of the causes and consequences of the American Revolution from several viewpoints, including military, political, social, economic, religious, and the Loyalist experience.

HISTORY

332.0 (632.0)   CANADIAN SOCIAL
HISTORY, 1837-1919

1 credit

An examination of the process and consequences of change in Canada from a rural to an urban society; and of Canadians from independent commodity producers to an industrial proletariat.

Battye

333.0 (633.0)   A HISTORY OF CANADA
IN THE 20TH CENTURY

1 credit

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.

Kiesekamp

334.0 (634.0)   MYTH AND HISTORY:
THE PROBLEM OF
INTERPRETING HUMAN
EXISTENCE

1 credit

Man's search for meaning. The life of man in relation to his own past and that of his communities; the question put to Marc Bloch: "Papa, what good is history?" Students in this course coregister in Rel 306.0.

Bollini

335.0 (635.0)   RESTORATION AND
18TH CENTURY ENGLAND

1 credit

The emphasis will fall on the continuity and development of institutions, procedures and ideas.

Cameron

336.0, 346.0   ENVIRONMENT, INSTITUTIONS
(636.0, 646.0)   AND VALUES IN CANADA AND
THE UNITED STATES DURING
THE 19TH AND 20TH CENTURIES

2 credits

Prerequisite: two courses in history, one of which must be in either Canadian or American history.

Students must register concurrently in 336.0 and 346.0 and will receive two credits. These courses will examine the development of institutions and attitudes in Canada and the United States during the 19th and 20th centuries. Unlike traditional courses in Canada-American relations it will deal with the development of the peculiar North-American life-style. Particular emphasis will be put on the role of the frontier and of religion and ideology in the development of national institutions, national myths, and national consensus.

Students will be expected to utilize primary as well as secondary materials including various literary, philosophical, and religious writings.

Kiesekamp, Howell

337.0 (637.0)   RUSSIA IN REVOLUTION

1 credit

The course will begin with the Decembrist revolt of 1825 and end at the time of Lenin's death when Stalin's rise to absolute power was beginning. It will deal with the social, political and intellectual dissent in response to autocratic intransigence which swept 19th century Russia and finally culminated in the Bolshevik seizure of power.

Some primary sources, including a few relevant novels, will be read in addition to secondary materials.

Haigh

338.0 (638.0)   VALUES AND THE HISTORY
OF FREEDOM IN EAST AND
WEST

1 credit

The course is cross-cultural in character and will place emphasis on the impact of the Judaic, Greek and Christian value systems on the development of free institutions in the west as compared and contrasted with the corresponding impact of Confucian values on Chinese institutions. The object of the course is to provide a historical perspective on contemporary problems relating to human values.

MacCormack

HISTORY

339.0 (639.0)   RUSSIA AND THE U.S.S.R. SINCE 1917

1 credit

The course will deal with Russia and the Soviet Union from the abdication of Tsar Nicholas II to the post-Khruschev period. There will be an attempt 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.

Haigh

340.0 (640.0)   HISTORY OF THE ATLANTIC PROVINCES

1 credit

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 adopting traditional British models of government, settlement, and society to a colonial region.

Keisekamp

341.0 (641.0)   BRITAIN IN THE 20TH CENTURY

1 credit

The course will attempt to outline and to explain the drastic changes which occurred in the international status and social fabric of the United Kingdom in the present century.

Cameron

342.0 (642.0)   CHINA IN REVOLUTION 1850-1950

1 credit

An analysis of the causes and consequences of the various revolutions which have drastically changed the course of modern Chinese history. More specifically, the problems of reform versus revolution, leadership, economic and social injustices, subversive ideology and governmental reactions will be dealt with in detail.

Sun

343.0 (643.0)   TO THE GREAT WAR

1 credit

Between the time of Napoleon and World War I, Europeans came to agree to a remarkable extent on a lexicon of political concepts such as honor, duty, citizen/subject, nation and democracy. This course will examine these and similar concepts, particularly the consensus with respect to war as both a supreme test of the community and the agency of its freedom. Emphasis is on Britain, France and Germany.

Bollini

344.0 (644.0)   A HISTORY OF NOVA SCOTIA

1 credit

This course will examine political, economic and intellectual aspects of Nova Scotian development.

Classes   3 hrs. a week. 2 semesters.

360.0 (Soc 360.0)   SCIENCE AND SOCIETY FROM THE 17TH CENTURY TO THE PRESENT

1 credit

Prerequisite: a course in history or sociology.

An interdisciplinary approach to the development of social and natural sciences. The course will examine the social and intellectual context for the rise of the sciences, their institutionalization, and the interrelationship between the natural and social sciences. Subjects looked at will include the effects of the Newtonian and Darwinian revolutions on biological and societal studies.

500.0   READING COURSES IN HISTORY

1 credit

Prerequisite: consent of the instructor.

Each reading course will be organized by the instructor(s) involved. In general, each course will be centered round a specific theme, and the students will be expected, through their reading, to be familiar with all aspects of the chosen area. Examinations and/or papers will be required at the end of each course.

Staff

HISTORY

501.0 THE PURITAN REVOLUTION AND THE CROMWELLIAN PROTECTORATE

1 credit

Prerequisite: His 303.0.

A pro-seminar with particular emphasis on political and economic changes during the Puritan revolution.

MacCormack

503.0 GERMAN FOREIGN POLICY 1890-1945

1 credit

The history of Germany with special emphasis on German foreign policy.

504.0 BRITISH FOREIGN POLICY 1890-1945

1 credit

Prerequisite: one of His 203.0, 315.0, or consent of the instructor.

Particular emphasis will be placed on Anglo-American relations, the Anglo-French Entente before 1914, and Anglo-German relations 1930-1945. Students will be expected to do considerable research in the diplomatic documents of the period.

MacCormack

508.0 KNOWLEDGE, VALUES AND FREEDOM

1 credit

Prerequisite: a course in either history, philosophy or religious studies, or the consent of the instructor.

An inter-departmental seminar which will explore the connection between knowledge and values in varying historical and cultural contexts as well as the impact of Eastern and Western value systems on the development of free institutions. Students will prepare papers under the guidance of specialists in the given field who will attend the meeting of the seminar at which the paper is presented.

MacCormack

511.0 MODERN EAST ASIA, SELECTED PROBLEMS IN MODERNIZATION

1 credit

Prerequisite: His 209.0.

The influence of the West on the modernization efforts of China and Japan during the 19th and 20th centuries.

514.0 SELECTED TOPICS IN LATIN AMERICAN HISTORY

1 credit

Prerequisite: His 210.0, 326.0 or consent of instructor.

A reading seminar involving an in-depth study and an historiographical research and interpretive paper on a selected period and/or problem in the history of Latin America. The aim of this course is to give students interested in the area a working knowledge of the historiography and an introduction into the problems of original research of the period and/or problem under consideration. While not absolutely required, a reading knowledge of Spanish or Portuguese is strongly desirable.

Young

515.0 DEPARTMENTAL SEMINAR ON HISTORIOGRAPHY

1 credit

Prerequisite: senior or graduate standing.

A course designed to familiarize students with various viewpoints dealing with historical material. Each instructor will present a viewpoint of historiography and invite comments. Students in turn will present papers dealing with related topics.

Staff

521.0 EUROPEAN DIPLOMATIC HISTORY, 1815-1945

1 credit

Selected themes of European diplomacy in the revolutionary period 1821-1863, Italian and German unification, events leading to World War I and the dissolution of the Hapsburg Empire, World War II, and the post-war structuring of Central and Eastern Europe.

Classes 3 hrs. a week. 2 semesters.

Bobr-Tylingo

HISTORY

690.0   THESIS RESEARCH

1 credit

Prerequisite: graduate standing.

The students will be engaged in research for and the writing of an M.A. thesis under the supervision of an advisor. No credit will be granted for this course.

Staff

Cross-Listed Courses.

Some Classics courses are cross-listed as follows:
Cla 303.0 — His 350.0
Cla 304.0 — His 351.0
Cla 305.0 — His 352.0

Certain other courses offered by the Departments of Classics, Anthropology and Religious Studies may, in special circumstances, be cross-listed and counted in a student's history concentration. In those cases, the students should seek the Department's permission.

1. The following courses in History will be offered in 1976-77:

His 120.0	His 210.0	His 317.0	His 333.0
His 121.0	His 211.0	His 318.0	His 334.0
His 122.0	His 212.0	His 319.0	His 340.0
His 123.0	His 291.0	His 320.0	His 343.0
His 124.0	His 304.0	His 321.0	His 515.0
His 203.0	His 312.0	His 326.0	His 521.0
His 204.0	His 315.0	His 331.0	His 690.0
His 209.0			

2. The following courses in History will not be offered in 1976-77:

His 218.0	His 324.0	His 337.0	His 501.0
His 220.0	His 327.0	His 338.0	His 503.0
His 303.0	His 328.0	His 339.0	His 504.0
His 306.0	His 329.0	His 341.0	His 508.0
His 311.0	His 330.0	His 342.0	His 511.0
His 316.0	His 331.0	His 344.0	His 514.0
His 322.0	His 335.0	His 346.0	
His 323.0	His 336.0	His 360.0	

MATHEMATICS

Chairman, Assistant Professor   W. Finden
Professor   D. G. Kabe
Associate Professors   K. Singh, Y.P. Singh
Assistant Professors   F. Chao, M. T. Kiang
       P. Scobey

Mathematics courses listed below include courses intended for math majors as well as so-called 'service' courses designed to meet the needs of students majoring in other departments. Courses in the latter category are Mat 113.0, 117.1(.2), 118.1(.2) and 119.1(.2). These courses are not suitable for math majors.

The major requirements in Mathematics are:

(1) Mat 100.0

(2) Mat 200.0 or 201.0

(3) Mat 311.0

(4) Mat 320.1 and 321.2

(5) Mat 349.0

(6) At least three other math courses chosen in consultation with the Department, giving a total of seven courses at the 200 level or above.

The Department also offers an honors program for math majors of above average ability. Math majors in their sophomore year with an overall grade point average of at least 2.5, and with a grade point average of at least 3.0 in their math courses, should consider enrolling in the honors program and are advised to consult with the Department before making a final decision.

The honors requirements in mathematics are:

(1) the courses given in (1) to (5) above

(2) Mat 330.1 and 331.2

(3) Mat 410.0

(4) At least five other math courses chosen in consultation with the Department, giving a total of eleven courses at the 200 level or above.

Mat 113.0 is normally taken by Commerce students and some psychology students. This course may also serve Arts students who wish to choose a math course to satisfy requirements for a Bachelor of Arts degree.

Mat 117.1 and 118.2 are designed to meet the needs of liberal arts students who desire a math course but do not have a strong background in mathematics.

Mat 119.1 is designed as a service course for departments who wish students to have a knowledge of statistics applied to their own discipline. Normally students learn basic statistical concepts in this course and split up for a second half course given by the individual departments in the winter term.

Mat 225.0, 308.1, 309.2, 408.1 and 409.2 are intended for students interested in computer science and numerical analysis.

Mat 314.0 and 414.0 are intended for students interested in probability and statistics.

Mat 100.0 has replaced Mat 110.1 (.2) and 111.2.* The half courses, Mat 210.1 (.2) and 211.2* have been dropped. Students will now take instead Mat 200.0 or 201.0. Mat 201.0 should be taken by students enrolled in Engineering who have successfuly completed Mat 100.0 or its equivalent to the satisfaction of the Engineering Division. Mat 200.0 should be taken by all other students requiring a first course in calculus. Mat 310.0 has been discontinued.

* For the 1976-77 academic year only, these two half courses will be offered to enable students who have already acquired the first half of the course, to complete the second.

100.0 ALGEBRA AND TRIGONOMETRY

1 credit

Prerequisite: Grade XI Mathematics.

Elementary logic. Set theory and operations on sets. Real numbers and the real line, including interval notation. Inequalities and absolute values. The Cartesian plane and representation of ordered pairs of real numbers. Elements of analytic geometry. Relations, functions, and graphs, with emphasis on the polynomial, trigonometric, exponential, and logarithmic functions. Complex numbers. Sequence and series. Mathematical induction. Permutations, combinations and the binomial theorem. Matrices, determinants, and systems of linear equations.

Classes 3 hrs. plus tutorial 1 hr. a week. 2 semesters.

Staff

111.2 ALGEBRA AND TRIGONOMETRY II

$1/2$ credit

Prerequisite: Mat 110.1 (.2)

This course will be offered for the last time during the 1976-1977 academic year to enable students who have already passed Mat 110.1 (.2) to complete a full course in Mathematics at the 100 level.

MATHEMATICS

113.0   MATHEMATICS FOR COMMERCE STUDENTS

1 credit

Prerequisite: Grade XI Mathematics.

Elementary set theory. Real numbers and the real number line. Inequalities and absolute values. The Cartesian plane and representation of ordered pairs of real numbers. Relations, functions, and graphs with emphasis on polynomial, exponential, and logarithmic functions. Sequences and series. Mathematics of monetary matters. Permutations, combinations, the binomial theorem, and probability. Matrices and systems of linear equations.

Classes   3 hrs. plus tutorial 1 hr. a week. 2 semesters.

Staff

117.1(.2)   MATHEMATICS FOR LIBERAL ARTS PART 1

$^1/_2$ credit

A preparatory course. Emphasis is on the logical and historical development of mathematical ideas. The following topics are included: numeral systems; mathematical statements; contrapositive, converse, and negative statements; necessary and/or sufficient conditions; abstract mathematical systems; and set theory.

Classes   3 hrs. a week. 1 semester.

K. Singh

118.1(.2)   MATHEMATICS FOR LIBERAL ARTS PART II

$^1/_2$ credit

A preparatory course. Emphasis is on applying mathematical ideas and acquiring skills in various mathematical operations. Topics to be discussed will include: a review of operations involving fractions; decimals; factorization and percentage; system of real numbers and its geometrical representation; algebra and geometry of elementary functional forms; limitations on the real numbers B, C involved in the operations A/B, $\sqrt{C}$; absolute values; inequalities; graphs and problems dealing with permutations and combinations.

Classes   3 hrs. a week. 1 semester.

K. Singh

119.1 (.2)   BASIC STATISTICS

$^1/_2$ credit

Prerequisite: Mat 100.0, 111.1 (.2) or 113.0.

This course is designed to impart basic statistical concepts common to applications in a variety of fields. In particular it will deal with the following topics: numerical probability; random variables, discreet distributions; normal distributions; sampling theory; estimation of mean and standard deviations; tests of significance; elementary treatment of linear regression, correlation and analysis of variance.

Classes   3 hrs. plus tutorial I hr. a week. 1 semester.

Scobey

200.0   DIFFERENTIAL AND INTEGRAL CALCULUS

1 credit

Prerequisite: Grade XII Mathematics or Mat 100.0 or Mat 111.1(.2).

Limits and continuity. The derivative, the indefinite integral. The definite integral and the Fundamental Theorem of Calculus. Continuity and its relation to differentiability and integrability. Techniques of differentiation and integration for algebraic, trigonometric, exponential and logarithmic functions. Applications of the derivative and the definite integral. The Mean Value Theorem. The extended Mean Value Theroem and l'Hôpital's Rule. Parametric equations. Derivatives and parametric equations. Integration and parametric equations.

Classes: 3 hrs. plus tutorial 1 hr. a week. 2 semesters.

Staff

MATHEMATICS

201.0   CALCULUS FOR ENGINEERS
1 credit

Prerequisite: Grade XII Mathematics or Mat 100.0 or Mat 111.(.2).

Limits and continuity. The derivative, the indefinite integral. The definite integral and the Fundamental Theorem of Calculus. Continuity and its relation to differentiability and integrability. Techniques of differentiation and integration for all functions. Applications of the derivative and the definite integral, including work, density, mass and moments. The Mean Value Theorem. The extended Mean Value Theorem and l'Hopital's Rule. Parmetric equations. Derivatives and parametric equations. Integration and parametric equations. Vector algebra in the plane. The inner (scaler or dot) product. Vector functions of one variable and their derivatives. Vector velocity and acceleration.

Classes   3 hrs. plus tutorial 1 hr. a week. 2 semesters.

Staff

211.2   INTEGRAL CALCULUS
$^1/_2$ credit

Prerequisite: Mat 210.1 (.2).

This course will be offered for the last time during the 1976-1977 academic year to enable students who have already passed Mat. 210.1 (.2) to complete a full course in Mathematics at the 200 level.

225.0   ELEMENTS OF COMPUTER SCIENCE
1 credit

Prerequisite: Grade XII Mathematics but Grade XI Mathematics also may be acceptable.

Algorithms and flowcharts. Input, output, storage, arithmetic and control. Simple machine language, looping and branching. Computer representation of numbers. Implication of finite word lenghts and order of operations. Overflow and round off. Data representation and storage, data manipulation. Numerical applications, functions and procedures, character strings, roots of equations, maxima and minima, areas, averages, root-mean-square. A study of FORTRAN and its application. TIME-SHARING. Data Processing.

Classes   3 hrs. plus tutorial 1 hr. a week. 2 semesters.

Finden

308.1 (.2)   NUMERICAL ANALYSIS I
$^1/_2$ credit

Prerequisite: Mat 200.0 or 201.0 or 211.1(.2).

A brief introduction to FORTRAN programming. A discussion of errors in numerical analysis. Theoretical and practical consideration of numerical procedures in non-linear equations in one variable including polynomial equations, systems of linear equations, systems of non-linear equations. A brief discussion of vectors, matrices, norms.

Classes   3 hrs. a week. 1 semester.

Finden

309.1 (.2)   NUMERICAL ANALYSIS II
$^1/_2$ credit

Prerequisite: Mat 308.1(.2) or permission of instructor.

Theoretical and practical considerations of numerical procedures in functional approximations, interpolation, least squares and numberical integration.

Classes: 3 hrs. a week. 1 semester.

Finden

311.0   CALCULUS II
1 credit

Prerequisite: Mat 200.0, 201.0 or 211.1(.2).

Review of matrices, determinants and Cramer's Rule. Vector algebra and three dimensional geometry, including an introduction to various coordinate systems (polar, cylindrical, and spherical). Vector calculus in two and three dimensions, including velocity and acceleration. Partial differentiation. Maxima and minima of functions of two variables. Taylor's Theorem in one and two dimensions. Indeterminate forms and l'Hopital's Rule. Infinite sequences and series. Double and line integrals. Improper integrals. Introduction to differential equations, including first order equation and linear equations with constant coefficients. Laplace transforms.

Classes   3 hrs. plus tutorial 1 hr. a week. 2 semesters.

Staff

MATHEMATICS

314.0 INTRODUCTION TO STATISTICS
1 credit

Prerequisite: Mat 200.0, 201.0 or 211.1(.2).

This course is designed to provide a mathematical basis for fundamental statistical concepts. It assumes familiarity with calculus and deals with the following topics: elements of set theory, probability, conditional probability, Bayes-Laplace rule, binomial, hypergeometric, Poisson, multinomial, uniform, exponential, gamma, beta, and normal distributions. Mathematical expectation, moments, generating functions, Chebychev's Theorem, sums and random variables, sampling distributions, chi-square, F and T distribution, point and interval estimation, tests of hypotheses, linear regression and correlation, bivariate normal distribution, the method of least squares. Lab exercises are assigned in class.

Classes 3 hrs. a week. 2 semesters.

Kabe

320.1(.2) LINEAR ALGEBRA I
$^1/_2$ credit

Prerequisite: Mat 200.0, 201.0 or 211.1(.2).

This course is meant to equip the student with the minimal basic techniques of linear algebra. Topics to be covered include: a complete discussion of linear equations over a field; matrices and their inverses; vector spaces and subspaces; bases, dimension, and coordinates; linear transformations and their representation by matrices; a brief introduction to inner product spaces.

Classes 3 hrs. a week. 1 semester

Y. P. Singh

321.1(.2) LINEAR ALGEBRA II
$^1/_2$ credit

Prerequisite: Mat 320.1(.2).

This course is intended as a continuation of Mat 320.1(.2) and presents further concepts and techniques of linear algebra. Topics to be covered include determinants, Cramer's rule, minimal polynomials and the Cayley-Hamilton theorem, canonical forms under similarity, further discussion of inner product spaces, bilinear and quadratic forms.

Classes 3 hrs. a week. 1 semester.

Y. P. Singh

330.1(.2) ABSTRACT ALGEBRA I
$^1/_2$ credit

Prerequisite: Mat 200.0, 201.0 or 211.1(.2).

This course introduces the student to a study of formal algebraic systems with emphasis on group theory and mappings that preserve operations. Topics to be covered include sub-groups, cyclic groups, permutation groups, cosets and factor groups, isomorphisms and homomorphisms and discussion on obtaining more specialized systems from groups by adding axioms.

Classes 3 hrs. a week. 1 semester.

Kiang

331.1(.2) ABSTRACT ALGEBRA II
$^1/_2$ credit

Prerequisite: Mat 330.1(.2).

This course is a continuation of Mat 330 and discusses additional algebraic structures. Topics is to be covered include rings and ideals, integral domains, Euclidean, principal ideal and unique factorization domains, fields and field expansions.

Classes 3 hrs. a week. 1 semester.

Kiang

349.0 ANALYSIS I
1 credit

Prerequisite: Mat 200.0, 201.0 or 211.1(.2).

Sets, functions, and relations, real numbers field; the least upper bound axiom; countability, sequences and subsequences, accumulation points, metric spaces, continuous functions, compactness and connectedness, series of functions, uniform convergence, integration.

Classes 3 hrs. a week. 2 semesters.

Chao

408.1(.2) ADVANCED NUMERICAL ANALYSIS I
$^1/_2$ credit

Prerequisite: Mat 309.1(.2) or permission of instructor.

Theoretical and practical considerations of numerical analysis in the eignevalue-eigenvector problem and in the solutions of ordinary differential equations.

Classes 3 hrs. a week. 1 semester.

Finden

MATHEMATICS

409.1(.2)   ADVANCED NUMERICAL ANALYSIS II

½ credit

Prerequisite: Mat 408.1 (.2).

Theorectical and practical considerations of numerical analysis in the solutions of ordinary and partial differential equations.

Classes   3 hrs. a week. 1 semester.

Finden

410.0   CALCULUS III

1 credit

Prerequisite: Mat 310.0 or 311.0.

Review of vector algebra. Differential and integral vector calculus, including the integral theorems of Green, Gauss, and Stokes. The general notion of a differentiable function and the relation between the general derivative and the directional derivative. The Jacobian and its relation to volume and orientation. Implicit functions. Some advanced notions of series, including uniform convergence, Fourier series, and double series. Convergence of improper integrals in one and two dimensions and functions defined by such integrals.

Classes   3 hrs. a week. 2 semesters.

Scobey

414.0   MATHEMATICAL STATISTICS

1 credit

Prerequisite: Mat 310.0 or 311.0.

This course is intended to provide a deeper insight into the mathematical foundations of statistical theories. Topics to be examined are: non-parametric methods, parametric estimation and tests of hypotheses, elements of sampling theory, analysis of variance and related design of experiments. Lab exercises are assigned in class.

Classes   3 hrs. a week. 2 semesters.

Kabe

425.0   ORDINARY AND PARTIAL DIFFERENTIAL EQUATIONS

1 credit

Prerequisite: Mat 310.0 or 311.0.

Classical techniques of solving first and second order equations, systems of equations, series solutions, transform methods, introductions to partial differential equations and discussion of simple types.

Classes   3 hrs. a week. 2 semesters.

Y. P. Singh

435.0   THEORY OF FUNCTIONS OF A COMPLEX VARIABLE

1 credit

Prerequisite: Mat 310.0 or 311.0.

A complex plane. Elementary transformations and mapping, analytic functions, branch points and cuts, infinite series and uniform convergence, conformal mapping, complex integration, Cauchy's theorem, residues, Liouville's theorem and the fundamental theorem of algebra.

Classes   3 hrs. a week. 2 semesters.

445.0   INTRODUCTORY OPERATIONS RESEARCH

1 credit

Prerequisite: Mat 310.0 or 311.0 and (or concurrently) Mat 320.1(.2).

The first half of the course will be devoted to a thorough discussion of linear programing, including geometry of convex sets in n-dimensional space, a theoretical development of the simplex algorithm, and duality. Approximately one half of the second semester will be devoted to dynamic programing, with the remainder of the term taken up by special topics to be selected from game theory and its relation to linear programing, transportation problems, network problems, decomposition of linear programing problems, integer programing, queuing theory, classical optimization theory, calculus of variations. The selection of topics will vary from year to year, depending on the interst of the students.

Classes   3 hrs. a week. 2 semesters.

Kabe

MATHEMATICS

449.0   ANALYSIS II

1 credit

Prerequisite: Mat 349.0.

An advanced study of sets, sequences, and functions, including: measurable functions and measures; Lebesgue integration and Lebesgue integrable functions; relation between Lebesgue integration and Riemann integration; Lp spaces; modes of covergence; properties of functions of bounded variation; decomposition and generation of measures.

Classes   3 hrs. a week. 2 semesters.

456.1(.2)   INTRODUCTION TO APPLIED
MATHEMATICS I

$^1/_2$ credit

Prerequisite: Mat 311.0 or concurrently with Mat 425.0.

Review of methods of solving ordinary differential equations. The Frobenius method of solution by series, with applications to the Bessel, Legendre, and other equations. Beta and gamma functions. Orthogonal functions and eigenvalue problems. The Sturm-Liouville problem and eigenfunction expansions. Laplace transforms. Vector analysis with line and surface integration.

Classes   3 hrs. a week. 1 semester.

K. Singh

457.1(.2)   INTRODUCTIONS TO APPLIED
MATHEMATICS II

$^1/_2$ credit

Prerequisite: Mat 311.0 or concurrently with Mat 425.0.

Theory of functions of complex variables, Fourier series and integrals, solutions of partial differential equations and their transformation to curvilinear coordinate systems.

Classes   3 hrs. a week. 1 semester.

K. Singh

The following courses in Mathematics will be offered in 1976-77.

Mat 100.0	Mat 330.1 and 331.2
Mat 111.2	Mat 314.0
Mat 113.0	Mat 349.0
Mat 119.1	Mat 408.1 and 409.2
Mat 200.0	Mat 410.0
Mat 201.0	Mat 425.0
Mat 211.2	Mat 435.0
Mat 225.0	Mat 445.0
Mat 308.1 and 309.2	Mat 449.0
Mat 311.0	Mat 456.1 and 457.2
Mat 320.1 and 321.2	

The following courses in Mathematics will not be offered in 1976-77.

Mat 117.1 and 118.2	Mat 414.0

MODERN LANGUAGES

DEPARTMENT
OF MODERN LANGUAGES

French — German — Spanish — Chinese

Chairman, Associate Professor	L. Batiot

French

Associate Professors	F. Pepin, G. LePierrès, J. Mackriss
Assistant Professors	G. Patterson, A. Murphy

German

Associate Professor	R. Nahrebecky

Spanish

Assistant Professor	A. J. Farrell

Chinese

Part-time Instructor	G. Leung

DEPARTMENTAL POLICY

A — GENERAL

1. French 100.0 is open both to students who have never taken French and to students covered under General Course Description, paragraph 2.

2. Placement test: See General Course Description, paragraph 2.

B — MAJOR CONCENTRATION

1. The major program in Spanish and German will be worked out in consultation with the professor concerned.

2. To obtain a major concentration in French, a student is required to have six university credits in French beyond Fre 200.0.

3. Two options are open to students in choosing their major concentration in French:
Option A — Language and Civilization
Option B — Language and Literature

The following courses are available to students in each of the options:
OPTION A:

Fre 240.0 or 250.0 (required)	Fre 418.0
Fre 301.0 (required)	Fre 421.0
Fre 310.1 and 311.2	Fre 422.0
Fre 413.0	Fre 423.0
	Fre 424.0
	Fre 425.0

OPTION B

Fre 240.0 or 250.0 (required)	Fre 419.0
Fre 300.0 (required)	Fre 420.0
Fre 301.0	Fre 421.0
Fre 414.0	Fre 422.0
Fre 415.0	Fre 423.0
Fre 416.0	Fre 424.0
Fre 417.0	Fre 425.0

A student choosing Option A, may, however, with the approval of the Department, take some courses included in Option B, and vice-versa. Exceptions to required courses can be made to suit the needs of individual students.

4. The courses at the fourth year level will be offered by rotation, except 421.0 which is offered every year.

C — HONORS

The Honors program in French, German and Spanish is predicated on the regulations of the Faculty of Arts. Two of the courses to be taken in French are compulsory: Fre 300.0 and Fre 500.0.

GENERAL COURSE DESCRIPTIONS

1. All Chinese, French, German, and Spanish courses are full year with one credit.

   N.B. French 310.1 and 311.2 are complementary courses, one of which cannot be taken without the other.

2. All students with Junior or Senior Matriculation are asked to register in Fre 200.0.

   A placement test will be administered during the first week of class. Its purpose is to determine which of the four courses (Fre 100.0, 220.0, 240.0, 250.0) best meets the needs of the individual student.

   Students who have already taken a university course in French at another university are asked to consult the Department before registering for a course in French.

3. The courses at the 500.0 level are seminar courses involving research; they include formal tutoring for the presentation of a thesis.

MODERN LANGUAGES — FRENCH

100.0 INTRODUCTION TO THE FRENCH LANGUAGE

1 credit

A course for students beginning the study of French. The basic structures of the language will be studied, with special emphasis on the oral aspect.

Note: See Departmental Policy A — GENERAL, paragraph 1, and GENERAL COURSE DESCRIPTION, paragraph 2.

Texts: G. Mauger, *Cours de langue et de civilisation française* Vol. 1, Part I (Hachette).

Classes 3 hrs. and lab three ½ hrs. a week. 2 semesters.

Staff

200.0 INTRODUCTION TO UNIVERSITY FRENCH

1 credit

Prerequisite: Placement test.

An introduction to university French combining audio-visual methods with a wide variety of written materials supported by grammatical studies. The aim of the course is to expand the student's oral proficiency and develop his reading ability. The course also includes the writing of short compositions.

Classes 3 hrs. plus lab and/or tutorials three ½ hrs. a week. 2 semesters.

Staff

240.0 INTERMEDIATE UNIVERSITY FRENCH

1 credit

Open to students who have a good knowledge of French, although oral proficiency is not a prerequisite. Students successfully completing Fre 240.0 may, with permission of the Department, continue as majors.

An oral and written approach to French, including composition, translation, conversation and a review of grammar based on contemporary texts.

Texts: G. Mauger, *Cours de langue et de civilisation française* Vol. 2, Part I (Hachette) and/or material prepared by the Department.

Classes 3 hrs. plus lab and/or tutorials three ½ hrs. a week. 2 semesters.

250.0 ADVANCED UNIVERSITY FRENCH

1 credit

Prerequisite: Placement test.

Oral and written French, including composition, translation, conversation and a review of grammar based on contemporary texts. This is an intensive course designed for students with a strong background in French.

N.B. Required of all majors.

Texts: G. Mauger, *Cours de langue et de civilisation française* Vol. 2, Part I (Hachette) and/or material prepared by the Department.

Classes 3 hrs. plus lab and/or tutorials three ½ hrs. a week. 2 semesters.

Batiot

300.0 THE PRINCIPAL THEMES OF FRENCH LITERATURE

1 credit

Prerequisite: Fre 220.0 or permission of the Department.

A study of the main themes in French literature from the *Chanson de Roland* to modern times. Special attention will be given to the relationship between society and literature.

N.B. This course is the prerequisite for all students who intend to take courses in French literature at either the 300 or the 400 level; compulsory for honors students and open to all others with permission of the Department.

Texts: Nelson and Oxen-Handler, *Aspects of French Literature* (Appleton-Century-Crofts). *Harrap's French-English Dictionary is recommended.*

Classes 3 hrs. a week. 2 semesters.

Pepin

MODERN LANGUAGES — FRENCH

301.0 ADVANCED CONVERSATION AND CULTURAL STUDIES

1 credit

Prerequisite: Fre 240.0 or 250.0.

A practical course intended to continue the development of the student's ability to speak and write French. Contemporary written texts will provide a basis for discussions and compositions of cultural and literary topics. Grammatical points will be detailed as necessary through translation and other exercises. This course is obligatory for students following Option A.

Texts: G. Mauger, *Cours de langue et de civilisation française*. Vol. 2, Part 2 (Hachette) and/or material prepared by the department.

Classes 3 hrs. plus lab and/or tutorials three ¹/₂ hrs. a week. 2 semesters.

Batiot, LePierrès

303.0 ACADIAN CIVILIZATION

1 credit

A general survey of the birth and evolution of Acadian society through a study of literary genres including poetry, novels, short stories, chronicles, folklore, oral tradition, and artistic modes of expression other than literature.

Classes 3 hrs. a week. 2 semesters.

310.1 FRENCH PHONETICS

¹/₂ credit

An introduction to articlatory phonetics with application to French. Standard (International) French will be used as a reference point. Certain regional and dialectal differences will be considered. The objective of the course is to increase pronunciation skills.

N.B. Strongly recommended for students considering a teaching career in French.

Classes 3 hrs. and lab two ¹/₂ hrs. a week. 1 semester.

Patterson

311.2 HISTORY OF THE FRENCH LANGUAGE

¹/₂ credit

Prerequisite: Fre 310.0 or Egl 305.0 or 350.0.

An introduction to the history of the French language. The major trends in the evolution of French from Latin to modern times will be examined. Special attention will be given to dialect change and French in North America. Aspects of phonetics, morphology and syntax will be included, together with abbreviated discussion of the social context for language change as manifested in the history of French.

Classes 3 hrs. a week. 1 semester.

Patterson

413.0 FRENCH CIVILIZATION

1 credit

An in-depth study of France and the fundamental aspects of French life and culture, history, geography, contemporary political institutions, educational system, social and artistic life. Special attention will be paid to the capital of France. Lectures, readings and discussions. The topic will often be illustrated with slides and films.

Text: Marc Blancpain and Jean-Paul Couchoud, *La civilisation française* (Hachette).

Classes 3 hrs. a week. 2 semesters.

LePierrès

414.0 EVOLUTION OF THE FRENCH NOVEL

1 credit

An examination of the principal stages in the development of the French novel.

Texts: La Fayette, *La Princesse de Clèves;* Abbé Prévost, *Manon Lescaut;* Balzac, *Eugénie Grandet;* Stendhal, *Le Rouge et le noir;* Flaubert, *Madame Bovary;* Proust, *Du côté de chez Swann*.

Summer reading is strongly advised.

Classes 3 hrs. a week. 2 semesters.

Murphy

MODERN LANGUAGES — FRENCH

415.0   THE FRENCH THEATRE
1 credit

A study of some of the major works of French dramatic literature.

Texts: Corneill, *Le Cid;* Molière, *Don Juan;* Racine, *Phèdre;* Marivaux, *Le Jeu de l'amour et du hasard;* Beaumarchais, *Le Mariage de Figaro;* Musset, *On ne badine pas avec l'amour;* Sartre, *Huis clos;* Beckett, *En attendant Godot.*

Classes   3 hrs. a week. 2 semesters.

Mackriss

416.0   POETRY IN FRANCE
1 credit

Prerequisite: a 300 level course in French or permission of instructor.

An introduction to the various poetic forms of the 16th, 17th and 18th centuries, including a brief survey of French versification, followed by an intensive study and concentration of the *Romantic, Parnassian and Symbolist* movements in the poetry of the 19th century up to the first World War.

N.B. This course will familiarize students with the form and content of French poetic diction and prosody.

Text: Pierre Seghers, *Le Livre d'or de la poésie française.* (Marabout - Paris - Montréal).

Classes   3 hrs. a week. 2 semesters.

Mackriss

417.0   FRENCH CANADIAN POETRY
1 credit

Prerequisite: a 300 level course in French or permission of instructor.

Based on an in-depth study of the works of contemporary poets, this course will deal with the technical means of aesthetics to determine the characteristics of poetry as a literary genre. The texts themselves and the relevant critique are used with a view to determining the evolution of a critical theory of our poetry.

N.B. This course will be complemented by a workshop of literary creativity and seminars.

Texts: (Reference): Pierre de Grandpré, *Historie de la littérature française du Québec* (Beauchemin).
(Analysis) M. Colin and J. V. Théberge, *Terre de Québec* (Renouveau Pedagogique).

Classes   3 hrs. a week. 2 semesters.

Pepin

418.0   THE CIVILIZATION OF FRENCH CANADA
1 credit

Prerequisite: a 300 level course in French.

This course will provide a detailed study of various aspects of the civilization of French Canada: its language, literature, religion, and major historical events as well as an analysis of the achievements in music, art, science and education, and of the current trends in the theatre, cinema, radio and television. Excursions.

Text: L. Lamontagne, *Visages de la civilisation au Canada français* (Les Presses de l'Université Laval).

Classes   3 hrs. a week. 2 semesters.

Pepin

419.0   FRENCH CANADIAN NOVEL
1 credit

Prerequisite: a 300 level course in French.

A study of the origins until 1930. Comparative development of the Canadian novel and popular tradition. The course is also designed to acquaint students with the ideas of writers from 1930 to the present day.

Texts: (Reference) Pierre de Grandpré; *Histoire de la littérature française du Québec* (Beauchemin).

Texts: (Analysis) Guèvrement, *Le Survenant* (Fides) Gabrielle Roy, *La Montagne secrète* (Beauchemin) M. C. Blais, *Les Voyageurs sacrés* (HMH) C. Martin, *Doux-Amer* (Cercle du Livre de France, Poche).

Classes   3 hrs. a week. 2 semesters.

Pepin

420.0   20TH CENTURY NOVEL
1 credit

In the 20th century the novel has become the most prominent, if not the most significant, literary genre. What is the secret of its appeal for the modern sensitivity? The novels to be studied in this course, reflecting as they do both the depth and the diversity of the form, may provide an answer to this question.

Texts: Proust, *A la recherche du temps perdu;* Gide, *Les Faux-Monnayeurs;* Mauriac, *Noeud de vipères;* Céline, *Voyage au bout de la nuit;* Malraux, *La Condition humaine;* Camus, *L'Etranger;* Butor, *La Modification.*

Classes   3 hrs. a week. 2 semester.

Murphy

MODERN LANGUAGES — FRENCH

421.0   COMPARISON OF ENGLISH AND FRENCH STYLISTICS

1 credit

Prerequisite: Fre 301.0.

A course designed to increase the student's knowledge of French beyond vocabulary and grammar and to enable him to grasp the divergence as well as the points of contact between the two languages by means of exercises and class discussion. These include vocabulary expansion by word formation, derivation, synonymy and idiomatic structures. This course will introduce the student to problems of English-French translation.

Classes   3 hrs. a week. 2 semesters.

Patterson

422.0   TECHNIQUES OF ESSAY WRITING

1 credit

Prerequisite: Fre 300.0, 301.0 or equivalent.

The purpose of the course is to aid the student in his ability to write in French on topics of various nature. Practical exercises on the structure of the basic paragraph and the relation of paragraphs as vehicles of thought within the total structure of an essay.

Texts: Dassonville, Michel, *La dissertation littéraire;* Dassonville, Michel, *L'analyse de texte;* Beaugrand, J. *Manuel pratique de composition française.*

Classes   3 hrs. a week. 2 semesters.

Pepin

423.0   INDEPENDENT STUDY

1 credit

Prerequisite: consent of instructor.

A tutorial course open to students who wish to study a particular subject or author largely through independent reading and research. Registration to this course is made after consultation with a member of the department who will organize the program of studies.

Staff

424.0   SPECIAL AUTHOR

1 credit

Prerequisite: permission of instructor.

A tutorial course open to students who wish to study a particular author largely through independent reading and research. Registration to this course is made after consultation with a member of the department who will organize the program of studies.

Classes   2 hrs. a week plus tutorials. 2 semesters.

Staff

425.0   THE FRENCH SHORT STORY

1 credit

Prerequisite: a 300-level course in French or permission of instructor.

A wide variety of short stories from the eighteenth century to the present day intended to give the student insight into France's political, ideological and social life. Discussions and fortnightly essays.

Classes   3 hrs. a week. 2 semesters.

Batiot

500.0   LITERATURE AND CRITICISM

Prerequisite: admission to the honors program.

Weekly seminars to be given by members of the Department on selected literary themes and problems.

501.0   HONORS THESIS

The course will involve the preparation of a thesis of approximately fifty pages on a literary subject of the student's choice. A supervisor will be delegated by the Department. The thesis must be ready for submission by March 15 of the academic year.

Text: Dassonville, Michel, *Initiation à la recherche littéraire* (Université Laval).

YEAR OF STUDY ABROAD: ANGERS

Saint Mary's University has entered into an arrangement whereby qualified students have the opportunity to study at the Catholic University of the West in Angers, France. Permission to participate in this program is granted by the Dean of Arts, the Chairman of the student's area of concentration, and the Chairman of the Modern Languages Department. Usual registration procedures are to be followed, except that tuition fee payments must be made directly to the University of the West.

MODERN LANGUAGES — GERMAN

100.0 INTRODUCTION TO THE GERMAN LANGUAGE

1 credit

An introductory language course for those beginning the study of German. Basic linguistic structures will be studied with particular emphasis on the oral aspects.

Text: Erika Meyer, *Elementary German* (Houghton Mifflin Co.) Second Edition.

Classes 4 hrs. a week. 2 semesters.

200.0 INTERMEDIATE GERMAN

1 credit

Prerequisite: Ger 100.0.

This course presents an intensified study of grammar and syntax and the reading of German texts.

Texts: Emory E. Cochran, *A Practical German Review* (Prentice-Hall); Two short biographies by C. R. Goedsche and W. E. Glaettli, *Thomas Mann and Mozart* (American Book Co.).

Classes 4 hrs. a week. 2 semesters.

250.0 GERMAN LITERARY PROSE

1 credit

The aim of this course is to familiarize the student with the artistic qualities of German literary prose. Summaries, compositions and short essays will be written.

Classes 2 hrs. a week. 2 semesters.

300.0 MODERN GERMAN LITERATURE

1 credit

Prerequisite: Ger 250.0 or equivalent.

A study of trends in modern German literature (Naturalism, Impressionism and Expressionism).

Classes 2 hrs. a week. 2 semesters.

301.0 THE ROMANTIC AGE

1 credit

Prerequisite: Ger 250.0 or equivalent.

The purpose of this course is to provide the student with an understanding of the characteristic traits of German poetry and prose in the Romantic Age.

Texts: Poems, tales and historic tales by L. Tieck, Novalis, H. von Kleist, C. Brentano, A. von Arnim, A. von Chamisso, E. T. A. Hoffman, L. Uhland, J. von Eichendorff and H. Heine will be read and discussed.

Classes 2 hrs. a week. 2 semesters.

400.0 GERMAN CONTEMPORARY LITERATURE

1 credit

Prerequisite: Ger 250.0 or equivalent.

A study of significant prose and dramatic works in German literature from 1945 to the present. A selection of works by Max Frisch, Heinrich Böll, Friedrich Dürrenmatt and Günter Grass will be studied and discussed.

Classes 2 hrs. a week. 2 semesters.

MODERN LANGUAGES — SPANISH

101.0 INTRODUCTION TO THE SPANISH LANGUAGE

1 credit

Designed to offer a firm initial competency in speaking and writing Spanish. This course requires regular attendance and a willingness to participate.

Text: Lamadrid, Bull, and Briscoe, *Communicating in Spanish, Level One* (Houghton Mifflin), and *CIS Workbook, Level One* (Houghton Mifflin).

Classes 3 hrs. and lab three $1/2$ hrs. a week. 2 semesters.

Farrell

201.0 INTERMEDIATE SPANISH

1 credit

Prerequisite: Spa 101.0 or Spanish matriculation.

A continuation of elementary Spanish, with emphasis on conversation and reading. The second term offers an introduction to modern Latin-American fiction. The evening section is expressly designed for students who have used *Communicating in Spanish* during their first year.

Texts: Crispin and Crispin, *Progress in Spanish* (Scott, Foresman), or Lamadrid, Bull, and Briscoe, *Communicating in Spanish*, Level One (Houghton Mifflin), and *CIS Workbook, Level One* (Houghton Mifflin).

Anderson-Imbert and L. B. Kiddle, *20 cuentos hispanoamericanos del siglo veinte* (Prentice-Hall).

Classes 3 hrs. a week, plus language laboratory. 2 semesters.

Farrell

300.0 SPANISH CULTURE AND CIVILIZATION

1 credit

Prerequisite: Spa 201.0 or equivalent.

A survey of historical and social developments. Geography and history with regard to literature, fine arts, architecture, painting and music.

N.B. This course is compulsory for majors and honors students.

Classes 3 hrs. a week. 2 semesters.

301.0 REPRESENTATIVE FORMS OF HISPANIC LITERATURE

1 credit

Prerequisite: a 200-level course in Spanish.

An overview of Spanish and Latin-American literary forms — poetic, narrative, and dramatic — from the Middle Ages through the present day. The autobiography, short story, and prose poem will be considered.

Classes 3 hrs. a week. 2 semesters.

Farrell

302.0 PROSE AND STYLISTICS

1 credit

Prerequisite: Sound knowledge of Spanish grammar.

This course examines various literary styles with the aims of increasing oral skills and of developing competence in written composition.

Texts: Charles Olstad and Leo Barrow, *Creative Spanish*, 2nd ed., (Harper and Row). Other texts to be announced.

Classes 2 hrs. a week. 2 semesters.

305.0 CERVANTES AND PRE-CERVANTINE SPANISH LITERATURE

1 credit

Prerequisite: Spa 201.0.

A two-semester course devoted to Cervantes and to exploring the various types of literature in Spain which were synthesized and transcended in his *Don Quijote*. The first semester examines in detail the literary background of 16th century Spain and the most representative prose works of that period, while the second concentrates on *Don Quijote*.

Texts: *Lazarillo de Tormes*. (University of Wisconsin Press), Jorge de Montemayor, *La Diana*, (Clasicos Castellanos), *El abencerraje y la hermosa Jarifa*, (Anaya); Mateo Aleman, Guzman de Alfarache, (Ebro); C. Colin Smith, *Spanish Ballads*, (Pergamon Press) Miguel de Cervantes, *Don Quijote de la Mancha* (Juventud).

Classes 3 hrs. a week. 2 semesters.

Farrell

MODERN LANGUAGES — SPANISH

310.0   THE PICARESQUE NOVEL

1 credit

Prerequisite: Spa 201.0 or equivalent.

The study of literary mode which is vigorously represented in Spanish literature, with emphasis on its historical background and aesthetic features.

Texts: *Lazarillo de Tormes* (University of Wisconsin Press); Mateo Aleman, *Guzmàn de Alfarache* (Ebro); Francisco Quevedo, *El buscon* (Ebro); selections from other writers.

Classes   2 hrs. a week. 2 semesters.

400.0   THE GENERATION OF 1898

1 credit

Prerequisite: a 300 level course in Spanish.

A survey of the principal works of a literary generation which emerged at the close of the 19th century.

Texts: A selection of readings from Ganivet, Clarin, Ortegay Gasset, Unamuno; reference will be made to other writers.

Classes   3 hrs. a week. 2 semesters.

402.0   CONTEMPORARY LATIN-AMERICAN LITERATURE

1 credit

Prerequisite: a 300 level course in Spanish or equivalent. Open to majors and honors students only.

The course examines a selection of the principal literary movements and works in 19th and 20th century Spanish American literature. In the first term, attention is directed to romanticism, gauchesque literature, and the cultivation of the short story and of the novel. The beginnings of Modernism and the poetic activity of the 20th century are explored during the second term.

Texts: Selections from Echeverria, Heredia, Acuna, Palma, Hernandez, Güiraldes; Mariano Azuela, *Los de abajo* (F.C.E.), Horacio Quiroga, *A la deriva* (C.E.A.L.), Eduardo Barrios, *El hermano asno* (Las Américas), Rubén Dario, *Cantos de vida y esperanza* (Anaya), selections from Julian del Casal and José Asuncion Silva.

Classes   3 hrs. a week. 2 semesters.

405.0   20TH CENTURY SPANISH LITERATURE

1 credit

Prerequisite: a 300 level course in Spanish.

An examination of the poetry, drama, and novel of 20th century Spain.

Texts: Readings from Lorca, Laforet, Cela, Arrabal and other writers.

Classes   2 hrs. a week. 2 semesters.

406.0   THE SPANISH THEATRE

1 credit

Prerequisite: a 300 level course in Spanish.

A study of works representing various types of Spanish dramatic literature, from medieval times to the present.

Texts: Readings from Juan del Encina, Gil Vicente, Lope de Rueda, Lope de Vega, Calderon de la Barca, Ramon de la Cruz, Leandro Fernandez de Moratin, José Zorrilla, Antonio Buero Vallejo, and Fernando Arrabal.

Classes   3 hrs. a week. 2 semesters.

Farrell

MODERN LANGUAGES — CHINESE

100.0(CE)

1 credit

An introduction to spoken and written modern Chinese (Mandarin). Conversational drill and comprehension exercises in classroom and laboratory provide practice in pronunciation and in the use of the basic patterns of speech. The Chinese ideographs are introduced and studied in combinations. Reading progresses from prepared materials to selections from contemporary writings, including the newspaper.

Leung

200.0(CE)   INTERMEDIATE MODERN
                   CHINESE

1 credit

Prerequisite: Chi 100.0.

A continuation of Chinese 100.0, this course is intended to develop proficiency in both oral and written Chinese with emphasis on comprehension. Textbooks, newspapers, magazines, and modern short stories will be extensively used, especially in the second semester, to help students acquire the ability to read and write. The abbreviated forms used in the People's Republic of China will also be introduced.

Leung

The following courses in Modern Languages will be offered in 1976-77:

Chinese
Chi 100.0

French
Fre 100.0	Fre 300.0	Fre 414.0	Fre 422.0
Fre 200.0	Fre 301.0	Fre 415.0	Fre 423.0
Fre 240.0	Fre 310.1	Fre 419.0	Fre 424.0
Fre 250.0	Fre 311.2	Fre 421.0	Fre 425.0

German
Ger 100.0	Ger 200.0	Ger 250.0	Ger 300.0

Spanish
Spa 101.0	Spa 201.0	Spa 301.0	Spa 406.0

The following courses in Modern Languages will not be offered in 1976-77:

Chinese
Chi 200.0

French
Fre 303.0	Fre 416.0	Fre 418.0	Fre 422.0
Fre 413.0	Fre 417.0	Fre 420.0	

German
Ger 301.0	Ger 400.0

Spanish
Spa 300.0	Spa 305.0	Spa 402.0	Spa 406.0
Spa 302.0	Spa 400.0	Spa 405.0	

PHILOSOPHY

Chairman, Associate Professor   R. C. Marshall
Professors   R. H. Beis, A. P. Monahan,
     W. A. Stewart, S.J.
Assistant Professor   R. N. Ansell
Lecturer   T. A. Tomkow

DEPARTMENTAL POLICY

1. THE BASIC LOGIC COURSE (Phi 200.0) is designed for students entering the University from Junior or Senior Matriculation. It is intended to develop a capacity for sound reasoning and critical analysis. This course fulfills a requirement for the B.A. degree.
2. THE INTRODUCTION TO PHILOSOPHY COURSE (Phi 201.0) is designed to introduce philosophy to students who are unlikely to have encountered the subject before. This course provides a good background to other philosophy courses and satisfies the humanities requirement for the B.A. degree. A philosophy course above 201.0 also meets the humanities requirement in the B.A. program.
3. THE MINOR AND NON-MAJOR PROGRAM:
   After completing Phi 201.0, students who do not wish to major in philosophy may select courses in the 200 and 300 range, or at higher levels. Such students are advised to select courses that relate to each other or to their area of concentration, and are encouraged to consult the appropriate course instructor before registration.
4. THE MAJOR PROGRAM:
   A philosophy major is required to complete six courses in philosophy. After Phi 201.0 (or 200.0), courses in ethics, epistemology, metaphysics and at least one course in the history of philosophy are normally required. A course in logic or philosophical methodology is strongly recommended. Other patterns of study may be arranged to suit individual needs, e.g., the needs of double majors and pre-law students.
5. THE HONORS PROGRAM:
   Prospective honors students should refer to the Faculty of Arts regulations pertaining to honors degrees and apply to the Registrar's Office for enrolment in the honors program, preferably after their first year in the University.

The following is a list of honors requirements in recommended order:
Phi 200.0 or 201.0
Phi 215.0 or 230.0
Two from Phi 250.0, 350.0, 352.0, 353.0
Phi 306.0
Phi 354.0 or 407.0
Phi 466.0
400 level elective
400 level or above elective
400 level or above elective

All prospective honors students must consult with the Chairman about admission to the program; after admission, the Chairman will assign an advisor to the candidate.

6. A student may register for a major concentration in philosophy concurrently with a major concentration in another subject approved by the Department. Examples of such subjects are classics, economics, English, history, political science and religious studies.
7. Philosophy courses at the 600 level are graduate courses. Certain courses at other levels may be taken for graduate credit and will be designated as follows: e.g., 300.0 (600.0).
8. A background in philosophy will help to prepare students for careers in the professions, especially law and education, government service, media and any field where a creative approach and critical judgement are required; and provides, generally, a useful complement to various other branches of learning.

200.0   BASIC LOGIC

1 credit

A course to establish and refine basic logical abilities. First term: the nature of argument, deduction, formal and informal fallacies, definition, conceptual analysis and uses of language. Second term: induction, probability, analogy, explanation, prediction, scientific method, and method in the social sciences and the humanities.

Classes   3 hrs. a week. 2 semesters.

Ansell, Marshall

PHILOSOPHY

201.0 INTRODUCTION TO PHILOSOPHY

1 credit

Students will be introduced to philosophy through an examination of some of the main areas in which philosophical problems have arisen, e.g., God, man, freedom, knowledge and morality. They will be encouraged to develop their own critical intelligence through the study of the major past and present contributions toward the solutions of these problems.

Classes 3 hrs. a week. 2 semesters.

Staff

215.0 INTRODUCTION TO SYMBOLIC LOGIC

1 credit

Prerequisite: normally, Phi 200.0 or 201.0 or courses in pure mathematics or computer science (any of the above concurrently with this course, if desired).

A thorough grounding in the propositional and predicate calculi with emphasis on the development of facility in natural deductive and axiomatic methods, and with some attention to metalogic, applications and set theory.

Texts: E. J. Lemmon, *Beginning Logic;* R. Carnap, *Introduction to Symbolic Logic and its Applications.*

Classes 3 hrs. a week. 2 semesters.

Ansell

218.0 (His 218.0) SCIENCE IN THE WEST SINCE 1500 A.D.

1 credit

A philosophical and historical examination of the major aspects of Western science as represented in some texts from the 16th century onwards. The roots of modern scientific and technological society will be examined in an interdisciplinary way.

Classes 3 hrs. a week. 2 semesters.

Ansell (and Haigh)

220.0 MEDIEVAL PHILOSOPHY AND POLITICS

1 credit

An examination of the medieval conception of society, with particular emphasis on the problem of the relation between political society and the society of the Church.

Texts: Readings in Augustine, John of Salisbury, The Canonists, Thomas Aquinas, Dante, John of Paris, William of Ockham, Marsilius of Padua.

Classes 3 hrs. a week. 2 semesters.

Monahan

222.0 INTRODUCTION OF ETHICS

1 credit

An introduction to moral philosophy designed to lead the student to examine the foundations of his moral positions. To this end historical and contemporary answers by philosophers to questions such as the following will be examined: what ought I to do morally, and why ultimately ought I to do it? Are ethical positions simply relative: (a) to a person? (b) to a society? What is the relation between science and morality?

Classes 3 hrs. a week. 2 semesters.

Beis

226.0 PHILOSOPHY OF MIND

1 credit

An introductory course in philosophy and/or psychology would be helpful.

This course will examine what, if anything, is unique about man. Is he just an animal or a little lower than the angels? The most complex machine of all or an integrated unity of mind and body? A self-organizing system developed through a long process of evolution or a unique product of special creation? Various philosophical and psychological theories will be discussed, but special emphasis will be given to those of S. Freud and B. F. Skinner.

Classes 3 hrs. a week. 2 semesters.

151

PHILOSOPHY

229.0 PHILOSOPHY OF LAW

1 credit

Theories of the nature of law. Analysis of the concepts law, international law, right, justice, motive, reason and cause. The logic of judicial reasoning. Theories of property. Liberty, morality, justice and the law. Free will, sanity and responsibility in relation to fitness to plead. Permissiveness, authoritarianism and theories of punishment.

Texts: Martin P. Golding, *Philosophy of Law*, Edward A. Kent, ed., *Law and Philosophy*.

Classes   3 hrs. a week. 2 semesters.

Ansell

230.0 PHILOSOPHICAL FOUNDATIONS AND METHODOLOGY

1 credit

Prerequisite: one course in philosophy.

Instruction in the use of methods for evaluating philosophical writings and solving philosophical problems. Basic papers and problems are selected for their value as exercises in the application of standard logical and semantical techniques, but also because familiarity with them is necessary in later courses. Controversial techniques are evaluated with the aid of uncontroversial ones.

Classes   3 hrs. a week. 2 semesters.

Ansell

244.1 HUMAN FREEDOM

1/2 credit

The traditional problems of free will and political freedom. Different concepts and conceptions of freedom and liberation. An examination of some contemporary thought on freedom and liberation.

Classes   3 hrs. a week. 1 semester.

Ansell

245.2 PHILOSOPHIES OF LIFE

1/2 credit

A comparative examination of philistinism, individualism, collectivism, hedonism, utilitarianism and other related outlooks.

Classes   3 hrs. a week. 1 semester.

Ansell

247.1 THE ARTIST

1/2 credit

An introductory course concerning the artist as creator and communicator and the various art forms he may work with.

Classes   3 hrs. a week. 1 semester.

248.2 THE WORK OF ART

1/2 credit

This course considers problems concerning what a work of art is and how we interpret and criticize works of art.

Classes   3 hrs. a week. 1 semester.

249.1 THE AESTHETIC EXPERIENCE

1/2 credit

This course analyzes the concept of aesthetic experience and its relation to the appreciation and interpretation of art.

Classes   3 hrs. a week. 1 semester.

250.0 GREEK PHILOSOPHY

1 credit

This course is designed to introduce students to Greek philosophy through a consideration of the major figures and schools within the context of their overall historical movement by studying and discussing in detail a few basic Greek philosophical works, and by allowing students to follow their own individual interests through independent work.

Text: Works by Plato, Aristotle, and other Greek authors.

Classes   3 hrs. a week. 2 semesters.

260.0 PHILOSOPHY IN LITERATURE

1 credit

This course involves making a critical assessment of philosophical positions found in selected contemporary stories, plays and novels. It should interest students who are intrigued by the philosophical significance of some literature.

Texts: Readings in selected literature reflecting contemporary issues, e.g. Dostoevsky, Camus, Orwell, Hemingway, Iris Murdoch, Margaret Atwood, Virginia Woolf, Margaret Laurence.

Classes   3 hrs. a week. 2 semesters.

PHILOSOPHY

300.0 (600.0) HEGEL'S POLITICAL PHILSOPHY
1 credit

Prerequisite: a social science or philosophy course will be helpful but is not required.

A lecture and seminar course examining Hegel's political writings in general and his *Philosophy of Right* in greater detail. The evolution of his political thought will be traced from his earliest writings to his mature works within the context of his philosophical system. An endeavor will be made to relate the more relevant aspects of his political philosophy to current concepts and problems.

Texts: G. W. F. Hegel, *Philosophy of Right*.

Classes 3 hrs. a week. 2 semesters.

Marshall

306.0 EPISTEMOLOGY
1 credit

Freshmen may not enrol in this course.

An investigation of the problem of knowledge through a study of the epistemological thought of Bernard Lonergan.

Text: B. Lonergan, *Insight*.

Classes 2 hrs. a week and seminars. 2 semesters.

Stewart

310.0 PHILOSOPHICAL FOUNDATIONS OF POLITICS
1 credit

Prerequisite: a philosophy or political science course.

An examination of some philosophical concepts basic to any philosophy of politics: society and social obligations, the common good, the individual and individual rights, law, freedom, tolerance and repression, popular consent, sovereignty. The course will investigate the relationship, if any, between ethics and philosophy of politics and, with reference to contemporary experience of differing state systems, raise the question of whether the expression "making a better world" has any meaning.

Classes 3 hrs. a week. 2 semesters.

Monahan

320.0 ADVANCED AESTHETICS: THE PHILOSOPHY OF ART
1 credit

Prerequisite: a course in philosophy or permission of instructor.

Man responds to objects of art; he reacts as creator, performer, spectator; he thinks about his responses. The interrelations of art, artist and spectator in their social and cultural context is a focal points for this course in the philosophy of art. In particular, philosophic inquiry will be directed towards expanding critical awareness about art forms and artistic expression.

Classes 3 hrs. a week. 2 semesters.

324.0 MARXIST PHILOSOPHY
1 credit

Courses in philosophy, sociology and/or economics would be helpful.

Marxist philosophy has at present more followers than any other systematic philosophy. The emphasis in this course is on the scientific naturalism of the later Marx and contemporary Marxists. The early, "humanistic" Marx will also be considered. Marx's theory of knowledge, which claims to replace ideology with science and supplement synchronic with diachronic analysis, will be analyzed in detail. Historical materialism is examined as a scientific theory and as an alternative to various other social and political theories. Such misunderstood Marxian concepts as 'dialectic', 'necessity', and 'contradiction' will be shown to refer to underlying, basic economic laws. Evidence for and against Marxism will be investigated.

Classes 3 hrs. a week. 2 semesters.

Marshall

330.0 (Rel 311.0) PHILOSOPHY OF RELIGION
1 credit

Prerequisite: a philosophy or religious studies course.

A consideration of the meaning, truth, and logic of religious language and religious teachings about the existence and nature of God. Basic religious texts such as the Bhagavad — Gita, the I Ching, the Homeric poems, the Koran, and the Bible will be read in relation to some philosophical texts such as Aristotle's *Metaphysics,* Aquinas' *Summa Theologiae,* and Hegel's *Lectures on the Philosophy of Religion*.

Classes 3 hrs. a week. 2 semesters.

PHILOSOPHY

340.0 ALIENATION AND THE BODY POLITIC

1 credit

Prerequisite: a course in philosophy or political science.

A study of the notion of alienation in Karl Marx and Bernard Lonergan, with special reference to the body politic. The course will also explore briefly the historical background and development of the notions of alienation and dialectic in earlier philosophers, especially Hegel, as well as in contemporary communism. Finally, an attempt will be made to develop the implications of Lonergan's thought for the body politic and political science.

Classes 3 hrs. a week. 2 semesters.

Stewart

350.0(650.0) MEDIEVAL PHILOSOPHY

1 credit

Prerequisite: a course in philosophy or permission of instructor.

A history of the major philosophical doctrines and currents in western Europe from the Period of Augustine to the 15th century.

Text: *History of Chrisitian Philosophy in the Middle Ages,* E. Gilson.

Classes 3 hrs. a week. 2 semesters.

351.0(651.0) PHILOSOPHY OF SCIENCE

1 credit

An introduction to the main problems of the philosophy of science designed to familiarize students with some of the contemorary analyses of scientific concepts and methods.

Text to be announced.

Classes 3 hrs. a week. 2 semesters.

352.0 (652.0) BRITISH EMPIRICISM

1 credit

Prerequisite: a course in philosophy.

A critical examination of works by Locke, Berkeley, Hume, Russell and Ayer, with attention focused mainly on their theories of knowledge, meaning and perception.

Texts: Readings in Locke, Berkeley, Hume, Russell and Ayer.

Classes 3 hrs. a week. 2 semesters.

Ansell

353.0 (653.0) CONTINENTAL IDEALISM, DESCARTES TO HEGEL

1 credit

Prerequisite: a course in philosophy or permission of instructor.

A lecture and seminar course examining the development of rationalist and idealist thought from Descartes to Hegel.

Texts: Readings in Descartes, Spinoza, Leibniz, Kant, Fichte, and Hegel.

Classes 3 hrs. a week. 2 semesters.

Marshall

355.0 (655.0) EXISTENTIALISM

1 credit

Prerequisite: a course in philosophy or permission of instructor.

A lecture and seminar course examining the origins, expressions and significance of the existentialist movement in contemporary philosophy.

Texts: Readings in Kierkegaard, Nietzsche, Jaspers, Marcel, Sartre and Camus.

Classes 3 hrs. a week. 2 semesters.

Monahan

PHILOSOPHY

390.0 - 395.0   READING COURSES IN PHILOSOPHY

1 credit

Prerequisite: permission of instructor.

These courses are organized by the faculty member(s) involved, and are designed to supplement and/or provide an alternative to regular courses in philosophy according to the special needs and interests of students. Each course may be on a particular subject and/or author(s) and could include, if desired, philosophical texts in a language other than English.

402.0   PHILOSOPHY OF THE SOCIAL SCIENCES

1 credit

Prerequisite: a course in philosophy or permission of instructor.

A philosophical examination of the purpose and character of the social sciences and of the major conceptual, logical and methodological problems which arise in them.

Classes   3 hrs. a week. 2 semesters.

407.0 (607.0)   PHILOSOPHY OF BEING

1 credit

This course is a philosophical investigation into the foundations of metaphysics in cognitional theory, of the principles of proportionate being, of the problems of a transcendent being or God. It also investigates related problems such as the problems of human freedom and of evil and the positions of atheism, agnosticism and pantheism.

Text: B. Lonergan, *Insight*.

Classes   2 hrs. a week and seminars. 2 semesters.

Stewart

450.0 (650.0)   PHENOMENOLOGY

1 credit

Prerequisite: one course in philosophy or permission of the instructor.

The origins, developments, concepts, method and influence of the phenomenological movement in contemporary philosophy.

Texts: Selections from Husserl, Heidegger, Sartre, Merleau-Ponty.

Classes   3 hrs. a week. 2 semesters.

Marshall

453.0   PHILOSOPHY OF HISTORY

1 credit

Prerequisite: a course in philosophy or permission of instructor.

A critical study of the philosophical views on the course of human history (its pattern, purpose and value) and an examination of the aim, nature and validity of historical knowledge.

Classes   3 hrs. a week. 2 semesters.

Marshall

465.0 (655.0)   ANALYTIC PHILOSOPHY

1 credit

Prerequisite: a course in philosophy or permission of instructor.

A lecture and seminar course that examines the origins, expressions and significance of the contemporary analytic movement in philosophy.

Texts: Readings from representative members of the analytic school.

Classes   3 hrs. a week. 2 semesters.

Beis

466.0 (666.0)   ADVANCED ETHICAL THEORY

1 credit

Prerequisite: a course in philosophy or permission of instructor.

A lecture and seminar course that examines certain fundamental problems of contemporary ethics. Attention will be concentrated on metaethical problems which arise from and are discussed in the writings of Moore, Stevenson, Hare, Nowell-Smith, Frankena, and Baier.

Texts: Selected readings from the authors above.

Classes   3 hrs. a week. 2 semesters.

Beis

PHILOSOPHY

467.0 (667.0) AUGUSTINE AND AQUINAS ON PHILOSOPHY

1 credit

Prerequisite: a course in philosophy or permission of the instructor.

A lecture and seminar course which explores the meaning of philosophy and its relation to theology in the writings of Augustine and Aquinas.

Texts: Selected readings in Augustine and Aquinas.

Classes 3 hrs. a week. 2 semesters.

Monahan

490.0 - 495.0 READING COURSES IN PHILOSOPHY

1 credit

Prerequisite: consent of the instructor.

These courses are organized by the faculty member(s) involved and are designed to supplement and/or provide an alternative to regular courses in philosophy according to the special needs and interests of students. Each course may be on a particular subject and/or author(s) and could include, if desired, philosophical texts in a language other than English.

690.0 - 695.0 READING COURSES IN PHILOSOPHY

1 credit

Prerequisite: consent of the instructor.

These courses are organized by the faculty member(s) involved, and are designed to supplement and/or provide an alternative to regular courses in philosophy according to the special needs and interests of students. Each course may be on a particular subject and/or author(s) and could include, if desired, philosophical texts in a language other than English.

1. The following courses in Philosophy will be offered in 1976-77:

Phi 200.0	Phi 224.0	Phi 306.0	Phi 355.0
Phi 201.0	Phi 226.0	Phi 320.0	Phi 466.0
Phi 215.0	Phi 229.0	Phi 330.0	Phi 467.0
Phi 222.0	Phi 260.0	Phi 350.0	

2. The following courses in Philosophy will not be offered in 1976-77:

Phi 218.0	Phi 247.1	Phi 310.0	Phi 402.0
Phi 220.0	Phi 248.2	Phi 340.0	Phi 407.0
Phi 230.0	Phi 249.1	Phi 351.0	Phi 450.0
Phi 244.1	Phi 250.0	Phi 352.0	Phi 453.0
Phi 245.2	Phi 300.0	Phi 353.0	Phi 465.0

PHOTOGRAPHY

200.0   PHOTOGRAPHY

1 credit

The fundamental laws, principles and procedures of photography are explored and applied specifically within **the** black and white and color format. This is an elective course and will not satisfy sections 4(b) or 5(b) of the science degree requirements.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

Sabean

PHYSICS

Chairman, Associate Professor   U. S. Merdsoy
Professor   D. S. Murty
Associate Professor   W. Lonc, F.V. Tomscha
Assistant Professor   K. Fillmore

As society continues to struggle with environmental problems, interest is expected to grow in the fields of environmental physics, earth physics, bio-physics, etc. Physicists at all degree levels are engaged by oil and mining industries, while others are involved in the search for mineral deposits or petroleum. They are employed in governmental research laboratories and in industry in the development of new products. Physicists are also employed in hospitals to supervise such services as high voltage x-ray equipment and cobalt therapy. Still others study radiation and its effects on living organisms. Graduates with a Bachelor's degree in physics or in physics and mathematics also fill teaching positions at the secondary school level (adapted from *University Careers Outlook,* Department of Manpower).

Contingent on General Science Degree requirements, students may choose to follow either of the following core programs:

A: Physics Concentration

First Year

Phy 111.0
a course in mathematics

Second Year

Phy 221.0   Mat 200.0 or 201.0

Third Year

Phy 321.1   Mat 311.0
Phy 322.2   Phy 332.2
Phy 331.1

Fourth Year

Phy 431.1
Phy 432.2
Phy 438.1 or an elective in physics, or mathematics, or astronomy
Phy 439.2

B: Physics Major

First Year

Phy 111.0
a course in mathematics

Second Year

Phy 221.0   Mat 200.0 or 201.0

Third Year

Phy 321.1   Phy 331.1
Phy 322.2   Phy 332.2
Mat 311.0

Fourth Year

Phy 431.1   Phy 439.2
Phy 432.2   Phy 453.1
Phy 438.1   Phy 471.2

Any departure from **A** or **B** schemes must receive departmental approval.

Non-physics majors/non-concentration may substitute alternative prerequisites for courses at the 300-level or higher at the discretion of the Physics Department.

111.0   GENERAL PHYSICS
1 credit

Prerequisite: algebra and trigonometry (concurrently).

Introduction to mechanics, sound, heat, electricity and light.

Text: Miller, *College Physics*.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

Fillmore, Merdsoy.

Recommend 111.0A for physics, chemistry, engineering and others.
111.0B for biology, psychology, geology and others.

201.0   PHYSICS FOR THE LIFE SCIENCES
1 credit

Prerequisite: Bio 111.0 and Phy 111.0 or permission of the Department.

Basic concepts for force, energy and work; interaction of light with biological systems; effect of heat on biological systems, interaction of ionizing radiation with these systems, electric currents living systems; sound waves in systems as well as in the environment; the optics of the eye; the physics of measuring various biological phenomena, including an introduction to the electronics necessary for these measurements.

Text: Cromer, *Physics for the Life Sciences*.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

Lonc

PHYSICS

221.0   UNIVERSITY PHYSICS

1 credit

Prerequisite: Phy 111.0 or a knowledge of Grade XII Physics. It is essential that students take an introductory calculus course concurrently.

Topics will include mechanics, heat, sound, light and electricity.

Text: Sears and Zemansky, *University Physics*.

Classes   3 hrs. plus tutorials and lab 3 hrs. a week. 2 semesters.

Merdsoy, Murty, Tomscha

260.0   ELECTRONICS FOR SCIENCE

1 credit

Prerequisite: Phy 111.0 or equivalent, Mat 200.0 or 201.0 or permission of the department.

Characteristics of electronic circuits and devices, especially IC's, sensors for light, temperature, sound, telemetry, microwaves, communications, solid state analog and digital circuits.

Text: Brophy, *Basic Electronics for Scientists*.

Classes   4 hrs. a week including lab. 2 semesters.

Lonc

Note: (1)   This course cannot be a substitute for Phy 111.0 or 221.0.
(2)   This course cannot be a credit course for a concentration or majoring student in Physics.

320.1   MODERN PHYSICS

$1/2$ credit

Prerequisite: Phy 221.0, Mat 311.0 concurrently.

Electrons and ions, charge/mass ratios, photo electric effect, relativity, nuclear atom as revealed by Alpha-ray scattering, spectrum of hydrogen atom and Bohr's theory, x-rays, wave mechanics, nuclear properties.

Text: Olderberg, Rasmussen, *Modern Physics for Engineers*.

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

Murty

321.1   OPTICS

$1/2$ credit

Prerequisite: Phy 221.0, Mat 311.0 concurrently.

Geometrical Optics: image formation by spherical surfaces, thin and thick lenses, lens aberrations, telescopes, mircoscopes. Physical optics: speed of light, dispersion, interference, diffraction, resolving power of optical instruments, polarization.

Text: Sears, *Optics*.

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

Fillmore

322.2   ELECTRICITY AND MAGNETISM

$1/2$ credit

Prerequisite: Phy 221.0, Mat 311.0 concurrently.

Electric and magnetic fields, and their corresponding potentials, properties of conductors and insulators, Lorentz force and applications, resistance, capacitance and inductance in AC circuits. The lab will introduce the student to the use of a variety of electric and electronic measuring instruments.

Text: Kip, *Fundamentals of Electricity and Magnetism*.

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

Fillmore

331.1   CLASSICAL MECHANICS I

$1/2$ credit

Prerequisite: Phy 221.0, Mat 311.0 concurrently.

Introduction to vector analysis, work, potential energy, principle of virtual work, the damped harmonic oscillator, the forced harmonic oscillator.

Text: R. A. Becker, *Introduction to Theoretical Mechanics*.

Classes   3 hrs. a week. 1 semester.

Tomscha

PHYSICS

332.2 CLASSICAL MECHANICS II
$^1/_2$ credit

Prerequisite: Phy 331.1.

Motion of a particle under the action of a central force, deduction of the law of force from Kepler's Laws, the two-body problem, motion of a system of particles, motion of a particle in an accelerated reference system, generalized coordinates, holonomic and non-holonomic constraints, degrees of freedom. Lagrange equations.

Text: R. A. Becker, *Introduction of Theoretical Mechanics*.

Classes   3 hrs. a week. 1 semester.

Tomscha

431.1 ELECTROMAGNETIC THEORY I
$^1/_2$ credit

Prerequisite: Phy 321.1, 322.2, Mat 311.0, Mat 411.0 concurrently.

Development of the theory of electric and magnetic fields and Maxwell's equations in non-polarized media, leading to applications such as waveguides.

Text: Lorraine and Corson, *Electromagnetic Fields and Waves*.

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

Lonc

432.2 ELECTROMAGNETIC THEORY II
$^1/_2$ credit

Prerequisite: Phy 431.1.

Development of the theory of electric and magnetic fields and Maxwell's equations in polarizable media, including an introduction to a relativistic formulation of the Maxwell equations.

Text: Lorraine and Corson. *Electromagnetic Fields and Waves*.

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

Lonc

434.1 ELECTRIC CIRCUITS I
$^1/_2$ credit

Prerequisite: Mat 311.0, Phy 221.0.

Circuit elements; equilibrium equations (mesh and mode analysis); network theorems, complex impedance and the use of phasors, steady state anlaysis, basic measurements.

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

Lonc

435.2 ELECTRIC CIRCUITS II
$^1/_2$ credit

Prerequisite: Phy 434.1.

Laplace Transform and Fourier Analysis methods as applied to circuit theory, analysis of circuits containing non-linear elements, analysis of circuits containing active elements.

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

Lonc

438.1 NUCLEAR PHYSICS I
$^1/_2$ credit

Prerequisite: Phy 321.1, 322.2 and Mat 311.0.

Atoms, electrons, radiations, the nuclear atom, x-rays, and atomic structure, quantum theory of radiation, special theory of relativity, group velocity and wave velocity. Mass spectrometers, atomic spectra and atomic structure, the nucleus and isotopes.

Text: Irving Kaplan, *Nuclear Physics*.

Classes   3 hrs. and lab 3 hr. a week. 1 semester.

Murty

439.2 NUCLEAR PHYSICS II
$^1/_2$ credit

Prerequisite: Phy 438.1.

Natural radioactivity and the radioactive laws, artificial nuclear disintegration, artificial radioactivity, alpha-decay, beta-decay, and gamma-decay, nuclear reactions, nuclear forces, nuclear fission, nuclear energy sources, particle accelerators.

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

Murty

453.1 THERMOPHYSICS
$^1/_2$ credit

Prerequisite: Phy 221.0, Mat 311.0.

Temperature, internal energy, 1st and 2nd laws of thermodynamics and their implications, entropy, systematic study of state functions and the resulting Maxwell distribution, transport phenomena.

Text: King, *Thermophysics*.

Classes   3 hrs. a week. 1 semester.

Merdsoy

PHYSICS

471.2 INTRODUCTION TO QUANTUM MECHANICS

$\frac{1}{2}$ credit

Prerequisite: Phy 438.1, Mat 410.0 concurrently.

Wave mechanical concepts, wave packets and uncertainty, linear operators, Schroedinger equation, energy eigenfunctions, harmonic oscillator, hydrogen atom, elastic scattering, co-ordinate momentum and energy representations.

Classes 3 hrs. a week. 1 semester.

Fillmore

NOTE: All 500 courses will be offered by consultation with the department.

550.0 TOPICS IN THEORETICAL PHYSICS

1 credit

Prerequisite: Phy 332.2, Mat 410.0.

Fluid dynamics, elasticity, tensor calculus, the theory of relativity. The areas of greatest concentration will be decided upon in consultation with the students.

Texts: G. H. A. Cole, *Fluid Dynamics*, (Methuen). B. Spain, *Tensor Calculus*, (Oliver and Boyd).

Classes 3 hrs. a week. 2 semesters.

Tomscha

551.0 THERMODYNAMICS AND STATISTICAL MECHANICS

1 credit

Prerequisite: Phy 453.1, Mat 410.0.

First and second law of thermodynamics and their application to simple thermodynamic systems and to chemical reaction, kinetic theory and transport phenomena. In statistical mechanics, the macro canonical and grand canonical ensembles, Bose-Einstein and Fermi-Dirac statistics are discussed and applied to gases, electrons in metals, and low temperature physics.

Text: Zemansky, *Thermodynamics and Statistical Mechanics*.

Classes 3 hrs. a week. 2 semesters.

Merdsoy

552.0 QUANTUM MECHANICS

1 credit

Prerequisite: Phy 471.2, Mat 410.0.

Wave mechanical concepts, wave equation of Schroedinger, energy eigen functions, examples of energy eigen functions, general principles of quantum mechanics, interpretative postulates of quantum mechanics, operators with continuous spectra, uncertainty principle, matrix mechanics, the equation of motion of operators, the Dirac notation for wave functions and operators, spin, Pauli's principle, time independent perturbation theory, collision processes, elastic scattering by fixed center of force, Born approximation, inelastic scattering processes, Dirac equation for a free particle.

Text: Mandl, *Quantum Mechanics* (Butterworth).

Classes 3 hrs. a week. 2 semesters.

Fillmore

553.1 UPPER ATMOSPHERE

$\frac{1}{2}$ credit

Prerequisite: Phy 432.2, Mat 410.0.

Meteorological conditions in the lower stratosphere, structure and circulation of the upper stratosphere and mesosphere, the sun's radiation and the upper atmosphere, composition of the stratosphere and mesosphere, composition and structure of the thermosphere, heat transfer and radiative processes, atmospheric tides and winds in the lower thermosphere, introduction to some other aeronomic problems, transport properties in the upper atmosphere.

Text: Craig, *The Upper Atmosphere*, (Academic Press).

Reference: Ratcliffe, *Physics of the Upper Atmosphere*, (Academic Press).

Classes 3 hrs. a week. 1 semester.

Murty

PHYSICS

554.1 INTRODUCTION TO SOLID STATE PHYSICS

½ credit

Prerequisite: Phy 471.2.

Crystal structure, lattice vibrations, free electron Fermi gas, band structure, properties of simple metals, semiconductors and insulators, superconductivity.

Text: C. Kittel, *Introduction to Solid State Physics,* (Wiley and Sons).

Classes 3 hrs a week. 1 semester.

555.2 TOPICS IN ADVANCED NUCLEAR PHYSICS

½ credit

Prerequisite: Phy 439.2, Mat 410.0.

Some selected topics in Nuclear Physics will be discussed. Topics will be oriented towards research problems.

Reference: K. Siegbahn, *Alpha-Beta-Gamma Ray Spectroscopy,* Vol. 1 and 2, (North-Holland).

Classes 3 hrs. a week. 1 semester.

Murty

605.0 (Ast 605.0) FUNDAMENTAL ASTROPHYSICS

1 credit

Prerequisite: Phy 432.2 and 439.2, and Mat 410.0 (may be taken concurrently).

The physical conditions in the outer layers of stars will be deduced from their continuous radiation and their spectral lines. This treatment of *stellar atmospheres* will involve a discussion of ionization and excitation, atomic and molecular spectra, and the thermodynamics of a gas. The topic of *stellar structure* will include an application of nuclear physics to stellar energy production and a treatment of nuclesynthesis in stars (explosive and non-explosive). A discussion of the *interstellar medium* will include interstellar clouds, the intercloud medium, ionized hydrogen regions, interstellar molecules, dust grains, and the galactic magnetic field.

The following courses in Physics will be offered in 1976-77:

Phy 111.0	Phy 331.1	Phy 439.2	Phy 552.0
Phy 221.0	Phy 332.1	Phy 453.1	Phy 553.1
Phy 320.1	Phy 431.1	Phy 471.2	Phy 554.1
Phy 321.1	Phy 432.2	Phy 550.0	Phy 555.2
Phy 322.2	Phy 438.1	Phy 551.0	

The following courses in Physics will not be offered in 1976-77:

Phy 201.0	Phy 434.1	Phy 605.0
Phy 260.0	Phy 435.2	

POLITICAL SCIENCE

Chairman, Associate Professor   J. G. Jabbra
Professors   R. C. Boyd, T. B. Ciuciura,
     W. J. Dalton, D. H. Gillis
Associate Professor   E. J. McBride
Assistant Professors   G. Chauvin, D. J. Higgins,
     R. G. Landes

DEPARTMENTAL POLICY

Students who intend to complete a major concentration in political science must take a minimum of six courses in political science. There are two required courses: political science 200.0 and 304.0. (With the permission of the department, students may be permitted to take another course in lieu of political science). The Department also strongly recommends that a student take Pol 301.0 and one seminar at the 500 level in one of the following sub-fields: Canadian Government, Comparative Government, International Relations, Political Thought.

Applications for admission to the political science honors program must be submitted to the Honors Program Committee which has the following objectives: (a) evaluate applications for admission to the honors program in political science; (b) seek out potential candidates and encourage them to apply for admission to the honors program in political science; (c) assist political science honors students in selecting their supervisors from the Department.

Candidates should normally complete the formalities for admission to the political science honors program not later than the beginning of their junior year.

A student, in order to be admitted to, and remain in, the political science honors program must have and maintain an overall average of B, with no grade below C.

A student also must enrol in and complete at least two seminars at the 500 level.

An honors student must take a number of courses, approved in consultation with his supervisor, in cognate disciplines over and beyond the B.A. prerequisites.

The following courses are strongly recommended to all honors students:
a. Scope and Methods (301)
b. One course in political philosophy

An honors student must pass a general oral examination before a departmental board composed of his advisor, and at least two other members selected by the Department. (The scope of the general oral examination will be determined by the Department, in consultation with the student's supervisor.)

Students are reminded that the requirements mentioned above constitute a minimum. If graduate work is contemplated, additional courses in political science and in cognate disciplines will be required. For more complete information, the student is advised to consult *Notes and Guidelines for Students in Political Science,* issued by the Department.

200.0   INTRODUCTORY POLITICAL SCIENCE
1 credit

An introduction to the scope and methods of political science. The nature of the state will be examined, as well as the various purposes advanced for its existence. The student will be introduced to various aspects of government, political parties, international relations and political philosophies.

Classes   3 hrs. a week. 2 semesters.

301.0   SCOPE AND METHODS OF POLITICAL SCIENCE
1 credit

Prerequisite: Pol 200.0.

An introduction to the concerns and methodologies of modern political science. Included will be a discussion of theories and approaches developed by the empirical school of political scientists.

Classes   3 hrs. week. 2 semesters.

Jabbra.

302.0   DEMOCRATIC GOVERNMENT
1 credit

An examination of fundamental concepts in democratic theory. Special emphasis is placed on the relationship between theory and practice. Great Britain, the United States and Canada serve as the source of examples of the practice of politics in Western democracies.

Classes   3 hrs. a week. 2 semesters.

Chauvin.

POLITICAL SCIENCE

303.0 GOVERNMENT AND POLITICS IN THE USSR AND EASTERN EUROPE

1 credit

A survey of the history, culture and political institutions — from the old Kievan Rus to the Russian Empire, the Russian Soviet Federal Socialist Republic, and the Union of Soviet Socialist Republics; the development of political institutions and processes from the Revolution to the present, with attention to the largest non-Russian Soviet republics in Europe (Ukraine) and Asia (Kazakhstan, Uzbekistan); contemporary political institutions and processes in Communist party-states of (or East Central) Europe; the German Democratic Republic, Poland, Czechoslovakia, Yugoslavia, and others.

Classes 3 hrs. a week. 2 semesters.

Ciuciura

304.0 CANADIAN GOVERNMENT AND POLITICS

1 credit

Prerequisite: Pol 200.0.

A study of Canadian constitutional democracy, encompassing an analysis of both political institutions and political behavior.

Classes 3 hrs. a week. 2 semesters.

Dalton, Landes

305.0 INTERNATIONAL RELATIONS

1 credit

Prerequisite: Pol 200.0.

A survey of and introduction to the study of international relations. The first term will concentrate on the following topics: nationalism and the rise of the nation-state; elements and evaluation of a nation's power; the balance-of-power system in the classical and nuclear age; international law; and the United Nations. The second term will concentrate on foreign policy decision-making and current foreign policy problems of the major powers. Consideration of Canadian foreign policy will be included in the second term's work.

Classes 3 hrs. a week. 2 semesters.

Landes

306.0 GOVERNMENT AND POLITICS IN WESTERN EUROPE

1 credit

Prerequisite: Pol 200.0.

A detailed comparative analysis of the institutions and functions of the national political systems, primarily of the United Kingdom, France, Western Germany, Switzerland and Austria.

Classes 3 hrs. a week. 2 semesters.

Ciuciura.

307.0 PROVINCIAL GOVERNMENT AND POLITICS

1 credit

Prerequisite: a 200-level course in political science.

An analysis of the dynamics and structure of provincial government in Canada, with special reference to Nova Scotia. Study of provincial political parties, voting behavior, policy formation, legislative and bureaucratic behavior form the core of this course. Basic political, financial and administrative problems facing provincial government will also be studied, with special emphasis on the inter-provincial, federal, and international input affecting the provincial policy-making process.

Classes 3 hrs. a week. 2 semesters.

Higgins

312.0 GOVERNMENT AND POLITICS IN THE UNITED STATES

1 credit

Prerequisite: Pol 200.0.

An analysis of the American political system in terms of the interrelationship of characteristics salient in the political culture, the social base, the consitutional order, the governmental structure and the policy process, with special emphasis on the political party system, voting behavior, and the Presidency.

Classes 3 hrs. a week. 2 semesters.

Landes

407.0 GOVERNMENT AND POLITICS IN THE MIDDLE EAST

1 credit

A comparative study of the governments and politics of Middle Eastern countries, with an emphasis on the analysis of the fundamental political and socio-economic changes that are occurring in the area and attempting to shape its modernizing pace.

Classes 2 hrs. a week. 2 semesters.

Jabbra.

POLITICAL SCIENCE

418.0 INTERNATIONAL LAW AND ORGANIZATION

1 credit

Prerequisite: Pol 200.0.

The principal features of public international law as they have developed and have been invoked in diplomatic practice, international adjudication, and national courts; a study of the structures and the processes of co-operation and conflict within the United Nations, the Commonwealth and other international organizations.

Classes 3 hrs. a week. 2 semesters.

Jabbra or Ciuciura.

419.0 COMPARATIVE CONSTITUTIONAL LAW

1 credit

Prerequisite: Pol 200.0.

A comparative analysis of constitutional systems, this course focuses upon the theory and exercise of judicial review, in the context of either Canadian and American constitutional law, or European constitutional practice. It combines lectures, collateral readings, and the case method.

Classes 2 hrs. a week. 2 semesters.

McBride.

420.0 URBAN GOVERNMENT AND POLITICS

1 credit

Prerequisite: Pol 200.0.

An analysis of political ramifications of urbanization, focusing on Canada. Using historical, comparative, and structural approaches, analysis in the first semester is concerned largely with municipal government — its development in Canada, inter-government relations, the concept of autonomy, and structures of decision-making. The second semester is devoted to an examination of urbanization and the political problems to which it gives rise — problems of structural adequacy and reform, and selected problems of functions such as urban development and renewal, urban transportation, and the urban physical environment.

Classes 3 hrs. week. 2 semesters.

Higgins.

430.0 INTRODUCTION TO PUBLIC ADMINISTRATION

1 credit

Prerequisite: Pol 200.0.

A study of the structure and operation of the administrative branch of government, both in theory and practice. Included will be an examination of the evolution of the Canadian federal public administration and public service, with some attention for comparative purposes to related experience in other nations. The administrative responsibilities and powers of the modern state will be assessed and a sampling of recent organization theories will be undertaken.

Classes 3 hrs. a week. 2 semesters.

Jabbra.

435.0 POLITICAL THOUGHT TO THE FRENCH REVOLUTION

1 credit

Prerequisite: Pol 200.0.

An historical treatment of the most important political ideas from the earliest writings on politics to the immediate precursors of the French Revolution. Some attention is paid to the mutual interaction of social conditions and ideas.

Classes 3 hrs. a week. 2 semesters.

Chauvin.

436.0 MODERN POLITICAL THOUGHT

1 credit

Prerequisite: Pol 200.0.

An examination of the major currents in political thought from the era of the French Revolution to the 20th Century. The major emphasis is on the liberal and the socialist traditions.

Classes 3 hrs. a week. 2 semesters.

Chauvin

440.0 THE POLITICS OF THE DEVELOPING AREAS

1 credit

Prerequisite: Pol 200.0.

An examination of problems of political development in Asian and African states, in the context of their modernization processes, with special reference to factors responsible for the emergence of authoritarian governments.

Classes 3 hrs. a week. 2 semesters.

Gillis

POLITICAL SCIENCE

441.0 GOVERNMENT AND POLITICS IN EAST ASIA

1 credit

Prerequisite: Pol 200.0.

A study of government structures and political dynamics in mainland China, Southeast Asia and Japan, with emphasis on current trends in the Chinese system.

Classes 3 hrs. a week. 2 semesters.

Boyd.

445.0 PROBLEMS IN CANADIAN GOVERNMENT

1 credit

Prerequisite: Pol 200.0.

This course offers a systematic investigation of a number of problems that face all levels of government in Canada.

Classes 2 hrs. a week. 2 semesters.

Gillis

446.0 POLITICAL PARTIES AND VOTING BEHAVIOR

1 credit

Prerequisite: Pol 200.0.

An analysis of the structures and functions of individual parties and party systems, with emphasis on Canada, the United States and Western Europe.

Classes 3 hrs. a week. 2 semesters.

Landes.

550.0 SEMINAR IN THE HISTORY OF POLITICAL THOUGHT

1 credit

Prerequisite: Pol 200.0.

An intensive study of major trends in political thought, ancient and modern, with special attention to contemporary political doctrines and ideologies, their transformation and interrelation in the course of history and their interrelation with social and political conditions.

Classes 2 hrs. a week. 2 semesters.

551.0 CANADIAN GOVERNMENT SEMINAR

1 credit

Prerequisite: Pol 200.0 and 304.0.

A study of selected aspects of Canadian government and politics, especially some of the dynamic forces which operate outside the formal constitutional framework.

Classes 2 hrs. a week. 2 semesters.

Dalton, Higgins

552.0 SEMINAR IN COMPARATIVE GOVERNMENT

1 credit

Prerequisite: Pol 200.0.

Conceived as a work-study group, this seminar is designed for students interested in the use of the comparative method in the analysis of contemporary national political systems.

Classes 2 hrs. a week. 2 semesters.

Ciuciura

553.0 INTERNATIONAL STUDIES SEMINAR

1 credit

Prerequisite: Pol 200.0.

A seminar on the contemporary interaction of the major powers, with special consideration of selected world problems, tensions, trends and developments.

Classes 2 hrs. a week. 2 semesters.

Boyd

555.0 SEMINAR ON CANADIAN FOREIGN POLICY

1 credit

Prerequisite: Pol 304.0 and 305.0.

Application of recent foreign policy models to Canadian data, survey of Canadian external relations, 1867-1970, detailed examination of contemporary problems in Canadian foreign policy, both geographic and functional. The latter includes defense, external trade, foreign aid and international organizations of special concern to Canada. Student presentations on selected topics are an important part of the course.

Classes 2 hrs. a week. 2 semesters.

The following courses in Political Science will be offered in 1976-77:

Pol 200.0	Pol 305.0	Pol 419.0	Pol 441.0
Pol 301.0	Pol 306.0	Pol 420.0	Pol 445.0
Pol 302.0	Pol 312.0	Pol 430.0	Pol 446.0
Pol 303.0	Pol 407.0	Pol 435.0	Pol 551.0
Pol 304.0	Pol 418.0	Pol 440.0	Pol 553.0

The following courses in Political Science will not be offered in 1976-77:

Pol 307.0	Pol 550.0	Pol 555.0
Pol 436.0	Pol 552.0	

PSYCHOLOGY

Chairman, Associate Professor   K. Konrad
Professor   J. Chadwick-Jones
Associate Professors   J. Darley, I. Lenzer
Assistant Professors   V. Catano, R. Konopasky
Lecturer   P. Street

Psychology is normally begun at the sophomore level. The introductory course is a broad survey of the discipline and is a prerequisite for all other psychology courses. The *compulsory* core program for those concentrating in psychology consists of the introductory course (201.0), Learning (301.0), and Experimental Design and Psychological Statistics (305.0). An average grade of C (2.0) in psychology courses is required for psychology majors.

The Department offers an honors program which follows the general regulations, as stated in this Calendar. An additional departmental regulation is that honor students take 449.0, and 549.0 (which is restricted to honor students).

201.0   INTRODUCTION TO PSYCHOLOGY

1 credit

Prerequisite: Sophomore standing.

The science of behavior, methods and measurement, psychological basis of behavior, maturation and development, individual differences and intelligence, personality, sensory processes and perception, learning, memory and thinking, motivation and emotion, social and clinical psychology, applications of psychology.

Each person taking this course must act as a subject for psychological experiments for a certain number of hours as a prerequisite for credit. The number of hours will be announced at the beginning of the course.

Classes   3 hrs. a week. 2 semesters.

Konrad, Lenzer, Darley,
Chadwick-Jones

301.0   PSYCHOLOGY OF LEARNING

1 credit

Prerequisite: Grade of C in Psy 201.0. Psy 301.0 is compulsory for all students majoring in Psychology. The student is advised to take Psy 305.0 concurrently. A final grade of C is mandatory for majors.

Classical conditioning and instrumental learning will be studied as examples of the learning process. Additionally, factors such as reinforcement, punishment, generalization, discrimination, transfer of training, extinction, short-term and long-term retention, interference, all-or-none versus incremental learning, and the physiological correlates of learning.

Classes   3 hrs. and lab. 3 hrs. a week. 2 semesters.

Catano

305.0   PSYCHOLOGICAL STATISTICS AND EXPERIMENTAL DESIGN

1 credit

Prerequisites: Grade of C in Psy 201.0. Mat 113.0 for arts students and Mat 100.0 for science students. Psy 305.0 is compulsory for all psychology majors. Students are strongly advised to take Psy 305.0 in the same year as Psy 301.0. A final grade of C is mandatory for majors.

Importance of statistics in psychology, probability and probability distributions, binomial and normal distributions, characteristics of distributions, measures of central tendency and dispersion, sampling and hypothesis testing, parametric.

The designing of experiments in psychology in the light of the above, the variation of factors and observation of changes in responses, interpretation of results based on experimental design and application of the relevant statistics.

Classes   3 hrs. and lab 1^1/$_2$ hrs. a week. 2 semesters.

Konopasky

331.1   CHILD PSYCHOLOGY

^{1}/$_2$ credit

Prerequisite: Psy 201.0.

An introduction to child psychology including a consideration of genetic and prenatal factors in development, early socialization, sexual differentiation, cognitive and intellectual development.

Classes   3 hrs. week. 1 semester.

Konrad

PSYCHOLOGY

334.1   PSYCHOLOGY AND RELIGION

$^1/_2$ credit

Prerequisite: Psy 201.0.

Interdisciplinary study of various aspects of the interface between religion and psychology. Competing value orientations in psychology and psychotherapy: the role of sin and guilt in mental illness; behaviorism, the medical model, and ethics; freedom and responsibility; the psychologizing of religion, and the ritualizing of psychology; contrasting images of man. Discussion of various phenomena, e.g., faith healing, conversion, speaking in tongues, transcendental experience. This course will not satisfy 4(b), 5(a) or 5(b) of the Science Degree Requirements.

Classes   3 hrs. a week. 1 semester.

Konrad

348.1   PSYCHOLOGY OF SEX ROLES

$^1/_2$ credit

Prerequisite: Psy 201.0. (enrolment limited to 40 students).

An examination of the psychology of sex role differences; sex role identity as determined by biological and environmental factors; discussion of sex role behavior among animals; theories as they relate to sex role differentiation, e.g., the psychoanalytic and social learning theory.

Classes   3 hrs. a week. 1 semester.

Lenzer

349.2   DRUGS AND BEHAVIOR

$^1/_2$ credit

Prerequisite: Psy 201.0. (enrolment limited to 40 students).

Effects of psychoactive drugs on normal and abnormal behavior and on consciousness, explanation in terms of brain functioning, discussion of methods used in the study of drug effects on animals and man.

Classes   3 hrs. a week. 1 semester.

Lenzer

350.1   BEHAVIORAL TECHNIQUES AND THE PROBLEM CHILD

$^1/_2$ credit

Prerequisite: Psy 201.0.

A survey of child behavior problems in the home, school and institutional settings and behavioral management techniques designed to handle such problems. Includes consideration of a broad range of problems: tantrums, classroom disruption, hyperactivity, distractibility, hitting of other children, troublesome bedtime behavior and general non-attentiveness to parental or teacher demands. Not for credit for honors or majors in psychology.

Classes   3 hrs. a week. 1 semester.

Konrad

402.0   PSYCHOLOGY OF SENSATION AND PERCEPTION

1 credit

Prerequisite: Psy 305.0.

An examination of how sensory systems (e.g., vision, audition) abstract and process information from the physical world and the resultant effect on awareness and attention. Topics include neural communication and organization, receptor and cortical processes, coding mechanisms, specification of the stimulus, perception of brightness and color, perceptual memory, form perception and recognition, perception of space, time and motion, extra-sensory perception, perceptual illusions.

Classes   2 hrs. and lab. 2 hrs. a week. 2 semesters.

Catano

403.1   PSYCHOLOGY OF MOTIVATION

$^1/_2$ credit

Prerequisite   Psy 301.0 and 305.0

A study of the impelling factors in behavior: instincts, needs, drives, incentives: behavioral and physiological components of hunger, thirst, sex, aggression and curiosity.

Classes   3 hrs. and lab 2 hrs. a week. 1 semester.

Darley

PSYCHOLOGY

404.0 INTRODUCTION TO PHYSIOLOGICAL PSYCHOLOGY

1 credit

Prerequisite: Psy 301.0 and 305.0.

Introduction to neuroanatomy of the brain. Neural mechanisms of sleep, arousal and attention; physiological basis of learning, language and motivation. Introduction to clinical neuropsychology. Physical control of the mind through electrical stimulation of the brain and through drugs.

Classes   3 hrs. and lab 2 hrs. a week. 2 semesters.

Lenzer

406.2 ETHOLOGY

½ credit

Prerequisite: Psy 301.0 and 305.0.

An examination of human and animal behavior: comparative development of social and emotional behavior, evolution, reflexive behavior, courtship, mating, and parental behavior.

Classes   3 hrs. and lab 2 hrs. a week. 1 semester.

Darley

410.0 SOCIAL PSYCHOLOGY

1 credit

Prerequisite: Psy 301.0 and 305.0.

Motives, attitudes, conformity, communication, group structure and leadership; aggression, person perception, methodology, social psychology in international affairs. In addition to the above any topic of interest to the students or to the teacher may be discussed in the class as part of this course. Experiments will be undertaken by students working individually or together.

Classes   2 hrs. and lab 2 hrs. a week. 2 semesters.

Chadwick-Jones

411.0 INDUSTRIAL AND APPLIED PSYCHOLOGY

1 credit

Prerequisite: ˙ Psy 305.0.

The application of psychological concepts to behavioral problems encountered in the work environment. Topics will include organizational structure, personnel selection, placement and training, leadership, human performance and capacity, motivation and morale, consumer psychology and how modern technology and organizations affect human behavior.

Classes   3 hrs. a week. 2 semesters.

Catano

412.0 HUMAN INFORMATION PROCESSING

1 credit

Prerequisite: Psy 301.0 and 305.0.

An examination of the processes by which sensory inputs are transformed, reduced, elaborated, stored, recovered and used. The course may include topics such as contemporary theories of perception and memory, psycholinguistics, computer simulation of cognitive processes, models of information processing, concept learning and formation, and decision making processes.

Classes   3 hrs. a week. 2 semesters.

Catano

413.0 ENVIRONMENTAL PSYCHOLOGY

1 credit

Prerequisite: Psy 301.0 or 305.0.

An examination of the evolutionary and biological background of humans relative to present industrial environment. Territoriality, space and human movements, privacy and crowding. Architectural design: housing, offices and hospitals, lighting. Perception of the city: cognitive maps, the sonic environment, the street and its social functions, stress in the urban environment, noise. Calhoun's rats and the rat race.

Classes   3 hrs. and lab 2 hrs. a week. 2 semesters.

Darley

PSYCHOLOGY

432.0 ABNORMAL PSYCHOLOGY

1 credit

Prerequisite: Psy 301.0 and 305.0.

Mental illness and mental health, normal and abnormal behavior, origin, development; symptoms and cures of certain behavior disorders, neurosis, and psychosis, psychological and physiological factors as joint causes of psychological problems, counselling, psychotherapy, behavior therapy, group therapy, mental retardation. Functions of mental hospitals, child guidance clinics, psychotherapists and psychiatrists.

Classes 3 hrs. a week. 2 semesters.

Street

433.0 PSYCHOLOGY OF PERSONALITY

1 credit

Prerequisite: Psy 301.0 and 305.0.

Major personality theories such as those by Freud and Rodgers, and the trait, factor-analytic, and learning theory approaches. Empirical research on such topics as the achievement motive.

Classes 2 hrs. and lab 2 hrs. a week. 2 semesters.

Street

434.2 PSYCHOLOGY OF ART

$1/2$ credit

Prerequisite: Psy 301.0 and one of Psy 402.0, 403.0, 412.0 (which may be taken concurrently).

A study of theory and research on psychological principles underlying the creation, meaning, and appreciation of art experience. Review of traditions in art criticism, e.g., psychoanalytic, as well as consideration of major theories addressed to analysis of aesthetic stimuli, experience and response, e.g., gestalt and information theory. Analysis of art as emotional communication, and its interpretation in the broader context of personality and culture.

Classes 3 hrs. a week. 2 semesters.

Street

440.0 EDUCATIONAL AND PSYCHOLOGICAL TESTS AND MEASUREMENTS

1 credit

Prerequisite: Psy 301.0 and 305.0.

Basic principles: statistical sampling and testing, psychological measurement and the construction of scales; test construction: standardization, validity, reliability; types of tests in common use: intelligence, aptitude, ability, personality, educational, vocational; special tests: language, clerical, perceptual, speed, and vocational selection, clinical tests: personality, psychopathology, impairment, traditional psychiatric classification ethics.

Classes 3 hrs. and lab $1^1/2$ hrs. a week. 2 semesters.

Konopasky

449.0 SENIOR SEMINAR

1 credit

Prerequisite: senior standing and permission of the Department. Applications for this course must be made in March of the junior year to the Chairman of the Department of Psychology.

An individual research course in psychology. This is a required course for fourth year honors students.

Classes and lab 6 hrs. a week. 2 semesters.

450.2 BEHAVIOR PROBLEMS OF CHILDREN

$1/2$ credit

Prerequisite: Psy 301.0, 305.0, 499.1 and 432.0 (the last may be taken concurrently).

A review of behavior problems exhibited by children in home and educational settings (e.g., tantrums, classroom disruption, hyperactivity, distractability, hitting of other children, troublesome bedtime behavior, and general non-responsiveness to parental or teacher demands), together with a discussion of available management techniques.

Classes 3 hrs. a week. 1 semester.

Konrad

PSYCHOLOGY

495.1 (.2)   ADVANCED BEHAVIOR MODIFICATION

$^1/_2$ credit

Prerequisite: Psy 301.0, 305.0, 499.1 and 432.0 (the last may be taken concurrently)

Consideration at an advanced level of behavior modification in relation to learning theory, with a special emphasis on assertive behavior. This course is an extension of Psy 499.1.

Classes 3 hrs. and lab 2 hrs. a week. 1 semester.

Konrad

498.2   COMMUNITY PSYCHOLOGY

$^1/_2$ credit

Prerequisite: Psy 301.0, 305.0 and 432.0 (the last may be taken concurrently).

Models of mental illness. Delivery systems of psychological services: social services, agencies, institutions and private practicing professionals. Epidemiological surveys. Preventitive psychiatry.

Classes 3 hrs. a week. 1 semester.

Konrad

499.1   BEHAVIOR MODIFICATION

$^1/_2$ credit

Prerequisite: Psy 301.0, 305.0, and 432.0 (the last may be taken concurrently).

A survey of behavior modification techniques: relaxation training, counter conditioning, assertive training, token economies, modeling, shaping, aversive techniques, etc., and their relationship to psychological learning theory.

Classes 3 hrs. and lab 2 hrs. a week. 1 semester.

Konrad

549.0   HONORS SEMINAR

1 credit

Prerequisite: fifth year honors standing.

An individual research course in psychology. It is expected that the student will produce an honors thesis based on his work in this course. The course is required for fifth year honors students.

Classes and lab. 6 hrs. a week. 2 semesters.

The following courses in Psychology will be offered in 1976-77:

Psy 201.0	Psy 349.2	Psy 432.0	Psy 450.2
Psy 301.0	Psy 350.1	Psy 433.0	Psy 495.2
Psy 305.0	Psy 402.0	Psy 434.2	Psy 498.2
Psy 331.1	Psy 404.0	Psy 440.0	Psy 499.1
Psy 334.1	Psy 410.0	Psy 449.0	Psy 549.0
Psy 348.1	Psy 411.0		

The following courses in Psychology will not be offered in 1976-77:

Psy 403.1	Psy 406.2	Psy 412.0	Psy 413.0

RELIGIOUS STUDIES

Associate Professor, Chairman	L. F. Murphy, S.J.
Associate Professor	E. Stiegman
Assistant Professor	S. A. Armstrong
Lecturer	P. Bowlby

The purpose of university studies in religion is to discover and explore the many dimensions of religion both as a universal human concern and as a tradition of reflection and worship. In this pursuit religious studies combines the methods and perspectives of theology, history of religions, social ethics, liturgy and spirituality with those of other disciplines in the humanities and social sciences.

The Religious Studies Department offers courses in three general areas:

Religion in Western Civilization
History of Religions (Comparative Religion)
Religion in Contemporary Society

Because so many students who are not majors in religious studies enrol in the Department for elective courses, special provisions are made in their regard. Many courses are offered as 300-level electives without prerequisites. The lectures of these courses can form the basis of advanced-majors courses, in which case a student informs the instructor of his wish to take the course at an advanced level, is admitted only with stated prerequisites, and is asked to accept more ambitious assignments.

Science students seeking electives will find 202.0, 230.0, and 347.0-348.2 of special interest.

MAJORS IN RELIGIOUS STUDIES

Students majoring in religious studies must fulfill the following requirements:
(1)   The equivalent of six full courses; four of these beyond the 200-level, at least two of which must be at an advanced level.
(2)   A grade of at least *C* in each course counted toward the major.

PREREQUISITES FOR MAJORS IN RELIGIOUS STUDIES

Students majoring in religious studies should undertake at least two of their courses at an advanced level. An advanced course, for this purpose, is distinguished by more mature assignments and a higher level of achievement, which can reasonably be expected only of students entering such courses with particular prerequisites.

The following prerequisites apply only to majors who choose to take the designated courses at an advanced level.

305.0 — Egl 200 and a course in religious studies
306.0 — A course in history and in the history of religions (the latter may be taken concurrently)
310.0 — Rel 202.0
313.0 — Rel 202.0
315.0 — A 200 level course in religious studies and a course in Canadian history (the latter may be taken concurrently)
323.0 — A 200 level course in religious studies
324.0 — A 200 level course in religious studies
330.0 — Rel 230.0
338.0 — Rel 202.0 or 313.0
340.0 — A 200 level course in religious studies and a course in either sociology or economics
345.0 — A 200 level course in religious studies
347.1 — A 200 level course in religious studies
348.2 — A 200 level course in religious studies
351.1 — A course in religious studies, and a 300 level course in English, modern languages, or classics
352.2 — A course in religious studies, and a 300 level course in English, modern languages, or classics

HONORS STUDENTS

The Department offers an honors program in preparation for graduate studies or for professions appropriate to the academic study of religion, such as journalism, social work, personnel management, civic leadership, teaching, and the ministry. General requirements for honors programs in the Arts Faculty are followed. Students write an honors essay, which may be prepared through an honors seminar (see Rel 590.0-595.0).

RELIGIOUS STUDIES

100.0 THE RELIGIOUS DIMENSION OF HUMAN LIFE: INTRODUCTION TO RELIGIOUS STUDIES

1 credit

There are many common life experiences (for instance, the encounter with death, suffering, loneliness, the quest for personal identity, sexuality, wonder, good and evil) which most men and women have sought to address in the context of an organized religion. In addition to studying these experiences which point toward the religious dimension in human life and the ways in which several religions have dealt with them, we shall also look at some secular approaches to the same experiences.

Classes   3 hrs. a week. 2 semesters.

Armstrong

201.0 THE GOD PROBLEM

1 credit

Does God exist? Can personal and social values be supported by humanist alternatives to religion? The course considers these and other classic questions of the philosophy of religion, together with more recent issues, e.g., the nature of language about God, mythology in religious Scriptures, and the dialogue between science and religion.

Classes   3 hrs. a week. 2 semesters.

Stiegman

202.0 INTRODUCTION TO THE BIBLE

1 credit

A critical approach to the Bible, involving an inquiry into the cultural and historical context of biblical literature, the meaning and relevance of the Bible for modern man.

Classes   3 hrs. a week. 2 semesters.

Murphy

215.0 MORAL PROBLEMS IN CONTEMPORARY SOCIETY

1 credit

An introduction to the meaning of Christian ethics through selected contemporary problems: Is morality a private affair (abortion)? Can religion and politics be separated (revolution)? Do moral norms change (the proper distribution of wealth)?

Classes   3 hrs. a week. 2 semesters.

Bowlby

230.0 THE MEASURE OF MAN

1 credit

Who am I? Who do the experts say I am? Who do I think, feel, wish, fear I am? Am I one or many? Am I alone? Scientists, historians, psychoanalysts, artists, philosophers, theologians have struggled with these and related questions. We will seek the relevance of their views of what man is to our own questioning of who we are.

Classes   3 hrs. a week. 2 semesters.

Armstrong

235.0 INTRODUCTION TO ASIAN RELIGIONS

1 credit

An introductory, non-technical study of Eastern religions through an examination of the historical and cultural roles of religions in Asian societies, such as Islam in the Middle East, Hinduism in India, Confucianism and Taoism in China, and Shinto and Buddhism in Japan.

Classes   3 hrs. a week. 2 semesters.

Bowlby

RELIGION IN WESTERN CIVILIZATION

305.0 DRAMA AND RELIGION

1 credit

A close reading of great plays from world literature, emphasizing Greek tragedy, Shakespeare, and the modern stage. The course strives for an awareness of religious dimensions in the fictional universe which every play creates, and of the mythical character of the play's central action. Attention is drawn to the origin of both classical and modern drama in religious ritual, and to the dramatic essence of Judaism and Christianity as religions of event.

Classes   3 hrs. a week. 2 semesters.

Stiegman

RELIGIOUS STUDIES

306.0 MYTH AND HISTORY: THE PROGLEM OF INTERPRETING HUMAN EXISTENCE

1 credit

His 334.0 to be taken concurrently.

Man's search for meaning. The life of man in relation to his past and that of his communities: the question put to Marc Bloc: "Papa, what good is history?"

Classes 3 hrs. a week. 2 semesters.

Armstrong, Bollini

309.0 (Cla 310.0) HISTORY OF ISRAEL

1 credit

A study of the history of the ancient Hebrew kingdoms of Israel and Judah from the earliest settlements in Palestine to the fall of Jerusalem in 70 A.D.

Classes 3 hrs. a week. 2 semesters.

Tobin

310.0 CHRISTIANITY IN MODERN CIVILIZATION: 1521 — TODAY

1 credit

Questions arising from the history of Christianity in the reformation and modern periods. Martin Luther: reformer of medieval superstition or destroyer of European unity? John Calvin and the rise of capitalism, the radicals, Henry VIII and Elizabeth, Puritans and religious freedom. The French revolution and the attack on Christianity; science, liberalism, marxism and the modern critique of Christianity. The de-christianization of contemporary culture.

Classes 3 hrs. a week. 2 semesters.

Murphy

313.0 JESUS OF NAZARETH

1 credit

Jesus of Nazareth: God, man or superstar? Did Jesus really exist? What did he teach? Was he a radical revolutionary? An impractical dreamer? Why was he killed? What does the resurrection mean? Does his ethical teaching have any challenge or meaning for us today? Many answers have been given to Jesus' question, "Who do men say that I am?" An examination of the views of some representative modern scholars with an analysis of the texts on which their views rest.

Classes 3 hrs. a week. 2 semesters.

Murphy

HISTORY OF RELIGIONS (COMPARATIVE RELIGION)

320.0 (Ant 349.0) MYTH AND SYMBOL

1 credit

What is myth? What is religious symbol? Are they relevant and meaningful for modern man? This course offers a comparative analysis of the nature of religious experience, myth and symbol by looking into various religions — primitive, classical, and modern. Attention will be given to modern theories of myth and symbol as developed, for example, by Freud, Jung, Eliade, and several notable anthropologists.

Classes 3 hrs. a week. 2 semesters.

321.0 PRIMITIVE RELIGIONS IN ASIA

1 credit

A study of the primitive religions among (1) hunters and food-gathers in Australia and (2) agriculturalists in Indonesia and Melanesia. Various modern theories of myth and mythic thought will be correlated with readings and interpretations of specific myths and symbols in Asian communities. In the second semester the course will concentrate on a study of various types of cosmogonic myth, their meanings and functions in Asian societies.

Classes 3 hrs. a week. 2 semesters.

323.0 THE RELIGIONS OF INDIA

1 credit

The Indus civilization: religion and philosophy of the Vedas, Brahamanas, and the Upanishads, Yoga mysticism and its influence on Buddhism, the Bhagavad-Gita, bhakti motifs, myths, and symbols of Hinduism and Buddhism as they are expressed in written documents, visual arts and other cultural creations. Some methodological problems relating to the study of Indian religions will also be discussed.

Classes 3 hrs. a week. 2 semesters.

Bowlby

RELIGIOUS STUDIES

324.0 RELIGIONS OF CHINA

1 credit

What did Confucius say? How does a Taoist and a Buddhist conceive of the world and his place in it? How have Chinese religious traditions shaped the character of Chinese culture? These questions will be examined through the reading in translation of selected Chinese classics such as: Confucius' *Analects,* Lao Tzu's *Tao te Ching,* The Buddhist *Platform Scripture* and selected writings of Chairman Mao.

Classes   3 hrs. a week. 2 semesters

Bowlby

RELIGION IN CONTEMPORARY SOCIETY

311.0(Phi 330.0)   THE PHILOSOPHICAL BASIS OF RELIGION

1 credit

A consideration of the meaning, truth, and logic of religious language and religious teachings about the existence and nature of God. Towards this purpose basic religious texts such as the *Bhagavad-Gita,* the *I Ching,* the *Homeric* poems, the *Koran,* and the *Bible* will be read in relation to some philosophical texts such as Aristotle's *Metaphysics,* Aquinas' *Summa Theologiae,* and Hegel's *Lectures on the Philosophy of Religion.*

Classes   3 hrs. a week. 2 semesters.

315.0 THE CHRISTIAN IN SOCIETY

1 credit

What sense does it make to speak of a Christian response to social and political problems in present-day Canada? An examination of the impact of earlier Christian groups on Canadian life, e.g., the Winnipeg General Strike of 1919, the Antigonish Movement, and the theology that led them to act. An analysis of at least one contemporary national problem and one local problem with respect to a possible Christian response.

Classes   3 hrs. a week. 2 semesters.

316.0(Ant 350.0)   ANTHROPOLOGY OF RELIGION

1 credit

The course will examine religious behavior as one way in which humans adapt to their environments. It will consider (but not be limited to) such questions as the origin and nature of religion as a panhuman phenomenon; religion as culture in the antropological sense; functional relations between religion and politics, economy, family; nativistic movements as responses to oppression.

Classes   3 hrs. a week. 2 semesters.

Jaquith

317.0 (Soc 317.0)   SOCIOLOGY OF RELIGION

1 credit

An analysis of the functions of religion and the interactions between religious belief systems and institutions and the major institutional areas of society.

Classes   3 hrs. a week. 2 semesters.

Okraku

330.0   OTHER PEOPLE: THE RELIGIOUS SIGNIFICANCE OF HUMAN RELATIONSHIPS

1 credit

Friends, acquaintances, strangers, enemies, fools — how are we to understand ourselves in relation to each of these? Is it wise to depend upon other people? Is there anything more valuable than friendship? Do only fools love their enemies? We will examine these and related questions from a variety of religious and secular perspectives. A principal thesis to be explored is that there is a major typological distinction between and within religions according to the seriousness with which they regard the singular other person.

Classes   3 hrs. a week. 2 semesters.

Armstrong

338.0   PROBLEMS IN CONTEMPORARY CATHOLICISM

1 credit

The Catholic Church is undergoing perhaps the greatest crisis in its history. Can the Church survive? Has it lost its soul? Why has it changed? What does it teach today? What contribution can it make to modern man? A general introduction to the Catholic crisis after Vatican II.

Classes   3 hrs. a week. 2 semesters.

Murphy

RELIGIOUS STUDIES

340.0 SOCIAL ETHICS: MAN AND FREEDOM IN A TECHNOLOGICAL SOCIETY

1 credit

Is technological man a myth or a reality? Is the technological society a threat to freedom or the context for a new participatory society? How can the world be made free for man and man free for the world? What is the place of fantasy and festivity in technocracy? What religious and ethical resources are important for the creation of a humanized society? How ought we to live? Can we survive?

Classes   3 hrs. a week. 2 semesters.

345.0 THEOLOGY OF LOVE AND SEXUALITY

1 credit

This course will explore man's self-understanding in the areas of love and sexuality from a theological perspective. The scriptures of various religions will be the focus for an exploration of how man has responded to the comedy and sublimity of his embodied being. Topics to be discussed are: the cultural history of love, sexual ethics and the new morality, the myth of sexual roles, psychological insights on sexuality, alternative styles of marriage, and the family.

Classes   3 hrs. a week. 2 semesters.

347.2 ECOLOGY AND RELIGION

$^1/_2$ credit

The course reviews the phenomenon of human ecology in order to advance to further questions: In man's relationship to nature, does nature have rights? To reduce pollution, may the rich deprive the poor of advanced technology? Is a low-consumption life-style desirable in itself? Should we leave development and progress to the experts? Such questions prepare the ground for a theology that finds religious meaning in the worldly realities of science, commerce, and government.

Classes   3 hrs. a week. 1 semester.

Stiegman

348.1 GOD IN SECULAR EXPERIENCE

$^1/_2$ credit

Is Christian life altogether different from human life? Or can one discern the action of God in the sheer process of human maturing? The student is led to inquire whether ordinary human life is ordinary at all, or whether it is the field of a dramatic conflict between forces of self destruction and powers of creativity and new life.

Classes   3 hrs. a week. 1 semester.

Stiegman

351.1 LOVE

$^1/_2$ credit

Our culture has represented love, variously, as effecting self-fulfillment, the affirmation of another personality, union with deity, merit for a future life; or, as sex, a passing neurosis, an unreasoned self-annihilation, or a social contrivance. This course explores the assumptions and implications of these views, particularly as they involve ultimate human concerns, that is, religion. The course can be continued into Rel 352.2 where a coordinate theme is studied in a similar manner.

Classes   3 hrs. a week. 1 semester.

Stiegman

352.2 DEATH

$^1/_2$ credit

The student considers such questions as what dying is really like, whether dying provides a valuable point of view on living, whether people continue in some form of existence after dying, how one is to understand the symbols in religious talk about death, and why mythologies deal so heavily in death.

Classes   3 hrs. a week. 1 semester.

Stiegman

490.0-495.0 READING COURSES IN RELIGIOUS STUDIES

1 credit

Prerequisite: consent of the Department.

These courses are organized by individual faculty members in agreement with the Department as a whole; they are designed to supplement or provide an alternative to regular courses in religious studies according to the special needs and interests of students. Course content can be proposed by the student.

RELIGIOUS STUDIES

590.0-595.0   HONORS SEMINARS IN
                        RELIGIOUS STUDIES

                                      1 credit

Prerequisite: fifth-year honors status and consent of the Department.

1. The following courses in Religious Studies will be offered in 1976-77:

Rel 100.0	Rel 235.0	Rel 347.2
Rel 201.0	Rel 306.0	Rel 348.1
Rel 202.0	Rel 324.0	Rel 351.1
Rel 215.0	Rel 338.0	Rel 352.2
Rel 230.0		

2. The following courses in Religious Studies will not be offered in 1976-77:

Rel 305.0	Rel 320.0	Rel 330.0
Rel 310.0	Rel 321.0	Rel 340.0
Rel 313.0	Rel 323.0	Rel 345.0
Rel 315.0		

SOCIOLOGY

Chairman, Associate Professor   S. Halebsky
Associate Professor   I. Okraku
Assistant Professors   R. Cosper, M. Overington,
     H. Ralston, L. Ruffman
Lecturer   D. Perrier

200.0   INTRODUCTORY SOCIOLOGY

1 credit

An introductory study of sociological perspectives and concepts; man's interaction and organization in society, particularly in modern Canadian society; relationship between sociological theory and research; analysis of major social institutions, e.g. familial, religious, educational, economic and political.

Classes   3 hrs. a week. 2 semesters.

Staff

DEPARTMENTAL STATEMENT

Soc 200.0 is the introductory course and is a prerequisite for most 300 level courses.

To major in sociology, a student must receive credit for Introductory Sociology (Soc 200.0), Research Methods (Soc 300.0), and Sociological Theory (Soc 301.0) — which are normally taken in the junior year — and Modern Sociology (Soc 430.0) which is taken in the senior year. In addition, a sociology major must take a minimum of two electives in sociology and three courses from allied fields (anthropology, geography, economics, political science, psychology); with the Department's permission, another field may be substituted. At least one course in an allied field must be on the 300 or 400 level. The sociology electives should be selected in consultation with the Department.

To minor in sociology, a student must complete the following courses with a quality point average of at least 2.0: Introductory Sociology (Soc 200.0); Research Methods (Soc 300.0) or Sociological Theory (Soc 301.0); and two electives.

There is an honors program in sociology which follows general university requirements. Each honors student's program is supervised by the department.

Note: courses are all the equivalent of three hours a week each academic year, although specific course schedules are decided by the department.

Students are urged to check with the department prior to registration to confirm the department's offerings.

178

300.0   RESEARCH METHODS

1 credit

Prerequisite: Soc 200.0.

An examination of basic methods and techniques in social research. Topics to be discussed include science and sociology, theory, conceptualization, research design, and methods of data collection and analysis. The student is introduced to sampling, measurement and statistical analysis of quantitative data. Students also get intensive experience in data collection and analysis through laboratories and independent research.

Cosper, Okraku

301.0   SOCIOLOGICAL THEORY

1 credit

Prerequisite: a course in sociology or permission of the instructor.

A critical examination of some classical statements in sociological theory, giving particular emphasis to key concepts in the development of contemporary notions in sociological analysis. The circumstances giving rise to sociology as a special field are considered, as are the relationships of specific theorists and their ideas to modern times.

Classes   3 hrs. a week. 2 semesters.

SOCIOLOGY

302.0   SOCIAL PROBLEMS INVOLVING DISORGANIZATION AND DEVIANCE

1 credit

Prerequisite: a course in sociology.

An analysis of factors generating social disorganization in contemporary society focusing on minority groups, such as blacks, women and Indians, and on the poor. The course also considers the dynamics of varieties of deviant behavior as in organized crime and juvenile delinquency.

Classes   3 hrs. a week. 2 semesters.

303.0   CRIMINOLOGY

1 credit

Prerequisite: an introductory sociology course and a second course in sociology which may be taken concurrently.

An analysis of criminal deviance which examines theories of its genesis, social definition, maintenance, control, and social consequences. The course is intended to give students an opportunity to examine major theoretical and methodological issues in the study of crime and crime control.

Classes   3 hrs. a week. 2 semesters.

Perrier

305.0   SOCIAL AND ECONOMIC DEVELOPMENT

1 credit

Prerequisite: a course in sociology or economics.

The application of sociological principles to problems of the third world, economic development and urbanization. Problems in the transition from agrarian to urban societies.

Classes   3 hrs. a week. 2 semesters.

306.0 (Edu 507.0)   SOCIOLOGY OF EDUCATION

1 credit

Prerequisite: a course in sociology or enrolment in Education.

The structural dynamics of educational systems in different societies, with special emphasis on Canada. The main focus will be on the nature of the relationship between educational institutions and the wider social systems and the implications of this relationship for educational alternatives.

Classes   3 hrs. a week. 2 semesters.

Ralston

308.0   URBAN SOCIOLOGY

1 credit

Prerequisite: a course in sociology.

An analysis of different ways in which sociologists approach the city; the historical and comparative approach, human ecology, urban and suburban interaction, informal urban social structures, community and power structure. Emphasis is on theory and research and their application to selected problems in the metropolitan area.

Classes   3 hrs. a week. 2 semesters.

Halebsky

311.1 (311.2)   POPULATION

$^1/_2$ credit

Prerequisite: Soc. 200.0.

An introductory course in demography and population studies designed to acquaint the student with the basic materials and techniques of demographic analysis, and to explore the interrelationships of demographic phenomena and various aspects of social structure. Topics include population size, composition, and distribution; and the dynamics of demographic change: i.e., fertility, mortality and migration. Particular attention is given to current population issues and problems in both developed (especially Canada) and developing nations.

Classes   3 hrs. a week. 2 semesters.

Okraku

313.0   SOCIOLOGY OF KINSHIP AND FAMILY

1 credit

Prerequisite: a course in sociology.

Cross-cultural analysis of family and changing family patterns, relationship between family and other institutions, male and female roles and patterns of interaction at each stage of family life-cycle.

Classes   3 hrs. a week. 2 semesters.

Ruffman

SOCIOLOGY

314.0   SOCIOLOGY OF PROFESSIONS

1 credit

Prerequisite: Soc 200.0

Examination of the models used to study increasing professionalization in modern societies. Professions such as medicine, law, social work, teaching, librarianship, and nursing will be analyzed. The role played by professionals within Canadian society will be examined. Topics include professional ideologies, inter-professional relations, socialization, colleague control, career lines, deviant behavior, government and bureaucratic influences on professional practice.

316.0   ORGANIZATION THEORY AND BUREAUCRACY

1 credit

Prerequisite: a course in sociology.

An examination of the formal structure and bureaucratic organization of systems of modern society. Organizational theory in relation to occupational, professional, industrial and work situations.

Classes   3 hrs. a week. 2 semesters.

317.0 (Rel 317.0)   SOCIOLOGY OF RELIGION

1 credit

Prerequisite: a course in sociology or religious studies.

An analysis of the functions of religion and the interactions between religious belief systems and institutions and the major institutional areas of society.

Classes   3 hrs. a week. 2 semesters.

Okraku, Ralston

318.0   SOCIAL CHANGE

1 credit

Prerequisite: a course in sociology.

This course has two objectives: to present a sociological view of history and to introduce the student to the more important theories of the form, causes and processes of social change.

Classes   3 hrs. a week. 2 semesters.

321.0   CANADIAN SOCIETY

1 credit

Prerequisite: a course in sociology.

An examination of the institutional framework and value basis of Canadian society. Topics include ethnic composition, class structure, economic and political institutions, and industrialization. A broad spectrum of social problems confronting Canada will also be considered.

Classes   3 hrs. a week. 2 semesters.

322.0   POLITICAL SOCIOLOGY

1 credit

Prerequisite: a course in sociology or political science.

Prevailing theories of radical or dissident behavior will be assessed critically and alternate emerging approaches suggested. Protest and radical movements in Europe, Latin America, and elsewhere will be considered.

Classes   3 hrs. a week. 2 semesters.

Halebsky

323.0   THE INDIVIDUAL AND SOCIETY

1 credit

Prerequisite: a course in sociology.

An approach to understanding the social world through an investigation of the formation, change, and performance of individual identities. We shall take society to be a process of communication in which meaning, roles, selves, and institutions are enacted in forms of interaction, and shall treat human persons as creative producers of social diversity. In personal terms, we shall struggle with a sociological response to the traditional questions: "Who am I?" and "What must I do?"

Classes   3 hrs. a week. 2 semesters.

Overington

324.0   SOCIAL STRATIFICATION

1 credit

Prerequisite: a course in sociology.

An analysis of the main features of social inequality in modern industrial societies: distribution of power and wealth, existence of power elites or governing classes, comparative community power structures, institutionalization of class conflict, problems of social mobility, political expression of class and status groups.

Classes   3 hrs. a week. 2 semesters.

Overington

SOCIOLOGY

332.0   STUDIES IN SELECTED SOCIETIES AND CULTURES

1 credit

Prerequisite: a course in sociology.

An in-depth study of the societal organization, institutions, customs and life styles of a particular country or area of the world. Areas may vary from year to year and will be chosen according to student interest, interdisciplinary programs and available faculty.

For 1976-77 the area to be studied is The Maritimes.

333.0   SOCIAL MOVEMENTS

1 credit

Prerequisite: a course in sociology.

Analysis of the origin and development of social movements and their role in social change. The political and sociological sources of social movements will be stressed, as well as their institutional and ideological transformations. The course will have comparative focus, with attention to both contemporary and earlier social movements.

Classes   3 hrs. a week. 2 semesters.

Halebsky

335.1 (.2)   QUANTITATIVE METHODOLOGY

$^1/_2$ credit

Prerequisite: Soc 300.0.

Designed to familiarize students with a broad range of quantitative statistical methods used in both basic and applied research problems in sociology. Special attention is given in the course to analysis of data using automated data processing techniques.

Classes   3 hrs. a week. 1 semester.

Okraku

336.1 (.2)   WORK IN CONTEMPORARY SOCIETY

$^1/_2$ credit

Prerequisite: Soc 200.0.

In this course, the work people do is analyzed as a product of industrialization and accompanying major social changes. Aspects of the social organization of work are studied, such as its relation to social class and the organiation of work into occupations. The importance of work for the individual in contemporary society is also studied; issues are raised such as the impact of work on personal identity and life style, alienation, occupational community, occupational choice and socialization, and careers.

Classes   3 hrs. a week. 1 semester.

Cosper

337.1 (.2)   LEISURE IN CONTEMPORARY SOCIETY

$^1/_2$ credit

Prerequisite: Soc 200.0.

In this course, leisure is seen as the converse of work in industrial society. Leisure is analyzed in relation to social structural features, such as social class and occupation. The course examines the social organization of such leisure activities as: social interaction with family and friends; voluntary associations, varieties of play including sports, pastimes, hobbies, games and holiday travel; participation in expressive culture; use of mass media, the arts and entertainment.

Classes   3 hrs. a week. 1 semester.

Cosper.

340.1 (.2)   ETHNIC AND MINORITY GROUPS: CANADA AND THE UNITED STATES

$^1/_2$ credit

Prerequisite: Soc 200.0

An analysis of the concepts of race and ethnicity with particular emphasis being given to Canadian and American minority groups. An historical and theoretical approach will be used with particular emphasis being given to such topics as racial and ethnic differentiation, segregation, discrimination, assimilation, inequality and conflict.

Classes   3 hrs. a week. 1 semester.

SOCIOLOGY

341.1 (.2)   ETHNIC AND MINORITY
              GROUPS: LATIN AMERICA
              AND THE OLD WORLD

¹/₂ credit

Prerequisite: Soc 200.0.

An analysis of the concepts of race and ethnicity with particular emphasis being given to Latin America, Africa, and other previous colonial areas as well as new and developing racial and cultural situations in such countries as Great Britain. The approach will be heavily cross-cultural and historical with particular emphasis being given to such concepts as power, pluralism, acculturation and assimilation.

Classes   3 hrs. a week. 1 semester.

342.1 (.2)   SOCIAL INTERACTION

¹/₂ credit

Prerequisite: a course in sociology.

An investigation of the social world through an examination of the nature and variety of human relationships. In personal terms, we shall struggle to understand our own places in the network of groups that make up society.

Classes   3 hrs. a week. 1 semester.

Overington

343.1 (.2)   SOCIETY AS DRAMA

¹/₂ credit

Prerequisite: a course in sociology.

An effort to present a model of society as drama through attention to the work of Goffman, Klapp, Burke, and Duncan. The scope and limits of this approach will be considered in an examination of its major concepts and application to some forms of political action. In personal terms we shall ask ''what happens to the real person when individuals are considered as 'actors'?''

Classes   3 hrs. a week. 1 semester.

Overington

351.1 (.2)   CONTEMPORARY ISSUES
              IN SOCIOLOGY

¹/₂ credit

Prerequisite: a course in sociology.

The course will provide an opportunity for students to study contemporary substantive issues in considerable depth and detail.

Classes   3 hrs. a week. 1 semester.

Okraku

401.0   SELECTED STUDIES IN
         SOCIOLOGICAL THEORY

1 credit

Prerequisite: Soc 200.0, 300.0 and 301.0 or permission of the instructor.

A seminar course which examines selected theoretical issues in sociology.

402.0 (Phi 402.0)   PHILOSOPHY OF THE
                     SOCIAL SCIENCES

1 credit

Prerequisite: permission of the instructor.

A seminar course on basic assumptions and concepts used in the social sciences, particularly sociology and allied fields. Open to students in philosophy and the social sciences with permission of the instructor.

Ansell

403.0   SELECTED STUDIES
         IN SOCIOLOGICAL ANALYSIS:
         PRACTICUM IN THE SOCIOLOGY OF
         ALCOHOL USE

1 credit

Prerequisite: Soc 200.0, 300.0 and 301.0 or permission of instructor.

This seminar introduces students to sociological theories of alcohol use in society, including cultural, deviance, and social control theories, and to several styles of research into alcohol use, including the epidemiological, cross-cultural, observational, and organizational approaches. Students will participate actively in classes and carry out a major research project during the year.

SOCIOLOGY

405.0 (Gpy 409.0)   SELECTED TOPICS:
                     BIRTH OF THE CITY

1 credit

Prerequisite: Soc 200.0, 300.0 and 301.0 or permission of instructor.

A cross-cultural study of the processes that gave rise to the evolution of cities. The processes assessed involve the cosmo-magical, ecological, demographic and technological bases of urban forms. The primary examples will be from early China, Mesopotamia and Mesoamerica. Secondary consideration will be given to West Africa and South-East Asia. In addition to the obvious neolithic casual sequence attention will also be paid to such consequences as the relation between urbanization and the state.

Classes   3 hrs. a week. 2 semesters.

407.0-408.0   DIRECTED READING
               IN SOCIOLOGY

1 credit

Prerequisite: Soc 200.0, 300.0, 301.0.

These courses provide an opportunity for students to read in depth in an area of sociology not normally covered by regular Departmental course offerings. Students are expected to demonstrate some initiative and independence.

Staff

430.0   MODERN SOCIOLOGY

1 credit

Prerequisite: open only to senior majors in sociology.

Issues in contemporary sociology are examined. The course emphasizes student participation and development.

Ruffman, Overington

451.0   SEMINAR IN SOCIOLOGICAL
         THEORY: FORMS OF COOPERATION

1 credit

Prerequisite: Soc 200.0, 300.0, and 301.0, or permission of the instructor.

Comparative study of social forms characterized by cooperative relations. Examination of family, agricultural organizations (e.g. kibbutz, communes, cooperatives); and more specialized non-agricultural cooperative organizations (e.g. buying and credit co-ops and types of industrial arrangements). Also consideration of social movements leading to establishment of these organizations. Students will be expected to study organizations and social movements in Nova Scotia.

453.0   SEMINAR IN SOCIOLOGICAL
         ANALYSIS

1 credit

Prerequisite: Soc 200.0, 300.0 or 301.0, or permission of the instructor.

An examination of selected methods of analysis in sociology.

For 1976-77 the seminar will deal with Citizen Participation.

455.0   SELECTED TOPIC

1 credit

Prerequisite: Soc 200.0, 300.0 and 301.0 or permission of instructor.

A seminar which examines selected topics within an area of specialization and enables a student to study a particular sociological problem in detail.

For 1976-77 the topic will be Education and Society.

530.0   HONORS SEMINAR

1 credit

Prerequisite: enrolment in honors program.

The purpose of this seminar is to help students prepare a major research paper on a topic agreeable to both the student and the department.

The following courses in Sociology will be offered in 1976-77:

Soc 200.0	Soc 324.0	Soc 342.1	Soc 430.0
Soc 300.0	Soc 332.0	Soc 343.2	Soc 453.0
Soc 301.0	Soc 336.1	Soc 407.0	Soc 455.0
Soc 303.0	Soc 337.2	Soc 408.0	Soc 530.0
Soc 308.0			

The following courses in Sociology will not be offered in 1976-77:

Soc 302.0	Soc 316.0	Soc 333.0	Soc 401.0
Soc 305.0	Soc 317.0	Soc 335.1	Soc 402.0
Soc 306.0	Soc 320.0	Soc 340.1	Soc 403.0
Soc 311.1	Soc 321.0	Soc 341.2	Soc 405.0
Soc 313.0	Soc 322.0	Soc 351.1	Soc 451.0
Soc 314.0	Soc 323.0		

WEST EUROPEAN STUDIES

West European Studies offers a coherent program in the humanities and certain social sciences with an emphasis on language skills and a specialized general knowledge of West European affairs and their relations to North America. The program seeks to establish a modern context for a concentration in the humanities and to produce graduates suitable to the recruitment needs of public service, trade, industrial, union and commercial organizations concerned with Western Europe or associated institutions such as NATO or the EEC. It is possible for participating students to study in certain European countries during the summer months with financial assistance from the host country. Such grants become available on a competitive basis.

Students graduating from the program will have a thorough grounding in at least one major West European language other than English, as well as a specilized acquaintance with the political and economic affairs of the region, and a particular interest in the thought, history, or literature of Western Europe. Since graduate departments in European Studies exist already in Canada and elsewhere, students interested in graduate studies need be at no disadvantage.

REQUIREMENTS

There are five basic requirements:
1. Two courses above the elementary level in one modern language other than English.
2. One course in economics and one in political science to be selected from the prescribed electives.
3. Three of the courses taken within the major concentration should deal with Western Europe or with principles directly relevant to comparative studies concerning Western Europe.
4. Each student will prepare a senior paper in the final year. The subject will be set by the faculty members concerned.
5. A special, obligatory seminar will be convened four times in the initial year of the program to hear and discuss papers presented by students enrolled in the area studies courses.

LIST OF ELECTIVES

Any students wishing to enrol in the program are encouraged to discuss their selection of courses with the co-ordinating Chairman, Dr. C. J. Terry of the English Department.

CLASSICS
120.0 The Classical Civilization of Greece and Rome
303.0 History of Greece
304.0 History of Rome
305.0 Hellenistic History

ENGLISH
300.0 Comparative Literature: Europe
301.0 The Modern Novella
304.0 The Development of Drama in the Theatre
413.0 Anglo-Irish Literature

ECONOMICS
101.0 Economic History of Europe
313.1 International Finance
314.2 International Trade

GEOGRAPHY
320.0 Geography of Europe

HISTORY
121.0 Civilization in the West
124.0 A History of Britain, 1066 to the Present
203.0 The 20th Century
204.0 Europe 1890-1945
304.0 Europe 1815-1945
311.0 Medieval England
315.0 19th Century Britain
341.0 Britain in the 20th Century
501.0 The Puritan Revolution
521.0 European Diplomatic History 1815-1945

WEST EUROPEAN STUDIES

MODERN LANGUAGES

FRENCH
100.0   Introduction to the French Language
200.0   Intermediate Oral and Written French
300.0   The Principal Themes of French Literature
301.0   Advanced Conversation and Cultural Studies

GERMAN
100.0   Introduction to the German Language
200.0   Intermediate German
250.0   German Literary Prose
301.0   Modern German Literature

SPANISH
101.0   Introduction to the Spanish Language
201.0   Elementary Spanish
406.0   The Spanish Theatre

PHILOSOPHY
352.0   British Empiricism
353.0   Continental Idealism Descartes to Hegel

POLITICAL SCIENCE
306.0   Government and Politics in Western
            Europe
553.0   International Studies Seminar

RELIGIOUS STUDIES
202.0   Introduction to the Bible
310.0   Christianity in Modern Civilization

SOCIOLOGY
301.0   Sociological Theory

Detailed descriptions of the above courses can be found
under the relevant departmental headings.

SECTION 7

Financial
Information

FINANCIAL INFORMATION

RESPONSIBILITY

It is the responsibility of each student to be familiar with University regulations pertaining to financial matters.

DEFINITIONS

Full-time student: one who is enrolled in three or more courses in one semester.

Part-time student: one who is enrolled in less than three courses in one semester.

1. FEES

Fees indicated here were in effect in the 1975-76 academic year and are subject to change.

a) Tuition Fees
   Full-time students —
   University Fee $662.00
   Students Council Fee   43.00
                                         _____
                                          $705.00

   Part-time students —
   Each full-credit course   150.00
   Each half-credit course   75.00

b) Special Fees
   Graduation: Degree or Diploma   20.00
   Official transcript   1.00
   Special examination
      (see section 11)   10.00

2. STUDENTS' REPRESENTATIVE COUNCIL FEE

The Students' Representative Council fee is required of all full-time students. It supports an extensive program of activities organized by the student government. This fee is set and administered by the Students' Representative Council.

3. THESIS SUPERVISION

Graduate students who have completed course requirements but have not completed the thesis are required to pay a registration fee of $25.00 at the commencement of each academic year until the thesis is completed, plus a fee of $70.00 if under a thesis supervisor.

4. RESIDENCE ACCOMMODATION AND FEES

a)   Residence fees cover accommodation for two full semesters. The board portion of residence fees covers meals served in the residence cafeteria for two full semesters.
Breakfast, lunch and dinner are served from Monday to Friday inclusive; brunch and dinner are served on Saturday and Sunday.

b) High Rise 1 (Edmund Rice Residence)

Furnished apartments for unmarried students (four students to each) contain living room, kitchen, two double bedrooms and bathroom. Provision is not made for combined room and board in this residence. Fee for each student: $655.00

c) High Rise II (Ignatius Loyola Residence)

Furnished responsibility suites for students wishing room and board. Each contains four single bedrooms, one double bedroom and bathroom.
Single rate for each student;
19 meals a week $1,380.00
Any 14 meals a week   1,325.00

Double rate for each student:
19 meals a week   1,305.00
Any 14 meals a week   1,250.00
There is no reduction for meals not taken at the University.

d) High Rise II

One and two bedroom apartments for married students. Stove, refrigerator and drapes are provided. Available on a 12 month lease only.

e) Low Rise (Vanier Residence)

Furnished responsibility suites for students wishing room and board. Each contains two single bedrooms, two double bedrooms and bathroom. A common lounge serves each floor.
Single rate for each student:
19 meals a week $1,380.00
Any 14 meals a week   1,325.00

Double rate for each student:
19 meals a week   1,305.00
Any 14 meals a week   1,250.00
There is no reduction for meals not taken at the University.

FINANCIAL INFORMATION

f) Meal Plans

Students may change from one meal plan to the other any time before September 25.

No changes are permitted for the first semester after that date. Students may change meal plans for the second semester before December 18.

Students wishing to change meal plans should notify the Director of Residences in writing.

Meal plans are not accumulative.

Unlimited servings of menu items on both meal plans.

5. CATERER'S SPECIAL PLAN

Students accommodated in High Rise 1, and non-resident students, may wish to take advantage of the Caterer's special plan for any nine meals. Details may be obtained from the Caterer.

6. EXTENDED ACCOMMODATION

a) For an additional charge of $5.00 a day, students may enter residence on a room-only basis, one week prior to the first date of the academic year, and remain for a maximum of one week after the final date of the academic year. Students interested in making such arrangements should contact the Director of University Residences.

b) Christmas Recess

A student may arrange to remain in residence during the Christmas recess, on a room-only basis, for a total additional charge of $50.00. Interested students should make arrangements in advance with the Director of University Residences.

c) Summer Accommodation

Residence accommodation is available to students during the summer months at rental rates applicable at the time.

d) Graduating Students in Residence

Provision is made for graduating residence students to remain in residence, on a room-only basis, up to and including Convocation day at no additional charge.

7. PARKING ON CAMPUS

Residence outside parking	$25.00 a year
Underground	$12.00 a month or
	$100.00 a 12 month period
Other parking	$10.00 a year

Parking fees are payable in advance.

8. APPLICATION FOR RESIDENCE ACCOMMODATION

Application for residence accommodation, together with a $50.00 residence deposit should be made to the Director of University Residences. When the application is accepted, the deposit is retained and applied as a payment against residence fees for the first semester after the student has entered residence. This deposit will be refunded if notice of cancellation in writing is received by the Director of University Residences by August 15. Deposits on applications accepted after August 15 are not refundable.

9. PAYMENT OF FEES

a) Although tuition and residence fees are due and payable at the time of registration, provision is made for payment in two installments: the first at registration; the second at the beginning of the second semester. The amount of each payment is stated below.

	First Semester	Second Semester
Tuition		
Full-time	$355.00	$350.00
Part-time — each course	75.00	75.00
Residence		
Single room, 19 meal plan	690.00	690.00
Single room, 14 meal plan	662.50	662.50
Double room, 19 meal plan	652.50	652.50
Double room, 14 meal plan	625.00	625.00
Room only — High Rise I	327.50	327.50

b) Fees must be paid, or arrangement for payment made with the Business Office, before a student is considered registered. Exceptions to this regulation may be considered on presentation of valid reason.

The applicable instalment on residence fees is to be paid on entrance to residence.

Students who have an unpaid account with the University may not be permitted to register.

c) Cheques or money orders should be made payable at par in Canadian funds, to Saint Mary's University, and addressed to the Business Office, Saint Mary's University, Halifax, Nova Scotia, Canada. B3H 3C3.

FINANCIAL INFORMATION

10. SCHOLARSHIPS, BURSARIES, LOANS, ASSISTANTSHIPS

a) One-half of the value of any scholarship or bursary awarded by the University may be deducted from tuition fees for the first semester. If the award exceeds the applicable tuition fees, the excess portion may be applied to residence fees. Students who have applied for a Canada Student Loan may, on presentation of official acknowledgement of the application, register with payment of only a nominal portion of tuition fees for the first semester.

b) Payment of residence fees cannot be deferred pending receipt of a Canada Student Loan.

c) Students whose fees are to be paid by government or some other agency are required to present a signed statement, certificate or other appropriate supporting material.

d) Scholarships and bursaries awarded by Saint Mary's University are credited to the student's account at the beginning of a semester. If the award is made during a semester, the credit becomes effective on the date on which the Business Office receives notification.

e) Assistantships awarded to students by academic departments are credited to the student's account in two equal instalments, usually on November 1 and March 1.

The following scale is applied in computing refund of tuition fees:

| | Applicable Fee | |
| | | Part-time each |
First Semester	Full-time	course
1st week of classes	$ 25.00	$15.00
Remainder of September	55.00	15.00
October 1 to 15	110.00	35.00
October 16 to 31	170.00	35.00
November 1 to 15	250.00	45.00
After November 15	355.00	75.00
Second Semester		
To January 15	$ 35.00	$15.00
January 16 to 31	90.00	15.00
February 1 to 15	140.00	35.00
February 16 to 28	190.00	35.00
After February 28	350.00	75.00

11. LATE PAYMENT

a) A student whose account is in arrears may be denied course marks, transcripts, or graduation.

b) If fees are to be paid by a Canada Student Loan or a Provincial Bursary which has been delayed, the late payment charge may be waived if payment is received by October 31 for fees for the first semester, and by February 28 for fees for the second semester. In such cases, students are requested to present evidence of the source of funds.

12. WITHDRAWALS AND REFUNDS

a) In order to be eligible for an adjustment of tuition fees, a student who wishes to withdraw from the University must notify the Registrar in writing and apply directly to the Business Office for refund. The official date of withdrawal will be the date on which the Registrar receives written notice.

b) Withdrawal from Residence

A student who wishes to withdraw from residence is required to pay the appropriate portion of the room fee, or room and board fee, to the date of withdrawal, plus a penalty of $100.00. The penalty charge is necessitated because of commitments made by the University on the understanding that the student would be in residence for the full academic year. It may be waived if the student withdraws simultaneously from all courses for the remainder of the academic year, or if the student finds an acceptable replacement who is willing to assume the balance of residence fees for the academic year.

Application for remission of the penalty charge should be made to the Director of University Residences.

If withdrawal is at the beginning of a month, or at any time within the month, the student may be charged for the full month.

c) No tuition or residence fee will be refunded to a student who withdraws after November 15 in the first semester, or after February 28 in the second semester.

FINANCIAL INFORMATION

FINANCIAL AID

Scholarships and Bursaries

Financial assistance is available to students at Saint Mary's University from four main sources: scholarships, bursaries, Canada Student Loans, and Provincial Government Bursaries. The scholarships and bursaries are administered either directly by the donor or by the Director of Financial Aid at Saint Mary's University (Room 405 and 406, Student Center). Government Loans and Bursaries are administered by the student's provincial government, in accordance with the Canada Student Loans Plan.

All financial aid is dependent on a student presenting a satisfactory record of academic achievement when entering Saint Mary's University. Renewals or continuance of aid depend on maintaining an adequate academic record while studying at the University.

The awarding of scholarships, and in some instances of bursaries, as well as the renewal of such awards, is dependent on excellence in academic achievement.

FUNDS ADMINISTERED BY SAINT MARY'S UNIVERSITY

1. Scholarships

Awards of up to $1,500 are offered to students presenting excellent academic records when entering the University. Students who wish to make application for these scholarships must have an average of 80 per cent or over in their high school work.

Students who have completed one or more years in the University are also eligible for scholarships, even though they were not given an award at entry. All students who have an average of at least B in their university work are eligible to apply for these awards.

Each scholarship is awarded for one year only. However, scholarships may be renewed each year provided academic achievement is maintained. Applications for awards or renewal of awards must be made by June 30th each year to the Director of Financial Aid.

Included in the scholarships administered by Saint Mary's University are the following gifts:

Brother Stirling Scholarship (full tuition)
Donated by Mr. John H. Dickey. Open annually to an entering student.

Mary C. Daley Scholarship ($100)
Awarded in alternate years. Open to all students.

Eleanor M. Florian Scholarship ($300)
Open annually to all students.

Duncan W. Lynch Memorial Scholarship ($400)
Open annually to a Catholic student from Dartmouth.

John Glenister Memorial Scholarship ($150)
Open annually to all students.

Joseph E. Donohue Memorial Scholarship ($400)
Donated from the estate of Eva Mae Donohue in memory of her late husband and open annually to all students.

Errol Davison Memorial Award ($500)
A scholarship to be held by a student in the Commerce Faculty in either the third or fourth year. High academic standing is required, although financial need will be considered. This scholarship is granted by the partners of H. R. Doane and Company in memory of Mr. Davison, a former partner of the firm and an alumnus and friend of Saint Mary's University.

II. BURSARIES

Students performing satisfactory academic work, though not a scholarship standing, are given financial aid through bursaries and assistantships. In these cases the criterion for an award is financial need. In addition, a number of positions as course readers and laboratory demonstrators are open annually to junior and senior students; remuneration is based on hours of employment. All inquiries concerning bursaries and assistantships should be made to the Director of Financial Aid (Student Center, Rooms 405 and 406).

13. MISCELLANEOUS

a) Students will be charged for damage to University property.

b) A $5.00 charge is made for any cheque returned by the bank.

c) Repeated NSF cheques may result in cancellation of registration.

d) Post dated cheques are not accepted.

e) Receipts for income tax purposes are issued after January 31 and will be mailed to students who request them from the Business Office.

FINANCIAL INFORMATION

Included in the bursaries administered by Saint Mary's University are the following endowed gifts:

The Raymond W. Ferguson Bursaries
Two bursaries of $400 each per year to be awarded annually by the scholarship committee after consulting the Dean of the Faculty of Commerce. The applicant must be a Nova Scotian in junior or senior year who is not receiving another bursary scholarship or prize exceeding $300 in that year. Financial need must be evident and the candidate should show academic ability and possess those qualities of character and initiative which indicate potential leadership in the business world.

Rebecca Cohn Memorial Bursary ($100)
Open annually to all students.

Bernard Zwicker Memorial Bursary ($150)
Donated by Mr. and Mrs. Ivan Zwicker in memory of their son. Awarded in alternate years commencing 1969-70. Open to students in the Commerce Faculty.

Lord Nelson Hotel Ltd. Bursary ($250)
Preference is given to applicants from the Atlantic Provinces. Open annually to students in either their Freshmen or Sophomore year.

The Institute of Chartered Accountants of Nova Scotia Centennial Bursary
A bursary to be held by a student in any faculty, under the following conditions: the student must be a resident of Nova Scotia wishing to further his post-graduate education by entering the accounting profession with the intention of becoming a Chartered Accountant in Nova Scotia. The student must be in either of the last two years of the course. Ability and financial need are taken into consideration in making the award.

IBM — IBM Canada Bursary Program
IBM Canada Ltd. makes an annual grant of $1,000 for bursaries to students registered in a full-time course at the university who have satisfactory standings and who demonstrate financial need.

The Birks Family Foundation Bursaries
The Birks Family Foundation has established a plan of annual contributions to the Student Aid Fund of recognized Canadian universities for the creation of the Birks Family Foundation Bursaries.

The Bursaries are awarded by the Foundation on the recommendation of the University Scholarship Committee and are not restricted to faculty or year and may be renewed. The number and amount of such awards may vary annually, depending upon the funds available for the purpose from the Foundation.

I.O.D.E. Bursaries — Nova Scotia
I.O.D.E. Bursaries, value $100 to $200, are awarded to entering students who show academic ability and financial need. Address applications to the Provincial Education Secretary, Provincial Chapter, I.O.D.E., 2037 Parker Street, Halifax, Nova Scotia, B3K 4T6. Applications open MARCH 1ST and close MAY 1ST.

FUNDS ADMINISTERED BY THE DONOR

I. Scholarships

Scholarships are offered in varying amounts up to full coverage of tuition fees. They include:

The Canadian Mathematical Congress Scholarships
The Canadian Mathematical Congress offers a number of scholarships for students of Grade XII in Nova Scotia schools on the basis of a competitive examination usually held early in May of each year. They are tenable at any university in Canada. The amount of each award is determined by a consideration of financial need based upon applications from the leading candidates. Further information is available from the guidance departments of the various high schools.

FINANCIAL INFORMATION

Imperial Oil Higher Education Awards
Imperial Oil Limited offers annually free tuition and other compulsory fees to the children of employees and annuitants who proceed to higher education courses. Initial awards, or renewal of awards, are restricted to students under twenty-five years of age on the date of registration for any undergraduate year.

To qualify, a student must attain an average mark of 70% or higher in the appropriate secondary school examinations in the subjects required for admittance to the approved institution, or must have attained an average of 70% or more in a college year upon which application is based.

Courses may be taken at any Canadian university or other approved institution of higher learning, and awards are tenable for a maximum of four academic years, or the equivalent, at the undergraduate or bachelor degree level. The four levels of academic years are measured from the first year of entering a post-secondary institution.

Further information and application forms may be obtained from The Secretary, Committee on Higher Education, Imperial Oil Limited, 111 St. Clair Avenue West, Toronto 7, Ontario.

Joe Gannon Memorial Scholarship
The scholarship, valued at $500, is awarded to the son, daughter or legal ward of a trade unionist who is a member of a union affiliated with the Nova Scotia Federation of Labour. Applications should be addressed to Selection Committee, c/o Nova Scotia Federation of Labour, 6074 Lady Hammond Road, Halifax, Nova Scotia.

Municipal School Board, Halifax County, Scholarships
Four awards of $100 are made annually to students who have been accepted by the Education Faculty of a Maritime university. The award is restricted to residents of Halifax County. Further information may be obtained from Municipal School Board, P.O. Box 90, Armdale, Halifax, Nova Scotia.

Hockey Canada Scholarships ($2,000 annually)
Hockey Canada Scholarships were established in 1969, as a result of recommendations by a government task force on sports. This scholarship program is intended to encourage young men in two important endeavors — the pursuit of a post-secondary education and the development of proficiency in the game of hockey. These scholarships are open to candidates with outstanding hockey ability, who are Canadian citizens or landed immigrants of at least one year status, and who have graduated or are about to graduate from a secondary school with an average of at least 65 per cent in the year of graduation, or who are presently enrolled or have been enrolled in a post-secondary institution. Tenable for four years. Further information and application forms may be obtained from the Director of Awards, AUCC, 151 Slater Street, Ottawa, 4, Ontario.

Canadian University Students' Scholarships
Annual awards by Canadian University Students enable specially selected students to take one year of their studies at a university in a different part of Canada.

Education Fund for Black Students
This fund was established in April 1965, for the purpose of assisting promising students to continue their education in high schools, vocational schools, technological institutes, nursing schools, and universities. Students who register at a recognized university or college are eligible for assistance under the terms of the Fund. Inquiries should be directed to Mr. Harlan Cox, Chairman, Education Fund for Negroes, Box 578, Halifax, Nova Scotia. Mr. Cox's office will also advise students of other sources offering assistance in meeting university expenses.

Nova Scotia Power Commission Centennial Scholarship — Engineering
The Nova Scotia Power Commission offers four permanent scholarships tenable at the Nova Scotia Technical College in Halifax and open to competing students from the following universities: Acadia, Dalhousie, Mount Allison, Saint Francis Xavier, Saint Mary's. Candidates must be residents of the Province of Nova Scotia. Each scholarship is valued at $850.00 per year and is applicable to the electrical, mechanical, civil or industrial engineering disciplines. Applications should be made in writing to the Dean of Engineering of applicant's university by February 28 of each year. Further information is available from the Director of Financial Aid.

FINANCIAL INFORMATION

Many parishes and parish organizations offer scholarships to deserving students. Students interested in such scholarships should make inquiries from their parish or the parish organization concerned. These awards include:

> *Saint Agnes Parish Holy Name Society Scholarship*
> One award of $100.

> *Saint Joseph's Parish Scholarships*
> Two awards, one of $200 and one of $150.

> *Saint Mary's Basilica Parish*
> The Monsignor Carroll Memorial Scholarship, valued at $300.

> *Saint Peter's Parish Holy Name Society Scholarships*
> These awards vary in number and value.

> *Saint Stephen's Parish Scholarships*
> Four awards of $100.

> *Saint Stephen's Educational Association Scholarships.*
> Three awards of $100.

The Home and School Associations of various schools offer scholarships to deserving students. Students interested in such assistance should seek further information from their respective Home and School Association. These awards include:

> *Bedford Home and School Association Scholarship ($100)*

> *Oxford Home and School Association Scholarship ($50)*

> *Saint Thomas Aquinas Home and School Association Scholarship ($100)*

In addition, many councils of the Knights of Columbus offer scholarships to deserving students. Students interested in such scholarships are advised to direct their enquiries to the council in their area.

These awards include:

> *Knights of Columbus Council 1097 (Halifax) Scholarships*
> Seven awards of $150.

> *Knights of Columbus Council 2181 (Yarmouth) Scholarship*
> One award of $200.

MILITARY SERVICE SCHOLARSHIPS

The high professional ability required of present-day military officers demands the best in education and training. The Department of National Defence therefore sponsors programs of university education and leadership training for selected service personnel who have the potential to become officers in the Canadian Armed Forces. The admission standards are high, but for those who qualify the way is open to a challenging and rewarding career.

The programs sponsored are the Regular Officers Training Plan (ROTP), Medical Officer Training Plan (MOTP), Dental Officer Training Plan (DOTP) and Reserve Officer University Training Plan (ROUTP). Training given under these plans is divided into two parts: normal attendance at university throughout the academic year and military training each summer.

Interested students are requested to contact one of the following:

Commanding Officer
Canadian Forces Recruiting Centre
Sir John Thompson Building
1256 Barrington Street
Halifax, Nova Scotia

OR
University Liaison Officer
Canadian Forces Base Halifax
FMO
Halifax, Nova Scotia

For ROUTP, contact the Commanding Officer of your local reserve unit.

FINANCIAL INFORMATION

II. BURSARIES

Assistance for students in financial need is available from various sources.

The Birks Foundation Bursaries

Each year the Birks Family Foundation pays the tuition and fees of all children of its employees in attendance at Canadian universities. On or before September 30 or each year the Birks employee should file with the Foundation, an application of intent to enrol a son or daughter in a university of his choice in the ensuing year. In the case of a student who wishes to continue studies on a Birks grant, notification should be given to either the Foundation or the Director of Financial Aid at the end of each school year.

Royal Canadian Legion Bursaries, Nova Scotia Command

Four bursaries, valued at $350 and $400, are offered annually. These awards were established to assist dependents of veterans in furthering their education. Application forms available from L. M. Rhodenizer, Education Committee, New Glasgow, Nova Scotia.

Children of War Dead Education Assistance Act

This act provides fees and monthly allowances for children of a veteran whose death was attributable to military service. Inquiries should be directed to the nearest District Office of the Department of Veterans Affairs.

I.O.D.E. Second War Memorial Entrance Bursaries

Awarded to children of deceased or permanently or seriously disabled Canadian men and women of the services, who served in World War II. Further information is available from I.O.D.E. Educational Secretary, 2037 Parker Street, Halifax, Nova Scotia.

Provincial Chapter of Nova Scotia I.O.D.E.

A number of bursaries are awarded to university students in need of financial assistance. Preference is given to first-year students. Further information is available from Provincial Educational Secretary, I.O.D.E., 5667 Victoria Road, Halifax, Nova Scotia.

The Post Discharge Rehabilitation Grants

Ex-service personnel seeking educational grants should contact the Director of Financial Assistance at Saint Mary's University. If accepted by the University, they will be given a letter with which to support their application to the Department of Veterans Affairs.

Metropolitan Life Insurance Company

Financial assistance is available to students whose parents are or have been full-time employees of the Metropolitan Life Insurance Company. This company also has a matching gift program available at Saint Mary's University. For full information contact the Director of Financial Aid at Saint Mary's University.

FUND ADMINISTERED BY THE PROVINCIAL GOVERNMENT

The University cooperates fully with both the Canada Student Loan Plan and the Nova Scotia Bursary — Canada Students Loans Program.

Canada Student Loan Plan

The Canada Student Loan Plan was introduced by the Federal Government as a broad program to assist students who, in the absence of a loan, would be unable to pursue full-time post-secondary studies at a university or other educational institution. Canada Student Loans, available only on the basis of Certificates of Eligibility issued by the appropriate authority (Issuing Agency) of a Province, may be made by any branch of the chartered banks and by certain designated credit unions with the guarantee of the Federal Government.

Applications for Certificates of Eligibility must be made to provinces participating in the plan, and decisions on individual applications are made by the appropriate provincial authority (Issuing Agencies). Students applying for certificates who meet residence and other requirements must also demonstrate that the financial means available to them from all other sources are insufficient and that a guaranteed loan is needed. In no case will a loan for an academic year exceed a maximum of $1,400, or total loans exceed $9,800 during the student's academic career. Provincial authorities may issue Certificates of Eligibility under the plan up to the limits of provincial allocations in each loan year. Borrowers under the plan

FINANCIAL INFORMATION

are required to repay the principal and to pay interest, but no payments are required as long as they are full-time students at a specified post-secondary educational institution or for six months thereafter. Interest during this period is paid by the Federal Government on behalf of the student. After a student's interest-free period has expired, he is required to make regular monthly payments which include repayment of principal and interest on the outstanding balance at the rate that is in effect for student loans at the time the student takes out his loan. The number of years over which a loan may be repaid depends on the loan amount and other considerations, but may not exceed ten years from graduation. A student applying for a loan under this plan should only request the funds needed to enable him to continue his studies. In doing so, he should give responsible consideration to the repayment obligations he is assuming.

Any student needing a loan should apply to the appropriate authority in the province where he officially resides both for full information and application form. Enquiry should be directed to one of the following addresses or the Director of Financial Aid at Saint Mary's University:

Nova Scotia	Canada Student Loans Committee, Department of Education, Box 578, Halifax, Nova Scotia.
Alberta	Students Assistance Board, Department of Education, Administration Building, Edmonton, Alberta.
British Columbia	The British Columbia Student Aid Loan Committee, c/o Department of Education, Parliament Buildings, Victoria, British Columbia.
Manitoba	Department of Youth and Education, Student Aid Officer, 1181 Portage Avenue, Winnipeg 10, Manitoba.
New Brunswick	Department of Youth, Centennial Building, Frederiction, New Brunswick.
Newfoundland	Canada Student Loans Authority, Department of Education, Confederation Building, St. John's, Newfoundland.
Northwest Territories	Director of Education for the Northwest Territories, Department of Education, Yellowknife, Northwest Territories.
Ontario	Department of University Affairs, Student Awards Officer, Suite 700, 481 University Avenue, Toronto 2, Ontario.
Prince Edward Island	Canada Student Loans Committee, Department of Education, Charlottetown, Prince Edward Island,
Quebec	Office of Student Aid Services, Department of Education, Parliament Buildings, Quebec 4, Quebec.
Saskatchewan	Department of Education, Avord Tower, Victoria Avenue & Hamilton Street, Regina, Saskatchewan.
Yukon Territory	The Students Financial Assistance Awards Committee, Superintendent of Education, Box 2703, Whitehorse, Yukon Territory.

FINANCIAL INFORMATION

Nova Scotia Government Bursary — Canada Students Loan Program

This program combines loan assistance available through the Canada Students Loan Plan grant and loan assistance available from the Province of Nova Scotia. It is designed to supplement the resources of a student who, lacking such aid, would be unable to proceed to university studies. The ratio of grants to loans is determined in accordance with a formula fixed by the Province of Nova Scotia.

The Canada Students Loan portion of the award is guaranteed by the Federal Government. No interest or payments on principal are required during the period that the student is in full-time attendance at the university and for six months thereafter. The interest during this period is paid by the Federal Government. The maximum amount available under the Canada Students Loan Plan is $1,400 in any one year, and the total indebtedness permitted is $9,800. With the addition of free grants from the Province of Nova Scotia, the maximum assistance a student receives in any year may exceed $1,400 depending on the formula in effect in the year of application.

Assistance under the Nova Scotia Bursary — Canada Students Loan Program is available to all residents of Nova Scotia, including graduates at the Bachelor's level from designated educational institutions. (Graduates proceeding to degrees in education should specifically check with the Financial Aid Officer of the institution which they plan to attend or the Director of Financial Aid at Saint Mary's University). A student from another province must apply for assistance to the government of his own province. Application forms can be obtained from the Supervisor of Student Aid, Department of Education, Box 578, Halifax, Nova Scotia.

Post Graduate Scholarship Assistance

Students whose university performance gives promise of successful graduate studies should seek advice on availability of fellowships and scholarships. Interested students should contact the Office of Graduate Scholarships in the Student Center or the Director of Financial Aid at Saint Mary's University.

Candidates are also alerted to outside sources of support for graduate study:
Nova Scotia Government scholarships for persons engaged in public education in Nova Scotia.

For information write:
> Director of Teacher Education
> P.O. Box 578
> Halifax, Nova Scotia.

Nova Scotia Teachers Union bursaries and scholarships for public school teachers.

For information write:
> Scholarship Committee
> Nova Scotia Teachers Union
> P.O. Box 1060, Armdale,
> Halifax, Nova Scotia.

Canada Council Special M.A. Scholarships.

For information write:
> Canada Council
> P.O Box 1047
> Ottawa, Ontario
> K1P 5V8

United States Students

All students proceeding to Saint Mary's University from the United States of America who require financial assistance should apply for information to the Higher Education Authority of their particular state or to the Office of Education, Department of Health, Education and Welfare, Washington, D.C. 20202, or personal bank.

SECTION 8

Activities
and
Facilities

STUDENT ORGANIZATIONS

The extracurricular organizations listed below are officially recognized by the University. Students who represent the University in any public activity — dramatics, debating, oratorical contests, or athletic competition, or who hold office in any student organization, must be in good academic standing at the time of their election or appointment.

STUDENTS' COUNCIL

The Students' Representative Council (SRC) is the official representative body of the Students' Association. Its purpose is to provide extracurricular services for the students and to represent their best interests to both the administration and the faculty. The Council sponsors clubs, societies and social events and maintains a rapport with the rest of the University community. The hope of the Council is to add to the general quality of life at the University so that the students may enjoy a well-rounded experience at Saint Mary's.

THE JOURNAL

The Journal is the official undergraduate newspaper of the Saint Mary's University Students Association, providing coverage of campus news events, as well as events in the community. The Journal is a member of the Canadian University Press.

RADIO SAINT MARY'S

Operating from the 5th floor of the Student Center, Radio Saint Mary's entertains and informs students. The station is staffed entirely by Saint Mary's University students and broadcasts 95 hours a week. Involvement includes news writing, announcing, programming, and engineering.

YEARBOOK

The aim of the Yearbook is to provide an interesting and well-presented documentation of student life on campus. The book is issued once a year and is sponsored by the Students' Representative Council. Student participation and assistance is welcomed.

ANTHROPOLOGICAL SOCIETY

The Anthropological Society, organized by students majoring in anthropology, serves to assist all interested students through a program which includes speakers and films on anthropology or related topics.

The Society also provides information on job opportunities and graduate schools and arranges special social functions.

ASIAN STUDIES CLUB

The Club endeavours to promote an increased cultural awareness of Asian societies. Club activities include seminars in the Chinese culinary art, film exhibitions, and other social functions. Membership is open to any student interested in fostering a better understanding of Asia.

BAHA'IS CLUB

This club is open to all students and faculty. Its purpose is to acquaint people with the Baha'i Faith, to co-operate fully with all other religious groups in inter-faith activities designed to promote unity, and to provide, in an amicable exchange of viewpoint, a forum in which the basic tenets of all religions may be discussed.

BIOLOGICAL SOCIETY

The Society was formed to stimulate student interest in the natural sciences. The aims are realized through field trips, movies, and visits to local scientific institutions.

BLACK STUDENTS' ORGANIZATION

Black Students' Organization was started in September 1971 at Saint Mary's University. One of its main functions is the appreciation and dissemination of knowledge relating to Black history, culture and experience. It is a forum for the expression of Black Student opinion. It is also active in developing community programs that are of relevance to the Black community in Nova Scotia.

BUSINESS ADMINISTRATION SOCIETY

The Business Administration Society is open to any student in Business Administration or Accounting. The elected representatives have the responsibility for submitting student views in the Commerce Faculty and organizing various social functions.

The activities carried out by this society help to establish a rapport between students and faculty. The goal of the society is to allow the students to gain a better understanding and appreciation of the academic and business environments.

CHESS CLUB

The Chess Club provides an opportunity for students who play chess to have games with fellow students. Aside from the enjoyment of the game, the club also presents an excellent way to improve one's skills. There is an annual tournament as well as matches with other universities.

STUDENT ORGANIZATIONS

THE CARIBBEAN STUDENT SOCIETY

The Caribbean Student Society was founded in recognition of the West Indian community of students who have traditionally been active in the social structure of the University. Its constitution calls for the Society to encourage cooperation among Caribbean students in this and other Canadian universities, and among West Indians and Canadians generally. The Society assists students in any way possible, keeps informed on West Indian affairs and fosters the culture of the Caribbean. Students keep in touch through an occasional fete or special exhibition, but mainly by trying to be what we are, without getting *"bowled behind we back"*.

CHINESE STUDENTS ASSOCIATION

This Association is open to all students. The aim of the Association is to promote knowledge of Chinese culture and to provide social and recreational activities oriented to the interests of all students.

THE CHEMICAL INSTITUTE OF CANADA

(CIC) Student Chapter is open to chemistry and chemical engineering students. Through affiliation with the national organization, an educational and social program is provided together with opportunities for closer contact with the faculty.

SMU DEBATING SOCIETY

All students are invited to join this society which strives through the art of debate, to promote interaction among young people at the university level. Members gain valuable experience and confidence in public speaking and improve self-expression through the use of logical argument. Members participate in annual debating tournaments with other universities.

THE DRAMATIC SOCIETY

The Dramatic Society, one of the most active societies on campaus, is unique in being both academically sponsored and at the same time a student organization. With the help of competent professionals, University faculty, and a large number of students, the Society each year presents a number of workshops, one-act and full length plays. In offering extracurricular education in all phases of drama, it hopes as well to provide enjoyable and instructive experience in the form of acting, scene design and building, lighting, painting, make-up, costume design and making, properties, and promotion and publicity. Membership is open to anyone in the University Community.

The Dramatic Society also cooperates in the entertainment programs offered by other student organizations and is responsible for management of the stage and its equipment whenever used.

THE ECONOMICS STUDENTS ASSOCIATION

The Economics Students Association was revived in 1973-74. Membership is open to anyone taking a course in economics. However, a strong nucleus of economics majors is required for the purpose of electing representatives to the Economics Department and to boards and committees on which students take an active role.

The Association has established a tutorial program for sophomore students, actively participated in Open House and sponsored a successful panel on the Energy Crisis.

Social activities conducted this year included a tour of Oland's Breweries and a party which is expected to become an annual affair.

THE ENGINEERING SOCIETY

The Engineering Society undertakes various activities such as student-faculty smokers and tours of local industrial establishments with the aim of helping students become better aquainted with one another and with matters of interest to engineers. The Society also sponsors the annual Engineering Student Talent Show.

W.A. BELL GEOLOGY CLUB

The W. A. Bell Geology Club was organized in 1968 to promote the Geological Sciences at Saint Mary's University, and to provide an opportunity for members to meet the Geology Community of Halifax and area. Activities include field trips, fund-raising, conferences, social evenings, and sports. With the Department of Geology, the Club sponsors a continuous seminar series with speakers on various relevant topics. Membership is automatic for all students majoring in Geology but is open also to any interested persons. (Club Phone 422-7951). The Geology Club is a member of the Atlantic GeoScience Society, Atlantic and Maine Universities Geological Conference and New England Intercollegiate Geological Conference.

STUDENT ORGANIZATIONS

GEOGRAPHICAL CLUB

With its founding in 1975, the aim of this Club has become the development of a general interest in the field of geography, to create an awareness within the student body that there are others interested in geography. This aim is achieved with biweekly meetings in which guest lecturers are presented, and films and discussions invite participation. Activities include smokers and field trips. The Club is open to any student. Same space, one distance for all!

AIESEC — INTERNATIONAL ASSOCIATION FOR STUDENTS OF ECONOMICS AND COMMERCE

AIESEC is a non-profit, apolitical organization of university students working with managers of the business community to increase international understanding and to bridge the gap between theoretical university education and the practical business world. There are twenty branches in Canada. Exchange programs arrange for students to go to assured jobs in foreign countries each year. Activities include seminars, meetings, career sessions, luncheons and receptions.

THE NEWMAN SOCIETY

The Society was formed to encourage the growth of a community on campus united by Christian ideals and by a desire to contribute to the community life on campus. The Society organizes Search retreat weekends for students, participation in inter-university Newman meetings, University Masses, orientation week and University projects such as Third World Awarness.

POLITICAL SCIENCE ASSOCIATION

The organization has an elected executive, non-executive posts, and committees at large. Its aim is to promote the social consciousness of our members to enable them to utilize their full potential as students and as citizens.

PSYCHOLOGY CLUB

The aim of this club is to promote general interest and education in the field of psychology and to provide a liaison between the psychology department and psychology students. Informal in structure, the club serves both an academic and social function. Membership is open to any full-time student.

RESIDENCE SOCIETY

The Residence Society is the largest society on campus, having a membership of 1,100 students. Its purpose is to represent residence students in the University community. The elected representatives are responsible for arranging dances, forums, trips, etc. for the residence students as well as participating in all campus activities. The goal is for a more unified residence community.

SAINT MARY'S FOLK CLUB

The Club is designed for student musicians who are interested in performing and for students who enjoy just listening. Through weekly meetings members can improve their presentations and learn new and unique performing styles. The major project of the Club is a weekly 'Coffee-House' which highlights local entertainers as well as some club members.

S.M.U. KAMP

In operation since December 1969 this organization works solely for the benefit of the underprivileged children in the Halifax-Dartmouth metro area. The club's intention is to bring these children into contact with many entertaining and educational activities not otherwise open to them. Working from the Edmund Rice Residence, the organization carries on an extensive list of projects, including everything from swimming instruction and creative arts to field trips to many of Nova Scotia's historical and vacation parks. During the months of July and August, the club conducts a series of "camps" for children between the ages of seven and eleven.

FACILITIES

LIBRARY

A new University Library was opened in the summer of 1975. Ultimately it will house a collection of 300,000 volumes and provide seating space for 750 students, faculty and staff. In it, the standard library services of reference, cataloging, interlibrary loans and circulation will be supplemented by access to an audio-visual collection, computer terminals linked to the National Library, and seminar rooms for group discussions. The goal of the Library is to meet the information needs of Saint Mary's University students by providing the formats and media most suitable to their topics.

COMPUTING SERVICES

Faculty and students may use the in-house computer (an I.B.M. 1130) located on the third floor of the Science Building. Authorized faculty and students may also use outside computers (C.D.C. 6400 at Dalhousie University and Maritime Computer Limited) by means of several terminals located on the Saint Mary's University campus.

The Computing Center staff conduct seminars on topics in computing and provide a variety of services to computer users. Program advisors are on duty during normal working hours and will give demonstrations on request. They provide assistance in such areas as statistics, numerical methods and the use of various program packages (I.B.M., scientific, commercial, engineering and statistical packages). Computer program and reference library facilities are maintained, and limited keypunching and related services are available. Research groups may either program their own work or avail themselves of the programming services provided by the Computer Center. A high speed counter-sorter is also available for use in conjunction with the installation or for small data-processing operations.

INTERNATIONAL EDUCATION CENTER

An International Education Center has been established to promote awareness of international development, relating particularly to countries and cultures of the Third World. It is designed to meet the increasing desire of Canadians in schools, in university and the community at large for information and understanding of the problems of developing societies.

Slide shows, films, videotapes, and other materials necessary for an intelligent perspective on world issues, are provided. Resource people from many parts of the world, now resident in Eastern Canada, bring their personal background and experience to discussions and forums.

The programs of the International Education Center include:

a) Courses for teachers-in-training, and the provision of materials and resources for Third World information in schools;

b) Supplementary support for University programs in Asian Studies, West European Studies and for studies in Canadian multiculturalism;

c) Courses, talks, and resources available to church, business and labor groups, and to other individuals or groups interested in obtaining a better understanding of Canada's multicultural heritage and its relationship to other peoples and cultures.

THE OBSERVATORY

The Rev. Michael W. Burke-Gaffney Observatory at Saint Mary's University was opened in 1972.

Resembling a beehive, the revolving, aluminum dome measures twenty feet in diameter and rests upon an elevated pad atop the 23-storey academic-residence building. The Observatory's sixteen-inch reflecting telescope, the most powerful in Eastern Canada, is used for student instruction and astronomical research.

The Observatory is open to the general public for regular viewing sessions every Saturday evening.

An enclosed corridor connects the Observatory to the night office and instrument room.

The Observatory is named for Professor Emeritus, Rev. Michael W. Burke-Gaffney, astronomer, engineer, and educator who has been at Saint Mary's University since 1940.

CULTURAL ACTIVITIES

PERFORMING ARTS

The performing arts program at Saint Mary's University brings a cross-section of excellent musicians and entertainers to the campus each season. From chamber orchestras to modern jazz, concerts provide musical adventure for every preference. The program presents professional artists in recitals and readings, and includes a variety of films covering academic interests, art and current movies.

THE ART GALLERY

Saint Mary's Univeristy Art Gallery is designed and constructed to standards of the National Gallery of Canada and is conveniently located on the ground floor of the Ignatius Loyola Building immediately west of the Gorsebrook Avenue entrance. Works of art in painting, sculpture and photography are exhibited each month. C. Anthony Law is artist-in-residence and makes his skills and experience available to students on a regular basis in weekly painting classes and occasional lectures on Canadian art.

Robert Dietz is curator of the Art Gallery.

MUSIC PROGRAM

A non-credit Instrumental Music Program is offered at Saint Mary's University to students who are interested in pursuing music as a means of self-expression and enjoyment.

No knowledge of music is required for the Beginner's Program, but candidates must pass a music test which will indicate aptitude for pitch and rhythm. Previous instrumental training is required for entrance to the Advanced Program. Candidates are auditioned for instrument proficiency and should perform at least at the level of a student graduating from the Nova Scotia High School Musical Instruments Program.

The program, although of a recreational nature, is a serious cultural program. In addition to instruction, participants perform in a wide variety of musical groupings, ranging from symphony orchestra through dance and marching bands. Students are expected to attend both instructional classes and rehearsal sessions, and are required to practice and to show improvement through the year.

The Instrumental Music Program has a provincial dimension, as it is co-sponsored by the Nova Scotia Department of Recreation and is available to members of the community as well as to students from other universities in the region. The registration fee for students not registered at Saint Mary's University is $25.00 for the Advanced Program.

The following instruments will be offered in the 1976-77 academic year:

STRING INSTRUMENTS:

Violin	Mr. Jan Wicha
Viola	
Cello	Mrs. Olive Shaw
String Bass	

WIND INSTRUMENTS:

Flute	Miss Elizabeth DuBois
	Miss Sandra Rigden
Oboe	
Clarinet	Mr. Alban Gallant
Bassoon	Mr. Jeffrey Pompe
Saxophone	Mr. Brian March
Trumpet	Mr. Hrvoje Hrestak
French Horn	Mr. Kirk Lughton
Trombone	
Baritone Horn	
Tuba	Mr. Adrian Hoffman
Percussion	Mr. Max Ball
Piano	Mrs. Eleanor May
	Mrs. Anna Kroscen
Classical Guitar	Mr. Trent Parrott

Application forms for admission to the Music Program may be obtained by contacting Mr. H.J. Hrestak, Director of the Music Program.

THE INSTITUTE OF HUMAN VALUES

The supporters of the Institute believe that an organic relationship exists between knowledge, values and freedom; that this relationship is one of interdependence and that none of these concerns of historical man can flourish in isolation. They believe further that a serious deterioration of this relationship has taken place with consequent danger to all three. They take as the primary goal of the Institute, the restoration of this relationship through discussion, teaching and research.

The contemporary crisis to which the Institute addresses itself is fourfold:

1. A twin crisis in the humanities and the social sciences, stemming from the failure to produce a theory of knowledge consonant with their characteristic functions and activities; a theory demonstrative not only of the relationship between all types of knowledge and the practical and/or value judgement, but also of the essential complementarity of the humanities, the social sciences and the natural sciences.

2. A crisis of values deriving from the fact that moral values have been divorced from knowledge on the one hand, and any concept of personal and social well-being on the other.

3. A crisis of leadership in all aspects of human activity, deriving from a widespread inability to make any meaningful connection between knowledge and the practical judgement.

4. A crisis in the area of political freedom which derives, at least in part, from a loss of the sense of the historical relationship between moral values and the winning and defence of that freedom.

The Institute does not attempt to grapple with these problems as a self sufficient entity, but acts rather as a catalyst through which the human and physical resources of Saint Mary's and other universities are brought to bear on them.

INSTITUTE ACTIVITIES

1. The coordination of the work of the members of the Institute in the various disciplines.

2. Research on all aspects of the relationships between knowledge, values and freedom, as well as upon urgent contemporary problems in which values are deeply involved.

3. The advising of students who wish to supplement their majors with problem and theme oriented core programs.

4. Liaison with faculties and departments with the object of implementing and improving such programs.

5. The advising of students who wish to follow a program related specifically to human values.

6. The arranging of special lectures and symposia designed to explore all aspects of knowledge, values and freedom.

7. The editing of a journal concerned with the relationships between knowledge, values and freedom.

8. The production of video and sound tapes on values problems for distribution to the university community and to the public at large.

9. Assistance and advice to primary and secondary school teachers who are interested in implementing the recommendations of the Nova Scotia Government Graham Commission with respect to values to public education.

10. The establishment of a clearing house of information on questions related to knowledge, values and freedom, as a service to its members within the university and throughout the world.